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8 May 2009

The Directors
Smart Rich Energy Finance (Holdings) Limited
Room 1909
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Dear Sirs

INDEPENDENT TECHNICAL REVIEW

MARTABE GOLD-SILVER PROJECT - SUMATRA - INDONESIA

BEHRE DOLBEAR AUSTRALIA PTY LIMITED

1.0 INTRODUCTION

The Martabe gold-silver project ("the project") in the Province of North Sumatra in Indonesia (Figure 1) is owned by PT Agincourt Resources ("PTAR"), an indirect majority-owned subsidiary of OZ Minerals Limited ("OZ Minerals"). OZ Minerals is a company formed in June 2008 by the merger of Oxiana Limited ("Oxiana"), the previous owners of the project, with Zinifex Limited. China Sci-Tech Holdings Limited ("CST"), whose shares are listed on the Hong Kong Stock Exchange ("HKSE") has negotiated with OZ Minerals to acquire the project; CST is being advised by Azure Capital Pty Limited ("Azure"). On 24 April 2009 OZ Minerals announced that CST was the successful bidder for the Martabe project; the project would be sold to CST for US$211 million ("M") plus the Reimbursement Amount, as defined in the Sale and Purchase Agreement dated 24 April 2009 ("the Sales and Purchase Agreement"), subject to the satisfaction of various conditions, including the consent of CST's shareholders and consent of OZ Minerals' lenders and Australia's Foreign Investment Review Board.

CST has advised that the acquisition will be undertaken by its wholly-owned subsidiary, Maxter Investments Limited ("Maxter"), pursuant to the Sales and Purchase Agreement. CST has also advised that it has entered into an option agreement with Smart Rich Energy Finance Holdings Limited ("Smart Rich") on 24 April 2009, whereby Polytex Investments Inc. (a wholly-owned subsidiary of CST) grants to Acewick Holdings Limited ("Acewick"), a wholly-owned subsidiary of Smart Rich, an option to acquire the entire issued share capital of Maxter, and thus the interests in the Martabe project, subject to completion of the Sales and Purchase Agreement.

Azure, on behalf of Smart Rich, has requested that Behre Dolbear Australia Pty Limited ("BDA") carry out a technical due diligence review of the project and prepare an independent technical report and risk assessment, consistent with the requirements of the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange ("the Listing Rules"). Where relevant and appropriate, BDA has made specific reference to Chapter 18 of the Listing Rules, and in particular Rule 18.09. BDA confirms that all requirements of Chapter 18 pertaining to project details that can be stated by an independent expert are detailed in this report. For the avoidance of repetition however, cross references to the Listing Rules are only given in the Executive Summary.

Martabe Project

Figure 1

PROJECT LOCATION

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The project lies within a sixth generation Contract of Work ("COW") area which was granted in April 1997. A Definitive Feasibility Study ("DFS") on the project was completed in November 2007 and in December 2007 the Board of Oxiana gave development approval. The initial capital cost of the project was estimated in the DFS at US$310M; this estimate was subsequently increased by OZ Minerals in November 2008 to the current budget of US$358M. The Construction Permit for the project was granted by the Indonesian Authorities in April 2008 and is the final step in the approvals process. Construction commenced in July 2008 and at that stage mining was planned to commence late in 2009, with the first gold pour planned for January 2010. Due to re-financing difficulties being experienced by OZ Minerals, construction was suspended in November 2008. At this stage the forecast cost at completion stood at US$360M, of which around US$57M had been expended and the forecast date for the first gold pour had been revised to March 2010.

The planned project comprises an open pit operation, mining and processing approximately 4.5 million tonnes of ore per annum ("Mtpa") at an average grade of around 1.9 grams per tonne gold ("g/t Au"), producing around 200,000 ounces ("ozs") of gold per annum together with 2 million ozs ("Mozs") of silver ("Ag"). The current life of mine ("LOM") plan extends for nine years, but there are good prospects for further extensions to the mine life based on exploration and drilling results from other known prospects in the area.

BDA is well acquainted with the Martabe project. BDA first visited the project site at Martabe in 2002, prior to the Oxiana acquisition. BDA undertook a technical due diligence review of the project in mid-2008 on behalf of the prospective lenders to the project. Visits were made to the project area, drill core and local infrastructure were reviewed, and discussions were held with project staff and management both on site, in Medan, and in Oxiana's head office in Melbourne. In November 2008, BDA carried out a further independent review of the resource and reserve estimates prepared by OZ Minerals based on additional drilling carried out in 2008. In the context of the current report, BDA undertook a site visit in April 2009 to confirm the current status of the site construction and development works.

BDA's review covers the geology, exploration, resource and reserve aspects, mining, processing, infrastructure, environmental and social aspects of the project, project approvals, life of mine production plans, project implementation, capital and operating costs and project risks.

BDA is the Australian subsidiary of Behre Dolbear & Company Inc., an international minerals industry consulting group which has operated continuously worldwide since 1911, with offices in Denver, New York, Toronto, Vancouver, Guadalajara, Santiago, Hong Kong, London and Sydney. Behre Dolbear specialises in mineral evaluations, due diligence studies, independent expert reports, independent engineer certification, valuations, and technical audits of resources, reserves, mining and processing operations and project feasibility studies.

BDA has reviewed the project resources and reserves in accordance with Australian industry standards and for compliance with the Australasian Code for Reporting Identified Mineral Resources and Ore Reserves prepared by the Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia, December 2004 ("the JORC Code"). BDA has not undertaken an audit of the data, re-estimated the resources or reserves, or reviewed the tenement status with respect to any legal or statutory issues. OZ Minerals advises that there are no title impediments to the proposed operation and that all project tenements are in good standing.

This report provides an independent assessment of the technical aspects of the Martabe project and potential risks. The report is provided to the Directors of Smart Rich for the purpose of assisting them in assessing the technical issues and associated risks of the development in the context of the proposed acquisition and for use in a circular to Smart Rich shareholders; it should not be used or relied upon for any other purpose. The report does not constitute a technical or legal audit. Neither the whole nor any part of this report nor any reference thereto may be included in, or with, or attached to any document or used for any purpose without BDA's written consent to the form and context in which it appears.

2.0 EXECUTIVE SUMMARY

2.1 Background

BDA has conducted an independent technical review of the Martabe gold-silver project in northwestern Sumatra, the proposed development plans and the current state of engineering and construction. Site visits have been undertaken to the project area in June 2008 and April 2009. BDA has reviewed resource and reserve estimates, details of mining plans and schedules, processing operations, metallurgical testwork, proposed flowsheets, environmental aspects and approval status, implementation plans and projected capital and operating costs, consistent with the requirements of Rule 18.09 of the Listing Rules. Discussions have been held with project and management personnel.

2.2 Project Overview *[Ref 18.09.(4,5,6,7)]*

The Martabe project is owned and operated by PT Agincourt Resources, an indirect majority-owned subsidiary of OZ Minerals. The project is located on the western side of the island of Sumatra, within the Province of North Sumatra, approximately 3 kilometres ("km") north of the township of Batangtoru, and approximately 40km south of the port of Sibolga (Figure 1). The project lies approximately 200km south of the provincial capital of Medan; regular daily flights link Medan with Jakarta and Singapore. Local commercial air services are available between Medan and provincial centres, one or two hours by road from the site.

The original COW was established in April 1997, covering an area of 6,591 square kilometres ("km^2"). Progressive relinquishments have reduced the COW area to 1,639km^2 or 25% of the original area; the Martabe project area itself occupies approximately 29km^2.

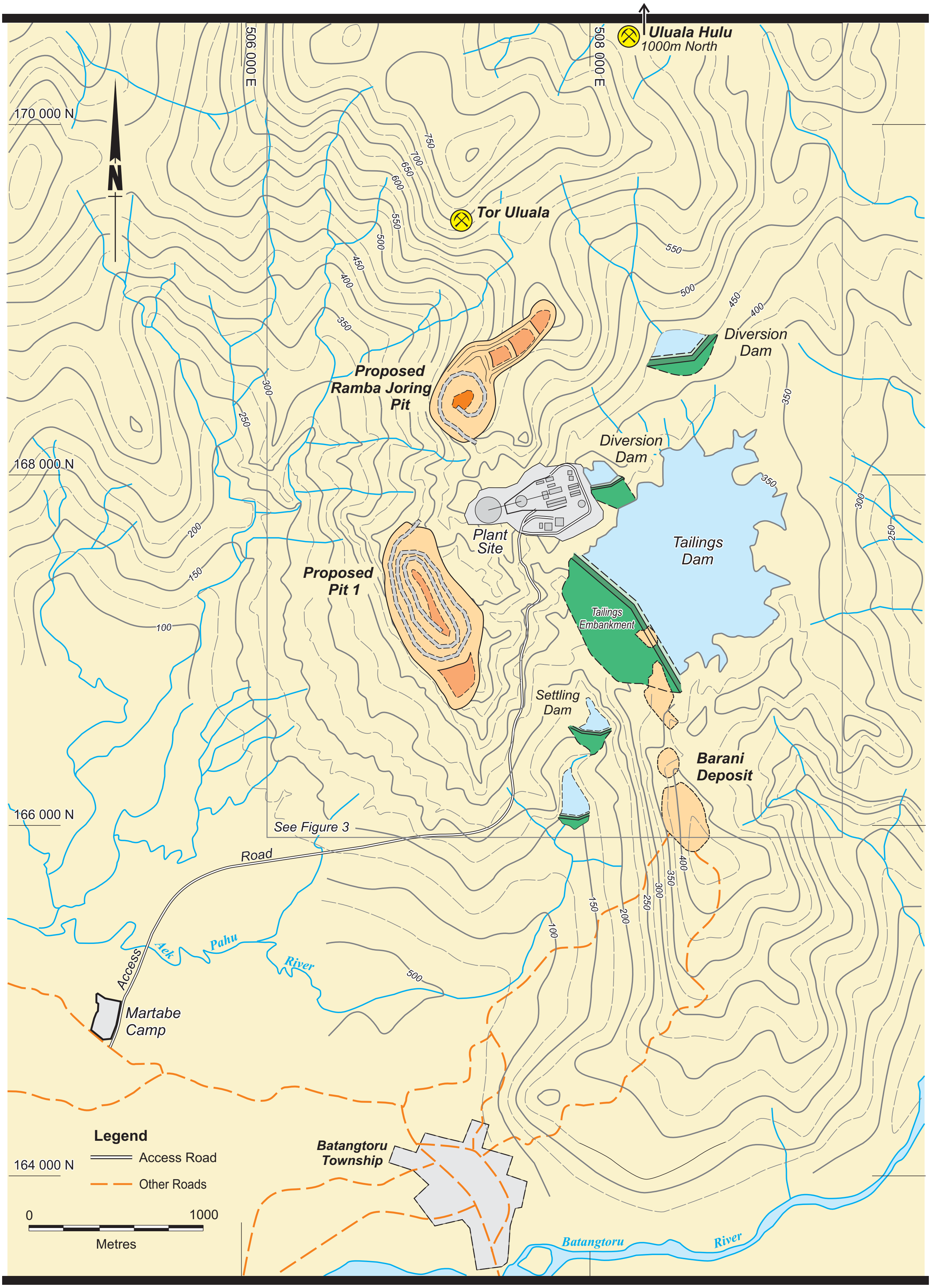
In 2006, Agincourt Resources Limited ("ARL") purchased the Martabe project and control of the various related entities from the then owner, Newmont Mining Corporation ("Newmont"). In April 2007, through a corporate takeover, Oxiana acquired ARL and the Martabe project. The ownership and operating rights to Martabe are held by PTAR. PTAR shares are held 95% by Agincourt Resources (Singapore) Pte Ltd, which is wholly owned by OZ Minerals through its subsidiary OZ Minerals (Martabe) Pty Ltd, and 5% conditionally by the Indonesian company PT Artha Nugraha Agung ("ANA"); the minority 5% shareholding held by ANA is intended to be transferred to the local government authority, and negotiations with respect to this transfer are ongoing.

The project was discovered by means of a regional geochemical sampling programme in 1996/97 which identified gold anomalism in the Martabe region. Drilling commenced in 1998 and confirmed the presence of gold, silver and copper hydrothermal mineralisation, within a sequence of lavas and volcanic and hydrothermal breccias. Five mineralised prospects, Purnama, Baskara, Pelangi, Kerjora, and Gerhana, have been identified over a 6km north-south strike (Figure 2). In recent reports the names of these prospects have been changed in accordance with local usage to Pit 1, Ramba Joring, Barani, Tor Uluala and Uluala Hulu respectively; at the request of CST and Smart Rich, BDA has used the new names in this report.

The deposits are associated with silicified ridges or hills, covered in fairly dense vegetation. Some of the hills are extremely steep, and access is difficult. Drilling is carried out by drill rigs lowered into position by helicopter, or by man-portable rigs.

The bulk of the work undertaken to date has focussed on the Pit 1 deposit, with 257 diamond drill holes completed on approximately a 50m spaced grid, with some infill drilling at a 25 x25m spacing. Resources have been defined at Pit 1, Ramba Joring and Barani and open pit reserves have been defined at Pit 1.

A Definitive Feasibility Study was completed in November 2007 based on open pit mining and carbon in leach ("CIL") processing of the Pit 1 ore. The DFS is based on mining and processing approximately 4.5Mtpa of ore at an average grade of around 1.9g/t Au, producing around 200,000ozs of gold per annum together with 2Mozs of silver. The stripping ratio is low averaging 0.66:1. Metallurgical testing has indicated recoveries of around 70-80% for gold and 60-80% for silver. The current mine plan has a life of nine years, however, there are good prospects for further extension from both the Pit 1 deposit at depth and from the adjacent Ramba Joring and Barani deposits and other prospects in the area. Board approval for project go-ahead was given in December 2007.



Martabe Project

Figure 2

SITE PLAN

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A 35 hole infill diamond drilling programme was completed at Pit 1 in 2008, covering the bulk of the initial three-year mining area at a 25 x 25m spacing. The drilling largely confirmed the previous interpretations and grade estimation and allowed the upgrade of some material into the Measured category.

PTAR received its Construction Permit for the Martabe project, issued by the Indonesian Department of Energy and Mineral Resources, in April 2008. This permit allows construction of the Martabe project to commence, and is the final step in the environmental permitting process or AMDAL. Two major contracts were awarded by PTAR in 2008 for the design and construction of the project. An Engineering, Procurement and Commissioning Contract was executed between Ausenco Services Pty Ltd and PTAR on 20 August 2008 and a Construction Management Contract was executed between Ausenco Asia Pty Ltd, PT Trantekindo Nindyatama and PTAR on 20 October 2008. An Interface Deed linking the two contracts was also executed by the parties to the contracts. In this report these contracts are collectively referred to as the Engineering, Procurement and Construction Management ("EPCM") Contract and the EPCM Contractor is referred to as Ausenco.

Construction commenced in July 2008 and at that stage mining was planned to commence late in 2009 and the first gold pour was planned for January 2010. Due to re-financing difficulties being experienced by the parent company, OZ Minerals, construction was suspended in November 2008, at which stage the forecast date for the first gold pour had been revised to March 2010. The contracts for the design and construction of the project were terminated on 2 December 2008.

PTAR is working closely with local authorities and community leaders to address social, environmental and development issues of concern. A land survey has identified land ownership and good progress has been made in negotiations on land purchase and compensation arrangements; PTAR advises that land acquisition over the core project area is over 90% complete. PTAR advises that the project enjoys strong support from the Central and Provincial governments and the near-mine community of Batangtoru.

The DFS was based on construction of a heavy fuel oil power station. However grid power is available within 3km of the project and PTAR has subsequently decided to use the grid supply with diesel generators to provide an emergency back-up supply. Process water will be recycled from the tailings storage facility ("TSF"), which will be constructed in the Aek Pahu valley to the immediate east of the pit and the plant (Figure 2).

Ownership/Tenement Holdings *[Ref 18.09.(4)]*

The project tenements are held through a 6th generation COW, established in 1997. The original COW covered an area of 6,591km^2 but progressive relinquishments have reduced the COW area to 1,639km^2; the Martabe project area itself occupies approximately 29km^2.

The ownership and operating rights to Martabe are held by PTAR. PTAR shares are held 95% by Agincourt Resources (Singapore) Pte Ltd, which is wholly owned by OZ Minerals through its subsidiary OZ Minerals (Martabe) Pty Ltd. A 5% interest in the project is conditionally held by the Indonesian company PT Artha Nugraha Agung; the minority 5% shareholding held by ANA is intended to be transferred to the local government authority and negotiations on this transfer are ongoing.

On 3 July 2008 it was announced that a memorandum of understanding had been reached with PT Antam Tbk ("Antam") for the sale of 10% of the Martabe project to Antam for US$66.5M, subject to approval of both Boards and the relevant Indonesian Government authorities. An option would also be granted to Antam to acquire a further 10% at the same price with an option for a further 5% based on the market value of the project at the time. However, PTAR advises that no final agreement was entered into and the proposed transaction is no longer in effect.

Resources/Reserves *[Ref 18.09.(5,6)]*

The Martabe resource estimate as of June 2008 is shown in Table 2.1. Resources have been estimated for the three principal known deposits, Pit 1, Ramba Joring and Barani, by independent specialist RSG Global Pty Limited ("RSG Global"), now part of Coffey Mining Pty Limited ("Coffey Mining). No formal resource estimate of the other known deposits has been carried out to date.

Infill drilling was carried out over a central portion (Years1-3 production) of the Pit 1 pit in 2008. There was no material change to the overall estimate but the drilling allowed a portion of the deposit to be upgraded to a Measured category.

Table 2.1

Summary of Martabe Resources - June 2008

Deposit	Category	Tonnage Mt	Gold Grade Au g/t	Silver Grade Ag g/t	Contained Au Mozs	Contained Ag Mozs
Pit 1	Measured	3.8	2.9	46	0.354	5.568
	Indicated	47.7	1.7	22	2.604	33.513
	Inferred	39.7	1.1	13	1.388	17.201
	Subtotal	*91.2*	*1.5*	*19*	*4.345*	*56.282*
Ramba Joring	Inferred	36.6	1.0	4	1.191	5.207
	Subtotal	*36.6*	*1.0*	*4*	*1.191*	*5.207*
Barani	Inferred	10.4	1.1	-	0.368	-
	Subtotal	*10.4*	*1.1*	-	*0.368*	-
Total	Measured	3.8	2.9	46	0.354	5.568
	Indicated	47.7	1.7	22	2.604	33.513
	Inferred	86.6	1.1	8	2.947	22.408
	Total	**138.1**	**1.3**	**14**	**5.905**	**61.489**

Note: cut off 0.5g/t Au; Ag grade not determined for Barani and therefore omitted from totals; Barani Ag grade estimated at 1-3g/t Ag but silver totals and grade calculated assuming no contribution from Barani

To date reserves have been estimated only for Pit 1, based on an optimised open pit mine design which extends approximately 900m north-south along strike; the Pit 1 reserves are shown in Table 2.2.

Table 2.2

Summary of Martabe Open Pit Reserves - June 2008

Category	Tonnage Mt	Gold Grade Au g/t	Silver Grade Ag g/t	Contained Au Mozs	Contained Ag Mozs
Proved	3.9	2.7	42	0.336	5.288
Probable	31.8	1.8	24	1.883	24.419
Total	**35.7**	**1.9**	**26**	**2.219**	**29.707**

Note: reserves estimated at a gold price of US$700/oz and silver price of US$11/oz

The designed open pit includes 1.9Mt of Inferred resource material at an average grade of 1.9g/t Au; in accordance with the JORC Code this material has not been included in reserves and has been designated as waste in the mining schedules; however, there are reasonable expectations that much of this material will be proved up during grade control drilling.

Based on the projected mining rate the defined tonnage would support a nine year mine life, with a waste to ore stripping ratio of approximately 0.7:1. Dilution has been estimated at 10% and mining recovery at 95%, both of which are considered reasonable. Because mining blocks are generally defined by a cut-off grade rather than a sharp geological contact, the risk of high levels of dilution is mitigated, as diluting material will commonly be low-grade mineralisation.

The final pit extends to an RL of approximately 240mRL, around the RL of the western colluvial plain and approximately 270m below the current ridge elevation. However, as much of the ridge will be removed during mining, final pit walls range from approximately 60-200m in height.

BDA considers that the area is prospective and that there is good potential to add significantly to the resource and reserve base over time with ongoing systematic exploration. Recent drill results at Barani and Ramba Joring are evidence of the further potential of the area.

Mining *[Ref 18.09.(5,6,7)]*

The mine plan for the Pit 1 deposit involves a single-stage low stripping ratio open pit, with all waste being contained within the TSF, or as part of the wall. The pit design was optimised at a gold price of US$650/oz. Dilution has been estimated at 10% and mining recovery at 95%, both of which are considered reasonable. Because mining blocks are generally defined by a cut-off grade rather than a sharp geological contact, the risk of high levels of dilution is mitigated, as diluting material will commonly be low-grade mineralisation.

Mining operations will be conducted by contractors, using hydraulic excavators and articulated all-wheel drive trucks. The fleet selection is considered appropriate for both pioneering and production activities in the high rainfall and soft ground conditions. The Martabe area is subject to a monsoonal climate and allowances have been made for lower mine productivity during the wet season, using stockpiled ore to maintain mill feed. All haul roads will be sheeted with rock to ensure reasonable conditions for mining throughout the year.

Optimisation studies have indicated that the economics of selectively scheduling the higher grade ore early are favourable and the financial model adopts significantly higher mining rates than the DFS, peaking at around 13Mtpa of ore and waste. As a result, mining will effectively be conducted over approximately six years, from 2010 through 2015. BDA notes that the significant size of the stockpiles represents some additional risk, as it is understood there are limited areas available for stockpiling, and this aspect is under further review.

The stripping ratio over the LOM is approximately 0.7:1. Mining block grade estimation is based on Ordinary Kriging. Ore and low-grade material will be mined and stockpiled separately; ore will be stockpiled according to rock-type and grade and the primary crusher will be fed by front-end loaders working from stockpile to allow appropriate blending; 50-70% of ore is scheduled to be direct tipped.

Geotechnical investigations have resulted in pit designs with overall pit slopes of 45-50°. Within the weathered area and the easterly-dipping clay breccia zone, walls will be mined with low 6m face heights, 60° batters and 25° inter-ramp angles. In combination with the proposed water depressurisation drain holes, these parameters should provide reasonable levels of safety for the long-term integrity of the wall. The final pit walls typically range from 60-200m in height.

Processing *[Ref 18.09.(7)]*

The Pit 1 ore is generally high in relatively abrasive siliceous material and contains minor levels of sulphide minerals. Gold appears to be dominantly fine-grained and the silver content appears to be present largely in the form of sulphosalts.

Process development testwork was initially carried out by Normandy Mining Limited ("Normandy") and later by Newmont. PTAR completed a test programme to provide additional design data for conventional treatment of the ore through a carbon-in-leach plant at a rate of 4.5Mtpa and an additional detailed programme has recently been carried out to refine gold and silver recovery models and to confirm some process design parameters. The plant will comprise single stage crushing, semi-autogenous grinding ("SAG") and ball milling (with the SAG mill close-circuited with a pebble crusher), a carbon-in-leach circuit with 20 hours residence time, an elution and electrowinning facility, a cyanide detoxification plant, and a tailings thickener.

Gold recovery is moderate, ranging from 70-80%; silver recovery is around 70% which is reasonably high for a CIL plant operating on a high silver ore. The main limitation on gold recovery is considered to be the fine-grained nature of the gold, much of which is associated with sulphide minerals in the less altered material. Recoveries on the low alteration ores are lower (~70%) than recoveries on the high alteration ores (~80%) and the fresher ores could be described as moderately refractory since gold extraction using whole-of-ore cyanidation is limited to around 70%. An alternative flowsheet which utilised sulphide flotation prior to cyanide leaching was tested but did not provide improved recoveries, even with a re-grind of the flotation concentrate and leaching of the tailings.

The presence of cyanide soluble copper in the ore has been allowed for in the design. Levels of this material of above 500 parts per million ("ppm") copper ("Cu") have been projected in the third operating year and in later years; appropriate modifications have been made to the flowsheet and to cyanide addition rates to the CIL plant in order to avoid significant losses of soluble gold.

Infrastructure *[Ref 18.09.(7)]*

The project area lies approximately 3km north of the township of Batangtoru, adjacent to the Trans-Sumatra Highway. The Trans-Sumatra Highway joins the regional centre of Padangsidempuan, 25km to the south with the port of Sibolga, 40km to the north (Figure 1) and continues to Medan, the regional centre 200km to the north. Medan is serviced by regular commercial flights from Jakarta, Singapore and Kuala Lumpur. A commercial air service is available from Medan to Sibolga and to Aek Godang, one and two hours respectively by road from the site. A commercial air service is available from The road journey from Medan takes approximately eight hours by road.

A jetty and associated freight handling facilities are to be constructed early in the project implementation phase at a location 27km west of the project site, to provide reliable access to the project for supplies.

The DFS proposal for supplying power to the project site was to install a 33 megawatt ("MW") heavy fuel oil fired power station at the site. However, PTAR has subsequently adopted the option of connecting to the national grid.

The project site is in a high rainfall area. Ample water is available from streams and watercourses at the site to provide a reliable water supply. Raw water will be supplied from a catchment dam to be constructed adjacent to the plant site. Process water will be provided from tailings thickener overflow and from tailings dam decant.

Site accommodation will be provided for around 30% of the workforce with the remainder being accommodated in villages in the surrounding area. The site accommodation facilities will include a mess, recreational facilities, games rooms, wet mess, laundry and drying rooms, etc. and will be equipped with a package sewage treatment plant.

It is proposed to update the current satellite telephone system for voice and data transmission and to install a VHF radio network for on-site communications; a telephone upgrade has been completed.

Administration, mining and process plant offices and service buildings are to be constructed adjacent to the process plant. Offices will generally be block-work construction, reinforced to meet the requirements of the high seismic conditions. Workshops, warehouses and similar buildings are to be of steel portal construction with steel cladding and concrete floors.

Mobile equipment will be provided for the process plant, and light vehicles are to be provided for managerial and supervisory staff.

Environmental and Community Issues *[Ref 18.09.(7)]*

The project is in a high rainfall, seismically active, area. The topography is steep and the hills are forested. The Pit 1 deposit is within 3km of the Batangtoru township. PTAR advises that the local population is generally supportive of the project, and that relations with the local authorities are good. Nevertheless, there are significant technical, social and environmental issues to be addressed.

A detailed and systematic environmental and social impact analysis and public consultation programme consistent with relevant Indonesian law has been prepared for PTAR by consulting group PT ERM ("ERM") as part of the formal permitting Environmental Impact Statement ("EIS") or Analise Dampak Lingkungan ("AMDAL") process. BDA has reviewed and concurs with the approach taken to complete this impact assessment analysis and the various environmental and social study programmes which support the AMDAL process. BDA has not undertaken a comparative analysis of Indonesian standards with the Equator Principles and associated IFC Performance Standards, particularly in the areas of water discharges, air, noise, occupational health and social issues (ie. resettlement) to confirm conformance with the Equator Principles/IFC Performance Standards and Guidelines. URS Australia Pty Limited ("URS") has undertaken a Social and Environmental GAP Analysis which considers environmental and social issues in relation to corporate standards and commitments.

The main environmental risk relates to the potential for offsite water contamination via contaminated water run-off, acid rock drainage from the TSF embankment, excess tailings decant or tailings seepage, particularly following an earthquake event and associated settlement of the TSF main embankment. Specific design elements, infrastructure layouts and inclusion of a downstream environmental dam and water treatment plant are planned to mitigate the risk of offsite water contamination occurring.

Seismicity evaluation is particularly important given that the project lies in a seismically active region. A number of seismicity assessments have been performed over recent years by Knight Piesold Pty Ltd ("KP") in 2002 and 2003, Golder Associates Pty Limited ("Golder") in 2004 and most recently by GHD Pty Limited ("GHD") in December 2008. GHD has recommended that consideration be given to conducting sensitivity analysis and designing for a range of seismic conditions including those at the upper end of the Peak Ground Acceleration ("PGA") estimations. GHD has also suggested a number of design precautions that could be considered for large embankments, such as the TSF. A third party independent expert consultant (DE Cooper & Associates Pty Ltd) carried out a review of the tailings and water management arrangements proposed by GHD and issued a report dated January 2009.

The main social risk area relates to local communities that may become disenchanted from re-settlement issues, land compensation, employment, in-migration, traffic or other social issues. To date however there appears to be a large measure of goodwill, and the employment and other benefits which the proposed mine development will bring appear to be eagerly anticipated. To manage community perceptions, address concerns and mitigate social impacts, PTAR plans to develop a Community Relations and Development Investment Plan ("CRDIP") to provide a framework for strategic social investments.

It is estimated that the project will employ up to 1,600 people during construction with a workforce of approximately 700 people when in operation. It is anticipated that 70% of the workforce will be recruited from local communities and the majority of the balance from elsewhere in North Sumatra and Indonesia.

Life of Mine Plan/Production Schedule *[Ref 18.09.(5,6,7)]*

The production schedule shown in Table 2.4 was extracted from the financial model provided titled "OZ_Minerals_Martabe_Asset_Model_Data_room_V5.xls" and corresponds to the LOM plan for the US$650/oz gold price scenario in the DFS. It is planned to mill around 4.5Mt of ore per annum for around nine years. Under the most recent optimised mine plan, mining will effectively be completed over approximately six years, with higher grade ores being processed as mined and lower grade material stockpiled for later treatment through the plant. The location and size of the stockpiles has not been finalised, but BDA understands that an area north of the TSF has been identified; the area will need to be large enough to accommodate around 15Mt to satisfy the proposed mining schedule. The schedule is based on the mining of 36Mt of ore and 26Mt of waste (a 0.7:1 stripping ratio) from 2010-2015. Ore treatment will extend from 2010-2018, with ore grade averaging approximately 1.9g/t Au and 26g/t Ag. Initial mill feed grades average around 2.3g/t Au, but drop to 1g/t Au for the last three years while treating low grade stockpiles. It should be recognised that the current mine plan is based only on the Pit 1 deposit, and if one or more of the adjacent prospects are proved up to reserve status, mine life would be extended and the grade profile may change.

Table 2.4

Martabe Operation - Projected Production Schedule

Item	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Ore Mined	Mt	7.1	6.1	7.0	7.5	6.0	2.1				35.7
Waste Mined	Mt	5.4	6.8	6.0	4.5	2.6	0.6				26.0
Material Mined	Mt	12.6	13.0	13.0	11.9	8.5	2.7				61.7
Ore Milled	Mt	3.1	4.5	4.5	4.5	4.5	4.5	4.5	4.5	1.1	35.7
Ore Grade	g/t Au	2.3	2.3	2.3	2.4	2.5	1.9	1.0	1.0	1.0	1.93
	g/t Ag	25.2	28.6	31.4	33.3	30.2	24.5	17.9	17.9	17.9	25.9
Au Recovery	%	80.1	76.3	72.6	73.7	75.2	70.1	77.7	76.0	76.0	74.9
Ag Recovery	%	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Au Production	kozs	187	253	245	260	272	188	116	112	28	1,661
Ag Production	kozs	1,769	2,893	3,175	3,368	3,055	2,480	1,818	1,808	444	20,810

Gold recovery is moderate averaging 75%; silver recovery, at 70%, is reasonably good for a high silver-gold ore from a CIL plant. Over the LOM the operation is projected to produce 1.7Mozs of gold and 20.8Mozs of silver. Annual production of gold is scheduled to average around 230,000ozs per annum from 2010 to 2015, dropping to around 110,000ozs over the last three years of mine life. BDA considers that the production schedule is reasonable but suggests that it may take 6-12 months to ramp up to full production and recovery levels.

Capital Costs *[Ref 18.09.(5,6,7,8)]*

The LOM capital cost for mining and surface facilities was estimated by PTAR in the DFS at US$310M in Q3 2007 dollars. An accuracy range of $\pm$10% was nominated by PTAR. The estimate was subsequently updated by PTAR in November 2008 to US$358M, following a review carried out in conjunction with Ausenco. At the time of termination of the EPCM contracts in December 2008, the forecast cost at completion was US$360.2M. This forecast is summarised in Table 2.5.

Table 2.5

December 2008 Forecast of Capital Expenditure

Item	Total Capital US$M
Mining Capital Costs	10.3
Process Plant and Infrastructure Direct Costs	211.2
Contractor's Indirect Costs	10.5
EPCM Costs	44.3
Other Owners Costs	66.4
Project Contingency	17.5
Total	**360.2**

The estimating and forecasting methodology is considered generally reasonable and appropriate, however, the contingency allowance appears low. While the costs of maintaining the site facilities while work on the project is suspended will tend to increase the overall capital cost, the current reduction in activity in the engineering design and construction industry and changes in the exchange rate for the Australian dollar since the estimates and forecasts were prepared have the potential to result in a lower overall capital cost.

At the time the work was suspended in November 2008, the Ausenco Monthly Report showed that around US$109.4M had been committed and US$57.3M had been expended, so that the remaining capital expenditure was around US$302.9M. Since the suspension, additional expenditure of around US$18.4M has been incurred on orders for critical long delivery mechanical equipment so that the forecast remaining cost to completion at the end of April 2009 is around US$284.5M.

On the basis of these commitment and expenditure amounts, using standard contingency percentages for uncommitted and committed but not expended costs, in BDA's opinion the required contingency is around US$26.5M, compared with the total contingency allowance of US$21.4M included in the December forecast (ie. in BDA's opinion an additional US$5.1M should be added to contingency). The current allowance comprises the US$17.5M project contingency and specific contingency allowances included in the Mining Capital Costs and Other Owners Costs of US$1.9M and US$2.0M respectively.

A US$/A$ exchange rate of 0.85 has been used to convert costs expected to be incurred in Australian dollars. The current exchange rate is around 0.72. The A$ denominated expenditure is advised by PTAR to be in excess of A$100M which means that if exchange rates remain at current levels for the remainder of the project development period there could be a potential reduction of more than US$13M in capital costs. In addition PTAR has advised that of the US$22.1M included in the forecast for land acquisition costs, around US$4M is unlikely to be expended.

BDA considers that a number of minor adjustments could be made to the forecast to take into account the effect of changes to exchange rates, the status of land acquisition costs and contingency allowances. These adjustments would have a net effect of reducing the total forecast by around US$12M. There may also be potential to further reduce some costs as a result of the current reduction in activity in the manufacturing and construction industries.

However, it is noted that expenditure for care and maintenance of the site is on-going and that the costs of restarting the project and recruiting and mobilising personnel and equipment redeployed since the suspension of the project is subject to some uncertainty. For that reason BDA would recommend that the current capital cost forecast of US284.5M to complete the project from end April be maintained at this time.

No allowance has been made in the estimate for Indonesian VAT, import duties, and tariffs. PTAR has advised that it has received advice from its Indonesian tax advisors that the conditions of the COW should protect it from any such costs. BDA assumes that the prospective project acquirers will independently review such assumptions.

BDA suggests that annual sustaining capital provisions should be increased by around US$1-2Mpa to account for replacement capital for process plant and administration equipment and ongoing mine exploration.

BDA recommends that in any project financing plan, a cost overrun allowance should be established of around 10% of the estimated remaining capital cost, in this instance of around US$28M. Such an allowance would not be planned to be spent and would not be included in any analysis of project cashflows. However, BDA suggests that it would be prudent to have a plan for accessing such an allowance at the commencement of the re-establishment of the project development rather than risk funds not being available in the event of a cost overrun.

Operating Costs *[Ref 18.09.(5,7,8)]*

The estimated operating costs for the Martabe project are shown in Table 2.6, based on the high grade case in PTAR's financial model. The mining cost averages US$2.66/t of material mined over the LOM, based on contractor quotations. Diesel costs account for approximately 16% of the estimated mining costs, based on diesel prices of US$1.11 per litre ("L"); this proportion is likely to have varied significantly over the last eighteen months. BDA considers that mining costs should be increased by 20% to allow for fluctuations in consumable costs, and for contract variations, latent conditions and work outside contract.

Processing costs in the model average US$11.10/t milled. BDA has been unable to identify any allowance for maintenance spares in the budget data used to derive the operating costs and therefore suggests that process costs should be increased by US$2Mpa or US$0.44/t milled. BDA also considers that G&A costs may be under-estimated, based on its experience at other operations in south-east Asia.

In the financial model total site costs average approximately US385/oz gold produced; silver credits reduce gold production costs by an average of US$155/oz, giving a net average cost of US$240/oz after consideration of royalties. Cash cost of gold produced, taking into account the silver credit, is projected to be between US$180-280/oz for the first six years of the mine life; projected costs increase to about US$350/oz in the last three operating years when the plant feed is from lower grade stockpiles. BDA considers that the operating cost estimate is accurate to ±20%.

Table 2.6

Operating Costs for the Martabe Gold Project

Item	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Costs											
Mining	US$M	29.9	28.9	29.8	29.7	23.8	13.3				155.5
Milling	US$M	35.0	50.8	49.7	49.5	49.7	49.9	49.6	49.6	12.2	396.2
Administration	US$M	6.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	2.1	67.3
Realisation	US$M	1.8	2.9	3.1	3.3	3.0	2.4	1.8	1.7	1.4	20.4
Total Site Costs	US$M	73.1	91.0	91.1	90.9	85.0	74.1	59.5	59.8	14.7	639.5
Royalties	US$M	1.7	2.3	2.5	2.7	2.8	1.9	1.2	1.2	0.3	16.5
Silver Credit	US$M	-21.9	-35.8	-39.3	-41.7	-37.8	-30.7	-22.5	-22.4	-5.5	-257.5
Total Cash Cost	US$M	52.9	57.5	54.3	51.9	49.9	45.3	38.5	38.6	9.5	398.4
Production											
Au Production	kozs	187	253	245	260	272	188	116	112	28	1,661
Ag Production	kozs	1,769	2,893	3,175	3,368	3,055	2,480	1,818	1,808	444	20,810
Unit Costs											
Mining	US$/t*	2.38	2.23	2.30	2.49	2.79	4.91				2.52
Processing	US$/t	11.21	11.29	11.05	11.00	11.05	11.09	11.02	11.09	11.09	11.10
Administration	US$/t	2.05	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.91	1.89
Total Cash Cost	US$/oz	283	228	222	199	184	241	332	343	344	240

**Note: unit mining costs are per tonne of material moved; they equate to US $3.46/t ore for the LOM*

Implementation Schedule *[Ref 18.09.(6,7,8)]*

Two major contracts were awarded by PTAR in 2008 for the design and construction of the project. An Engineering, Procurement and Commissioning Contract was executed between Ausenco Services Pty Ltd and PTAR on 20 August 2008 and a Construction Management Contract was executed between Ausenco Asia Pty Ltd, PT Trantekindo Nindyatama and PTAR on 20 October 2008. An Interface Deed linking the two contracts was also executed by the parties to the contracts. The contracts were terminated on 2 December 2008. It is proposed that similar contracts be reinstated, either with Ausenco or with another suitably qualified contractor when the project re-starts.

PTAR proposes to directly contract for the mine development and operations and will also arrange some minor aspects of infrastructure including telecommunications.

The PTAR project team is responsible for overall project management; the members of the project team whom BDA has met appear to have good experience in managing projects in the region. In addition PTAR currently has access through OZ Minerals to process and mining management personnel with sufficient expertise and experience to ensure that the completed process plant and mine design meet PTAR's expectations. It would be important for any party acquiring the project to have access to similar expertise.

Construction commenced in July 2008 and at that stage mining was planned to commence late in 2009, with the first gold pour planned for January 2010. Construction was suspended in November 2008, at which stage the forecast date for the first gold pour had been revised to March 2010.

The project schedule prepared for the Ausenco closeout report in November 2008 showed a total project duration of 15 months from the recommencement of project activities. This schedule recognised that the procurement of long delivery equipment items, including the critical milling equipment, is proceeding but made only nominal time allowances for the re-establishment of the EPCM Contracts and re-mobilisation of EPCM personnel.

BDA understands that the acquisition transaction is expected to be completed by the beginning of July 2009 and that finance is expected to be in place by October 2009 to allow project development to resume with a full Owner's project team having been recruited and mobilised. On that basis, BDA would expect that support staff and the EPCM contractors can be re-engaged and mobilised, orders for major equipment and materials re-established and construction contractors re-engaged and mobilised by around the end of 2009 so that the project can be constructed and commissioned by around the end of the first quarter of 2011.

BDA generally concurs with the contracting strategy and the project schedule, however it should be recognised that the schedule will not be able to be finalised until the project ownership is resolved and project development activities resume.

3.0 RISK SUMMARY

3.1 Project Risk Summary

When compared with many industrial and commercial operations, mining is a relatively high risk business. Each orebody is unique. The nature of the orebody, the occurrence and grade of the ore, and its behaviour during mining and processing can never be wholly predicted.

Estimations of the tonnes, grade and overall metal content of a deposit are not precise calculations but are based on interpretation and on samples from drilling which, even at close drill hole spacing, remain a very small sample of the whole orebody. There is always a potential error in the projection of drill hole data when estimating the tonnes and grade of the surrounding rock. Even with close-spaced drilling, significant variations may occur.

Comprehensive metallurgical testwork can reduce the processing risks, but the questions of representivity and scale-up remain. Estimations of project capital and operating costs are rarely more accurate than ±15% and, depending on the status of the estimate, several areas may be nearer to ±20-30%. Mining project revenues are subject to variations in metal prices and exchange rates.

In reviewing PTAR's Martabe gold-silver project, BDA has considered areas where there is perceived technical risk to the operation, particularly where the risk component could materially impact the projected cashflows. The assessment is necessarily subjective and qualitative. Risk has been classified from low through to high. In Section 3.2, BDA has considered factors which may ameliorate some of these risks.

Risk Component	Comments
Resources/Reserves *Low-Medium Risk*	Because of the inherent variability of gold mineralisation, BDA would rarely rate the resource risk as less than low-medium. The basic Pit 1 resource drilling grid at 50 x 50m is somewhat wide for gold resource definition, and some of the hole orientations are not ideal; the majority Indicated and Inferred categorisation is considered generally appropriate. The 2008 infill drilling programme has reduced drill spacing over a central portion of Pit 1 to around 25 x 25m, and results have generally confirmed the interpretation and grade estimation based on the wider-spaced drilling. Given the topography and access difficulties BDA considers the spacing acceptable until more detailed grade control drilling commences. The geological database has been comprehensively reviewed by resource specialists RSG Global and Coffey Mining; BDA considers the data quality is generally good and the geology and mineralisation controls are reasonably well understood. All sample data is based on diamond drilling. The resource model has been independently prepared by RSG Global/Coffey, with input from PTAR geologists on the domain modelling. Detailed lithological and alteration domains have been defined and these have facilitated the preparation of the resource model, outlining the principal high grade, lower grade and waste zones. An Ordinary Kriging resource block model has been prepared. Statistical and visual validation of the resource model has been undertaken. An open pit mineable reserve has been estimated based on the Pit 1 resource model. Mining dilution and mining recovery figures used in the reserve estimate appear generally acceptable, based on the interpreted broad areas of mineralisation amenable to bulk mining operations. Stripping ratios are low and there is upside potential from the in-pit Inferred material which has been assumed to be waste. There is also good potential to define additional mineable reserves at adjacent prospects, specifically Ramba Joring and Barani.

Risk Component	Comments
Open Pit Mining *Low-Medium Risk*	The mining targets are considered achievable. The mining rate is significantly higher than proposed in the DFS, but the plan incorporates an additional excavator and trucks and the vertical advance rate remains relatively low. There is some risk that the operation may be constrained by poor availability of the mining fleet, as has been encountered elsewhere with AWD articulated trucks. In the area of geomechanics, there is some risk of localised wall failures, but conservative wall angles should minimise any material impact, together with the flexibility provided by multiple mining areas within the pit. It is proposed that all the ore will be mined within approximately six years - this will require substantial stockpiles, up to around 15Mt capacity. The location for stockpiles of this size has yet to be finalised, but PTAR has advised that an area north of the TSF has been identified. Additional technical risks relate to the topography, rainfall and seismic activity. The combination of high rainfall and seismic activity needs to be taken into account in terms of pit and dump stabilities.
Processing *Low Risk*	Testwork has been thorough and potential issues with cyanide soluble copper and mercury in the ore have been recognised. Preliminary plant design has been carried out in a competent manner. BDA suggests that during detailed design, the implications of the relatively high cyanide soluble copper levels likely to be present in the ore towards the end of the mine life should be considered. Martabe ore is well suited to processing through a CIL plant, although gold recoveries are not particularly high. However, the metal recoveries projected in the financial model are consistent with recoveries achieved in testwork. Earlier process studies favoured development of a heap leach process for the ore. However, BDA agrees that the high rainfall at the site would have made control of the discharge of excess water a difficult exercise.
Services and Utilities *Low/Medium Risk*	The supply of power from connection to the national grid may present some risk of interruption to supply, although PTAR is proposing a significant standby capacity to mitigate this risk. Water supply is considered low risk. The bulk of circuit water will be reclaimed, with the high rainfall being collected in site dams providing a reliable source of make-up water.
Infrastructure, Roads, Transport *Low/Medium Risk*	Access to the site is reasonable and will be improved for transport of supplies when the proposed jetty is constructed. The remote location will always cause logistics to be a critical aspect of the operation, particularly in relation to transporting major items of plant and equipment to site. However, surveys carried out during the feasibility study have indicated that risks are manageable.
Tenement and Title *Low Risk*	The COW is the over-riding legal document for the ongoing management of the Martabe project, and appears to provide a sound basis for exploration and project development, borne out by PTAR's experience in Indonesia to-date. PTAR advises that the Indonesian Government authorities continue to reiterate support, and this is evident at provincial, district and local level. There seems no reason why this support should not continue for the Martabe project. A portion of the COW is within both protected forest and production forest areas, however PTAR has advised that the proposed area of mine operations is not within these designated forest areas.
Social Issues *Low Risk*	The main social risk area relates to local communities becoming disenchanted from re-settlement issues, land compensation, employment, in-migration, disturbance from traffic or other social issues. To date however there appears to be a large measure of good will, and anticipation of employment and other benefits which the proposed mine development will bring. To manage community perceptions and address concerns, PTAR plans to develop a Community Relations and Development Investment Plan to provide a framework for strategic social investments. PTAR advises that the Central, Provincial and Local government authorities remain supportive of the project.

Risk Component	Comments
Environmental Issues *Medium Risk*	Site environmental procedures and ongoing monitoring and data collection programmes appear to be well planned and implemented. The main environmental risk areas of the project as currently proposed relate to the potential for offsite water contamination via site contaminated water run-off, acid rock drainage ("ARD") from the TSF, including the embankment materials, excess tailings decant or tailings seepage following an earthquake event and settlement of the TSF main embankment. The likelihood of these occurrences however is considered low, and the potential impact is reduced due to the various design elements and proposed infrastructure layouts. The inclusion of two downstream environmental dams (Settling Dams SD1 & SD2) and water treatment plant will mitigate the risk of offsite water contamination during operation. Water treatment may be necessary for an unspecified time following mine closure to handle potential acid mine drainage from the TSF embankment. Ongoing monitoring of water quality post mining will be essential to ensure that ARD impacts are not occurring. An in-situ weathering column leachate monitoring program has operated since March 2004 and together with sample geochemical analytical data, provides an information base which is suitable to assess the potential risk associated with ARD generation.
Project Implementation *Medium Risk*	Given the remote location, the climate and the topography, implementation of the project will present significant risks. However the PTAR project team has demonstrated a capability to implement similar projects elsewhere in Asia and the preferred EPCM Contractor, Ausenco, also has a good track record in development and construction of mining projects in the region. The current project schedule of 15 months after recommencement of project activities has been made less risky by the continuation of the procurement of the SAG and ball mills. Orders have been placed and design and fabrication are reported to be on schedule.
Production Ramp-Up *Low/Medium Risk*	The proposed mining schedules are considered achievable, although the first full year rate may be optimistic. The mining rates are significantly higher than those proposed in the DFS, but are based on a commensurate increase in excavators and trucks. Provided that the contractor mobilises sufficient equipment and achieves reasonable availability, the schedule is regarded as achievable. The ore stockpile build up is rapid, from 2.5Mt in Year 1 to around 15Mt in Year 5. The process plant production schedule proposed by PTAR is generally reasonable. However, BDA considers that modifications should be made to the projections for the first year of process plant operation to reflect a more realistic ramp-up of process plant performance.
Capital Cost *Medium/High Risk*	Capital costs for projects in remote locations in less-developed economies are always subject to significant risk and have in recent years come under significant upward pressure, however such pressures are likely to abate as a result of the current global economic downturn. The estimating methodology used to arrive at the current forecast of US$360M is considered generally reasonable and appropriate. BDA is of the opinion that the contingency allowance is low by around US$5M, but notes that changes in the US$/A$ exchange rate are likely to result in a reduction in US$ costs of more than US$13M and that PTAR has advised that land acquisition costs are likely to be around US$4M less than currently forecast.. There is a risk that some Indonesian VAT, import duties and tariff costs omitted by PTAR from the estimate on the advice of its Indonesian taxation advisors may be payable. The cost risk generally lies with the final construction quantities and the performance of the erection contractors. BDA recommends provision of an overrun allowance of 10% of the remaining capital cost to cover cost overruns and the potential risk of capital increases from contractor claims and start-up issues.

Risk Component	Comments
Operating Cost *Medium Risk*	Mine operating costs have been based on the lowest contractor bid and compare reasonably with estimated owner-operator costs, based on first principles. Diesel fuel represents approximately 16% of the mining cost, and contract prices were based on fuel at US$1.11/L, but should have an additional 20% allowance for variations in consumables and conditions and unanticipated contract costs. BDA considers that processing and G&A costs together may be up to US$5.5Mpa higher than estimated; however, since the estimate was produced for a January 2009 valuation of the property, cost escalation is not likely to be a significant factor. The decision to obtain power from the Sumatran grid should stabilise power costs over the life of the mine.
Country and Political Risk	BDA is not expert in this area and makes no assessment of country or political risk. However, BDA observes that progress to date on the Martabe project has significantly reduced the perception of country risk, and the efficacy of the COW has been demonstrated through the exploration, pre-feasibility and feasibility phases to date. PTAR advises that the local, regional and national regulatory agencies continue to provide support for the project. In terms of government approvals, access to land, local employment and local community relations, there appear to be no outstanding difficulties and appropriate processes for handling these areas have been successfully implemented.

3.2 Risk Mitigation Factors

There are a number of factors which combine to reduce some of the risks identified above. Principal amongst these are:

- All geological data is based on diamond drilling; much of the core is PQ or HQ size and core recoveries are generally good. The geology, though complex, has been well modelled and the mineralisation controls are generally well understood. The 2008 infill drilling programme within a central portion of Pit 1 has generally confirmed the interpretation and grade estimation based on the wider-spaced drilling, and has reduced the risk in the area of initial mining.
- Detailed infill grade control drilling will be undertaken and will provide a valuable guide to mining. Although the overall grade is modest at 1.9g/t Au, there are substantial intersections at significantly higher grade which will provide an opportunity to optimise the ore feed in the early years, based on the proposed stockpiling policy.
- There are known additional resources at two other adjacent prospects and significant mineralisation has been intersected elsewhere in the project area; only the Pit 1 prospect is currently included in the mine plan, but there are good prospects for additions to mineable reserves from the other known areas of mineralisation.
- The use of an established mining contractor, experienced in Indonesian conditions, gives added confidence in the ability of the mining operation to achieve the production targets.
- Both Golder and Coffey have conducted extensive geotechnical studies on the project and the pit wall and slope designs reflect the findings. The proposed wall angles are reasonably conservative, but failures may still occur, particularly in the clay breccia zone. It is intended to depressurise the walls with drain holes and to establish drainage channels around the pit perimeter to reduce the quantity of water entering the pit and damaging the walls.
- GHD has completed a detailed design of Tailings Dam, Water Dams and Sediment Containment Ponds; this report is dated December 2008. PTAR engaged an independent third-party consultant (Dr N Mattes, Senior Principal from URS Australia) to review the preliminary conceptual design of the TSF and associated infrastructure. The consultant concluded that the design was carried out in accordance with current good practice and that the proposed TSF was considered to be appropriate to the conditions revealed by the site investigations carried out to date. A further independent third-party consultant (DE Cooper & Associates Pty Ltd) reviewed the December 2008 GHD Detailed TSF Design in January 2009.
- The plant design is based on a considerable volume of testwork, and the processing characteristics of the various ore lithologies are well defined.

- While this will be PTAR's first operation in Indonesia, the PTAR project team has had a number of years construction and operating experience in Southeast Asia, and PTAR's management has considerable Indonesian experience. The in-house knowledge of the logistics of operating in Southeast Asian environments will significantly mitigate the risks of start-up of a project in a less-developed country.
- Progress on the Martabe project through the exploration, pre-feasibility and feasibility phases to date demonstrates the efficacy of the Contract of Work. Local, regional and national regulatory agencies continue to support the project's development. In terms of gaining government approvals, access to land, and managing local employment and local community relations, there appear to be no unresolvable social or regulatory difficulties at this stage.
- Following the cancellation of the former contracts, the new owner will have the opportunity to re-tender and perhaps gain some cost benefits from the general reduction in mining and project development activity in the region. If Ausenco was re-appointed as EPCM Contractor, this would be seen as likely to reduce the EPCM risk, given the company's extensive experience of similar projects in similar locations together with the project knowledge gained to date.

4.0 SOURCES OF INFORMATION

BDA has undertaken recent site visits to the Martabe gold and silver project in June 2008 and April 2009. Discussions have been held with technical and management staff on site, in Medan and in Melbourne. The drilling undertaken to date has been reviewed, and drill core from several holes inspected. The location of the various prospects and the planned open pit, plant site and TSF site have been reviewed; a helicopter flyover has been undertaken, providing an overview of the project area. Resources, reserves, mining, processing and waste disposal plans and environmental and social issues have been reviewed and discussed. The principal technical reports and documents reviewed are listed below:

Oxiana - Public Information

- Annual Reports 2006 and 2007 - Oxiana Limited
- Quarterly Reports for 2007 and 2008 - Oxiana Limited and OZ Minerals Limited
- ASX Announcements 2007 and 2008 - Oxiana Limited and OZ Minerals Limited

Martabe Technical Data

- Blast Fragmentation Prediction, Martabe Gold Project - Blast Dynamics Inc, November 2004
- Pit 1 Pit Slope Design, Martabe Project - Golder Associates, January 2005
- Martabe Open Pit Contract Mining Quote, Scope and Pricings - RSG Global, October 2006
- Martabe Gold Project Contract Mining Budget Price - PT Leighton Contractors Indonesia, November 2006
- CIL Design Modelling for Martabe using CIMCIL - Murdoch University Gold Technology Gp, March 2007
- Martabe Gold Project Comminution Circuit Design - Orway Mineral Consultants, April 2007
- Mineral Resource Explanatory Notes - Oxiana Limited, June 2007
- Ore Reserve Explanatory Notes - Oxiana Limited, June 2007
- Martabe Project Review of Conceptual Design of TSF - URS, June 2007
- Martabe Project TSF Geotechnics Report - GHD, October 2007
- Martabe Project Definitive Feasibility Study - Coffey Mining, PT Agincourt Resources, November 2007
- Updated DFS Exec Summary Capital Section “DEC 2007 Section 7 Capital Cost.doc” - PTAR, Dec 2007.
- Martabe Drill Hole Logs and Assay Data - Various
- Oxiana Limited and Zinifex Limited Specialist’s Technical Report - AMC Consultants Pty Ltd, May 2008
- Zinifex Limited Proposed Merger with Oxiana Limited Valuation Report - Grant Samuel, May 2008
- Martabe Project Technical Presentation - Oxiana Limited, June 2008
- Mineral Resource Explanatory Notes - OZ Minerals Limited, June 2008
- Ore Reserve Explanatory Notes - OZ Minerals Limited, June 2008
- LTCF Model “V19 13052008 DRAFT.xls” - PT Agincourt Resources, July 2008
- Capital Cost Spreadsheet “Martabe Capex Sheet Current Exchange Rates.xls” - PTAR, July 2008
- Martabe Project On-site Weathering Column Update - Water Management Consultants, October 2008
- Martabe Project November Monthly Report 2008 - Ausenco Services Pty Ltd, November 2008
- Martabe Project TSF Design Summary - GHD, December 2008
- Martabe Project TSF Detailed Design Report - GHD, December 2008
- OZ PTAR Martabe Monthly Report January 2009 - PT Agincourt Resources, January 2009
- Martabe Project Tailings and Water Management Expert Review - DE Cooper & Associates, Jan 2009
- Martabe Project Closeout Report - Ausenco Services Pty Ltd, February 2009
- Martabe Project Status of Permitting - PT Agincourt Resources, April 2009
- Financial Model “OZ_Minerals_Martabe_Asset_Model_Data_room_V5.xls” - OZ Minerals Ltd, April 2009

Tenements

- Tenement Location Map
- Map of Local Land Holdings

General Data

- Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves - Report of the Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia, December 2004.

5.0 MARTABE PROJECT

5.1 Background

Location

The Martabe project is owned by PT Agincourt Resources, a joint venture company specifically formed to operate a Contract of Work which was entered into with the Indonesian Government in April 1997. The project area is located on the western side of Sumatra, in the Province of North Sumatra, approximately 3km north of the township of Batangtoru, and 40km south of the port of Sibolga (Figure 1). The regional centre of Padangsidempuan lies 25km to the south and the provincial centre of Medan approximately 200km to the north. Regular daily flights from Jakarta, Singapore and Kuala Lumpur provide good access to Medan.

The local topography is steep and rugged. An access road has been developed as part of the initial construction work to the process plant and TSF sites and initial earthworks have been undertaken. Five mineralised prospects, Pit 1, Ramba Joring, Barani, Tor Uluala and Uluala Hulu, have been identified over a 6km north-south strike. The deposits are associated with steep, silicified, ridges or hills, covered in fairly dense vegetation. Resources have been estimated for Pit 1, Ramba Joring and Barani, but to date reserves have only been defined over the Pit 1 deposit, and it is this deposit on which the DFS and the current mine plan are based. The Pit 1 deposit comprises a steep-sided north-south ridge which rises 250m above a colluvium-filled valley to the west and 100m above rugged hills to the east. The mineralised zone has a strike length of approximately 900m, and preliminary pit designs are based on a maximum pit depth below the current peak of around 270m, bringing the base of the pit to around the level of the western plain. As much of the ridge is removed, final pit wall heights range from approximately 60-200m

The Martabe site is located close to the equator, and the climate is hot and tropical. Annual rainfall averages over 4,000mm, with annual evaporation estimated at 1,800mm. Rain falls throughout the year, with the highest rainfall associated with the monsoonal period from October to December.

Martabe lies within a high activity seismic area, related to the proximity to plate subduction zones which parallel the west coast of Sumatra (Figure 1). The project is located approximately 10km west of the Sumatran Fault.

History and Ownership

There is no history of mining within the immediate vicinity of the project. The overall tenor of the mineralisation in the area is relatively low, with few instances of high grade material having been shed from the main lode; there is no record of free gold having been found in the area. The deposit was discovered by Normandy as a result of a regional stream sediment survey, with anomalous values found in the stream running to the south of the deposit. Drilling commenced in 1998 and confirmed the presence of gold-silver hydrothermal mineralisation within a sequence of lavas and volcanic and hydrothermal breccias.

The Martabe project is owned and operated by PT Agincourt Resources, but has undergone several changes of ownership. The original COW, covering an area of 6,591km^2 was granted to Normandy Anglo Asia Limited, a subsidiary of Normandy Mining Limited. In 2002 Newmont Mining Corporation took over Normandy. As part of a disposal of non-core assets, Agincourt Resources Limited purchased the Martabe project and control of the various entities from Newmont in 2006. In April 2007, through a corporate takeover, Oxiana acquired Agincourt and thus PTAR and the rights to continue development of the project. PTAR shares are held 95% by Agincourt Resources (Singapore) Pte Ltd, which is wholly owned by OZ Minerals through its subsidiary OZ Minerals (Martabe) Pty Ltd, and 5% conditionally by the Indonesian company PT Artha Nugraha Agung (ANA). The minority 5% shareholding held by ANA is intended to be transferred to the Indonesian local government authorities and negotiations on this transfer are ongoing.

Progressive statutory relinquishments have reduced the COW area to 1,639km^2 or 25% of the original area; the Martabe project area itself occupies approximately 29km^2. A Definitive Feasibility Study was completed in 2007 to establish an optimum strategy for the mining of the Pit 1 deposit, using conventional open pit mining methods, and the processing of the ores by conventional CIL ore treatment methods to produce gold-silver bullion. The DFS evaluated a range of production scenarios at gold prices of US$500/oz, US$650/oz and US$800/oz. The US$650/oz scenario was selected as the basis for the engineering and cost studies, in line with corporate assumptions at that time. The DFS projects that an estimated 200,000ozs of gold and 2Mozs of silver will be produced annually, totalling approximately 1.7Mozs of gold and 16.5Mozs of silver over a nine-year mine life. Plans and schedules have been developed and engineering and cost studies have been completed for the mine development and construction of the process plant and infrastructure. The initial capital cost estimate was US$310M; the estimate was subsequently updated by PTAR in November 2008 to US$358M, following a review carried out in conjunction with Ausenco. At the time of termination of the EPCM contracts in December 2008, the forecast cost at completion was US$360M, with physical completion targeting late May 2010..

Contract of Work (COW)

The Martabe COW is a 6th Generation Contract of Work signed in April 1997 as an agreement between the Government of Indonesia and PT Danau Toba Mining (subsequently PT Agincourt Resources), an Indonesian registered PMA or Penanaman Modal Asing, ie. a Foreign Direct Investment company specifically established under the conditions of the COW. The COW document covers all conditions relating to exploration, feasibility, construction, mining and rehabilitation, which, under the doctrine of "lex specialis", is intended to protect the investor from changes in tax and other laws for the term of the agreement.

After various statutory relinquishments, the COW currently covers an area of 1,639km^2; this represents 25% of the original COW area and no further compulsory reductions are required. The COW was placed in suspension between March 1999 and April 2000 while forestry boundary issues were resolved. The Martabe project itself lies within an area of approximately 29km^2 inside the COW area. PTAR advises that the COW is in good standing and that all conditions for mandatory area relinquishments, minimum expenditure commitments and tax and reporting obligations have been met. An Extension of Feasibility phase was granted to 26 May 2008, but no further extension of this feasibility phase is provided for, nor is it necessary, as the feasibility phase is now deemed complete with the acceptance of the Feasibility Study by the Indonesian Government.

The minimum expenditure requirements under the COW, to the end of the Exploration Period, have been substantially exceeded. No minimum expenditure provisions are fixed for the Feasibility Period. The Construction Period is granted over three years. If this proves to be unworkable, the COW holder may seek Ministerial approval for a revised time schedule. The Operating Period is deemed to commence on the earlier of the first day of the calendar month following the first month during which the average daily throughput is at least 70% of the design capacity, or six months after the date of completion of the facilities. The Operating Period is for 30 years, or longer if approved, but must commence within eight years from the commencement of the COW allowing for any time extensions granted during the various work periods of the COW. PTAR advises that the requirement for the commencement of the Operating Period within eight years of commencement of the COW is covered by the extensions already granted since commencement of the COW.

Project Status

The bulk of the work undertaken to date has focussed on the Pit 1 deposit, with 257 diamond drill holes completed on approximately a 50m spaced grid, with some infill drilling on a 25 x 25m grid over the early production areas, allowing the estimation of resources and reserves. A DFS was completed in November 2007, based on open pit mining and CIL processing of the Pit 1 ore. The DFS was based on a 4.5Mtpa project with a mine life of around nine years, producing annually around 200,000ozs of gold and 2Mozs of silver. There are strong expectations that additional economic ore will be defined both at Pit 1 and at Ramba Joring and Barani, leading to an extension of mine life.

The DFS was based on the construction of a heavy fuel oil power station, but grid power is available within 3km of the project. PTAR has determined that reliable supply is available from the grid, however, the rates to be charged have not been finalised. The current plan for power supply is to connect to the grid with diesel generators to provide emergency back-up. Process water is readily available from collection of run-off, and will be based on recycle from the TSF. The principal site access roads to Batangtoru are paved, but are narrow and winding and pass through numerous villages; height and weight restrictions apply at several river crossings. PTAR plans to construct a jetty at the coast to the west of the project area which will provide ready access for barged supplies and equipment during construction and operations.

PTAR is working closely with local authorities and community leaders to address social, environmental and development issues of concern. A land survey has been undertaken to identify land ownership and negotiations on land purchase, lease and compensation arrangements are well advanced. Land acquisition is over 90% complete for the core project area. Base line environmental studies have been carried out and an Environmental Impact Statement or AMDAL has been prepared. Water management, waste disposal, noise, air quality, land use, land acquisition, compensation and rehabilitation are all issues which are addressed.

The Construction Permit for the project was granted by the Indonesian Authorities in April 2008, and is the final step in the approvals process. Construction commenced in July 2008 and at that stage mining was planned to commence late in 2009, with the first gold pour planned for January 2010. Due to re-financing difficulties being experienced by OZ Minerals, construction was suspended in November 2008, at which stage the forecast date for the first gold pour had been revised to March 2010. A temporary access road to the process plant and mine site has been constructed and a start has been made on site earthworks. Contracts will need to be re-established and construction re-commenced under the new ownership.

6.0 GEOLOGY AND MINERALISATION

6.1 Regional Geology

The Martabe project lies within the Cainozoic Sumatran volcanic arc, which forms the northwestern extension of the Javanese Sunda-Banda arc, extending for over 1,600km. Subduction of the Indian oceanic plate is occurring along the arc, resulting in major regional faulting, volcanism and seismic activity. The Sumatran Fault system ("SFS") runs the length of the island, and passes 10km to the east of Martabe (inset, Figure 1). Dextral strike slip movement is estimated to be up to 400km. The SFS is highly segmented with numerous offsets commonly exceeding 10km. Hydrothermal activity related to this system is interpreted as the principal mechanism for the formation of the Martabe gold deposits.

6.2 Local Geology

The geology in the Martabe area is dominated by a Miocene dome complex, composed of dacitic lavas and fragmentals surrounded and underlain by tuffs, sediments, agglomerates and andesitic and basaltic lavas (Figure 3). The geology and mineralisation are controlled by major north-northwest faults which are part of the SFS.

The oldest rocks in the area are Palaeozoic meta-sedimentary rocks of the Tapanuli Group. These rocks underlie the Tertiary volcanics and sedimentary units. The eastern part of the area is dominated by granite, in intrusive and fault contact with the older rocks. Age dating gives a Triassic age and the intrusion is correlated with the Sibolga granite batholith to the northwest.

Barus Formation sediments, mostly conglomerates and sandstones with minor siltstones and shales, are the oldest of the Tertiary units, and from mapping and drilling are considered to underlie much of the Martabe area. Overlying the Barus Formation sediments are the Miocene age Angkola Volcanics, a series of basaltic and andesitic lavas and breccias. The porphyritic andesite (VAN) and volcanic breccia (VBX) are significant host rocks to the mineralisation (Figure 4). Emplaced along the faulted western margin of the granite complex is a late Tertiary dacitic dome complex, comprising a dacitic porphyry (VDA), which is also a significant host rock, and a hornblende andesite, which is a late-stage intrusive and is generally unmineralised (except at Ramba Joring). Associated with the dacite dome is a diatreme complex comprising a series of fault-controlled phreatomagmatic breccias; two units are recognised, a silicified breccia (sBPM) which is commonly well-mineralised and was fractured and crackle-brecciated during the main stage of mineralisation, and a late-stage clay-rich breccia (cBPM) which is typically unmineralised.

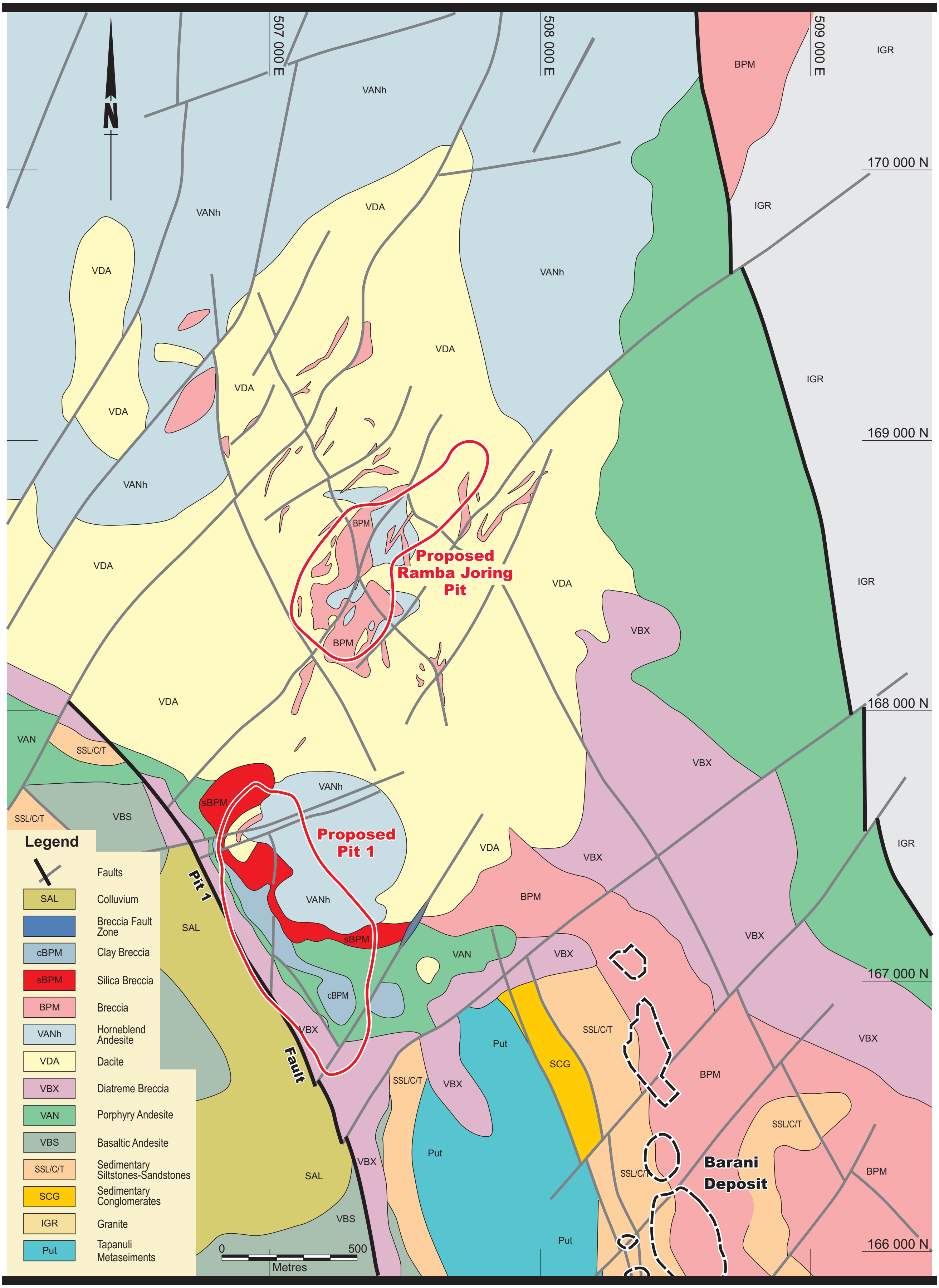
Overlying the older units is the Quaternary Toba Tuff, which forms a prominent plateau to the north of Martabe but is restricted to small erosional remnants in the Martabe area.

The stratigraphic sequence is summarised in Table 6.1.

Table 6.1

Martabe Stratigraphic Sequence

System	Age	Code	Description
Toba Tuff	Quaternary		Rhyolite tuff and pumice
Dacitic Dome and Diatreme	Late Miocene	VDA, VANh, BPM	Dacite porphyry, hornblende andesite, and multi-phase phreatomagmatic breccia either silicified (sBPM) or clay-rich (cBPM); sBPM is a major host rock, particularly where strongly leached and silicified
Angkola Volcanics	Miocene	VBS, VAN, VBX	Basaltic andesite, porphyritic andesite, and volcanic breccia; VAN and VBX are important host rocks; mineralisation is typically associated with silica alteration and crackle-brecciation
Barus Formation	Oligocene/Miocene	SED	Conglomerate, sandstone and siltstone; underlie most of the Martabe district
Sibolga Granite Complex	Triassic	IGR	Correlated with the Sibolga Granite, approximately 209Ma
Tapanuli Group	Permian	Put	Carbonaceous meta-sediments, marine turbidite, greywacke, shale, slate



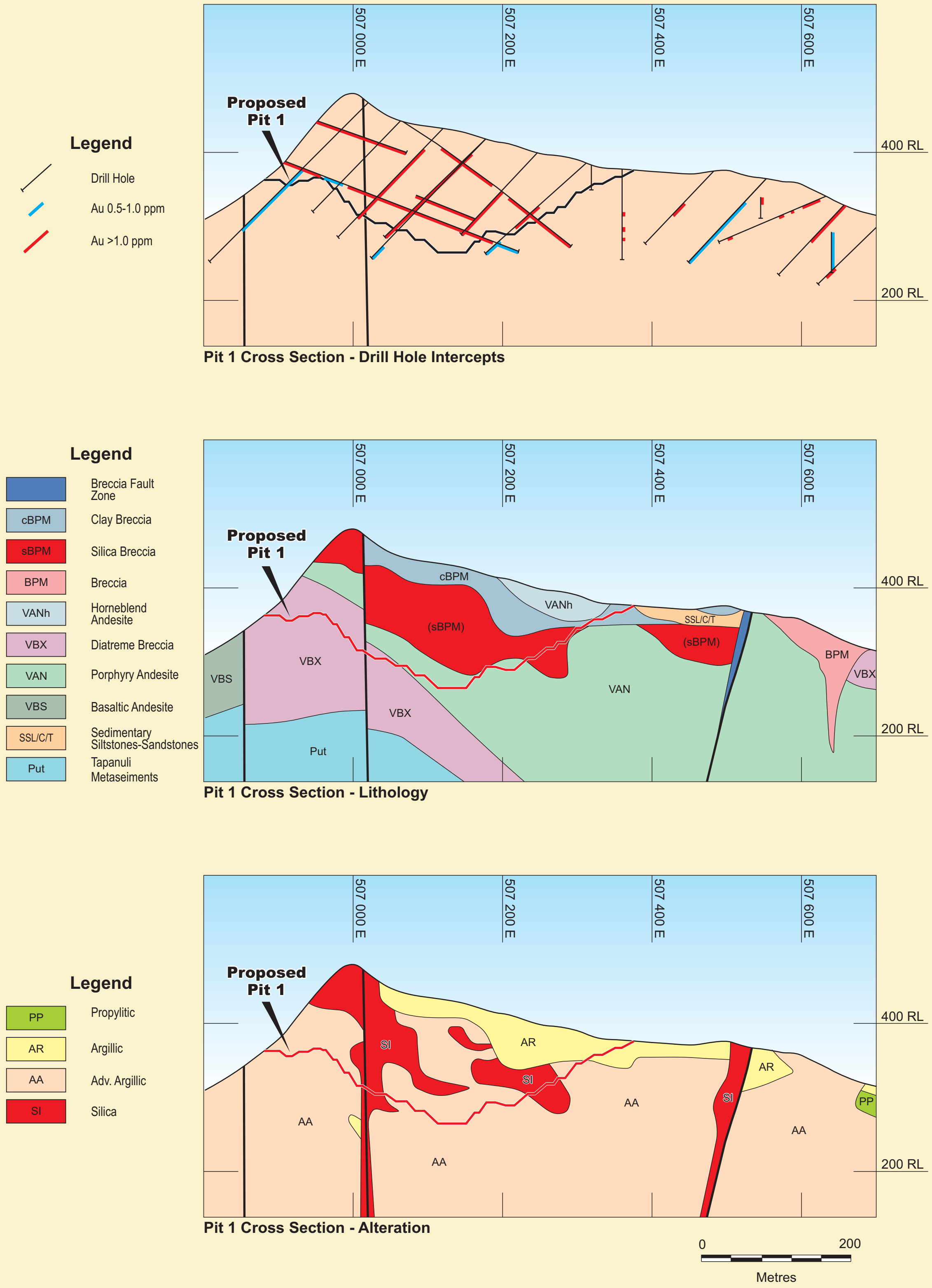
Martabe Project

Figure 3

GEOLOGICAL PLAN

BDA - 0108

Behre Dolbear Australia Pty Ltd



Martabe Project

Figure 4

GEOLOGICAL SECTIONS

BDA - 0108

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6.3 Structure

Major fault structures control the distribution of the principal geological units and have a major influence on the distribution of the mineralisation. The northwest striking faults such as the Pit 1 fault are considered part of the dextral strike-slip Sumatran fault system. In addition to strike slip movement a significant vertical component is indicated. The Pit 1 fault to the west, and the Granite Contact fault to the east, form a graben in which the Tertiary volcanics, dacites and breccias are preserved in a downthrown block (Figure 3).

Although the Pit 1 fault strikes northwest, the majority of the ore controlling faults strike at an acute angle to the north. These faults appear to have controlled the emplacement of the dacitic dome complex and hydrothermal alteration centres are aligned along this trend. North-northeast faulting appears to impact on the diatreme dykes and silicified zones, particularly in the Ramba Joring area.

6.4 Mineralisation

The gold-silver mineralisation at Martabe is of the high sulphidation epithermal type, hosted largely within the dacitic dome and diatreme complex. Mineralisation occurs generally in brecciated and siliceous zones, associated with silicic and advanced argillic quartz-alunite-kaolinite alteration grading outward into clay-rich argillic and chloritic facies (Figure 4). Acidic hydrothermal fluids leached the rocks leaving residual silica which has produced a vuggy, permeable host as well as a competent rock subject to brittle fracture. There is a strong correlation between mineralisation and silicification. Higher grades are commonly associated with late-stage fracturing and crackle-type brecciation. The clay-altered breccias tend to form a capping

Known mineralisation extends over approximately 6km of strike in five principal locations, Barani, Pit 1, Ramba Joring, Tor Uluala and Uluala Hulu, from south to north. Mineralisation outcrops along the ridges, and is typically deeply oxidised to depths in excess of 120m, though the oxidation profile is highly irregular. Within the oxide zone the original sulphides are oxidised to haematite and goethite. Primary copper sulphides are oxidised and largely leached. Gold is fine-grain and fairly evenly distributed through the host lithologies, though typically higher grades are associated with the more silicified zones (Figure 4).

Below the base of oxidation is a transition zone of mixed oxide and sulphide material. The thickness of the transition zone is variable, but averages approximately 50m. The primary mineralisation below is characterised by pyrite-enargite (copper arsenic sulphide), with minor covellite (copper sulphide), sulphur, pyrite, barite and marcasite; however, copper grades are relatively low and rarely exceed 0.2% Cu. Silver is present as proustite (silver arsenic sulphide) and pyrargyrite (silver antimony sulphide).

Pit 1 and Ramba Joring mineralisation styles are generally similar. Mineralisation at Barani is somewhat different and is mainly hosted by steeply dipping quartz veins and sheeted quartz veins, together with hydrothermal breccias and silicic-altered rocks proximal to the veins.

6.5 Exploration Potential

There is considerable exploration potential within the Martabe area. Relatively little detailed exploration has been undertaken in the general COW area, as initial regional geochemical surveys focussed attention on the Martabe area as geochemically anomalous. BDA has not undertaken a systematic review of the wider exploration potential, and has focussed primarily on the Pit 1 prospect and the current LOM plan; however BDA notes that significant mineralised intersections have been obtained at adjacent prospects and further afield and BDA considers the Martabe area in general to have significant potential for further economic mineralisation.

Within the Martabe area, five mineralised systems have been identified, Pit 1, Ramba Joring, Barani, Tor Uluala and Uluala Hulu. Resources have been defined at Pit 1, Ramba Joring and Barani, but reserves at present are restricted to Pit 1; drilling at the other prospects is at a relatively early stage, however, economic thicknesses and grades have been intersected at each location.

Significant drilling has been carried out at Barani in 2008 (64 holes, 7,151m); the northern part of the Barani project underlies the planned TSF, so it is important to determine at an early stage before TSF construction if these zones warrant economic extraction. To date it appears that the northern parts of the Barani deposit are relatively minor and the principal mineralisation lies to the south of the TSF.

Additional drilling has been carried out at Pit 1, Ramba Joring, Tor Uluala and Uluala Hulu and further work is planned. In total 164 holes were drilled in 2008. In BDA's opinion it is likely that additional mineable reserves will be defined, leading to an extension of mine life. At depth at Barani, relatively high grade quartz veins have been intersected, suggesting a possible future potential for a high grade underground operation. Again, substantial work is required before any reasonable estimate of underground potential is possible.

Exploration work is also ongoing in the wider COW area, investigating prospects which could supply additional feed to the Martabe project, and other stand-alone prospects. This work includes geological mapping, geochemical sampling, geophysical surveys including Induced Polarisation studies, and also diamond drilling, and where appropriate, reverse circulation drilling. Significant drilling has been undertaken on some prospects with, for example, 52 holes drilled in the Gambir-Kapur area to the south of Martabe. The principal prospects on which work is planned for 2009 include (from north to south) Tango Papa, Baning, Tani Hill, Golf Mike, Gambir-Kapur, Southern Corridor, Aek Goting, Rantan Panjang and Panyabungan areas. PTAR has professional geological and support staff well capable of carrying out such a programme.

Conclusions

The geology and mineralisation controls at Pit 1 are reasonably well understood, but the geology is complex and mineralisation is both structurally and lithologically controlled. Local controls are not always well defined, and this will await detailed infill and grade control drilling. Selected infill drilling at Pit 1 within the area planned for initial mining has largely confirmed the previous interpretations and grade estimates. Drilling at the other prospects is wider spaced and the geology is generally less-well defined. However, significant intersections have been achieved and the potential for further work to outline additional mineable mineralisation is considered to be high. There are a number of prospects with known mineralisation within the wider COW area and further follow-up work is warranted.

7.0 GEOLOGICAL DATA

BDA has not undertaken an audit of the geological data as part of this review. The following information is based on discussions with project staff, and review of geological logs and drill core, and consideration of sampling and assaying processes and procedures. RSG Global, now merged with Coffey Mining, visited site several times and undertook a detailed check of processes and procedures as part of the resource estimation process, and undertook database checking and verification; BDA has reviewed RSG's various reports on the geological data.

7.1 Drilling

All sample information is based on diamond drilling. Diamond holes have been drilled along sections approximately normal to the strike of the mineralised zone. Holes have typically been drilled at PQ and HQ size, with a lesser proportion of NQ size core; triple-tube equipment has been used to maximise core recovery. At Pit 1 drill spacing is generally at 50m along east-west section lines 50m apart. Infill drilling of a central portion of the deposit (Years 1-3 production) has decreased the hole spacing to approximately 25 x 25m over this area. At Ramba Joring the hole spacing is generally along lines spaced 50m apart and oriented northwest-southeast. At Barani drilling over the central portion of the deposit is on an approximate 50 x 100m grid, with 100m spacing or wider over the peripheral areas; drill lines are oriented east-west. Hole inclinations on all deposits vary according to the geology and the accessibility of drill sites. At Pit 1 a number of holes have been drilled at shallow angles from wooden platforms constructed on the steep western side of the ridge. All drilling is based on helicopter support or the use of man-portable rigs, as there has been no vehicular access to any of the prospects.

As of June 2008, 257 holes had been drilled at Pit 1 (41,792m), 146 holes at Ramba Joring (22,819m) and 119 holes at Barani (17,857m). Core recovery is generally good, averaging 92-93% through the mineralised intervals in Pit 1 and Ramba Joring and 90% in Barani.

Limited twin drilling has been carried out but a number of holes cross in close proximity and holes drilled for metallurgical purposes sometimes duplicate earlier holes. RSG Global reports that where comparative data is available, assays are reasonably consistent and of the same order of magnitude.

7.2 Survey

All holes are surveyed at the collar and at 50m intervals downhole, using Eastman single shot cameras. RSG Global reports that deviations are generally minimal. Surface topography is based on digital terrain modelling, based on aerial photography. Over Pit 1, this data has been supplemented with 100m-spaced surveyed sections.

7.3 Logging

Drill hole cores are logged for lithology, weathering, alteration, structure, mineralisation and for geotechnical data including RQD (rock quality designator) measurements. All drill core is photographed. All potentially mineralised core is marked up for sampling.

7.4 Sampling and Sample Preparation

All potentially mineralised core is diamond sawn, with half core dispatched for analysis and half retained in the core box as a permanent record. The majority of samples are a standard one metre length, but take into account geological boundaries. Most cores are completely sampled. Sample preparation is undertaken at the PT Intek Testing Services ("ITS") sample preparation facility in Padang. Samples are dried, and crushed to 2mm before splitting approximately 1.5kg, which is then pulverised to -200 mesh. A 250g pulp is then split and forwarded to the ITS laboratory in Jakarta for analysis. Prior to July 2004 samples were crushed to -10mm before splitting, but the finer crush was adopted to reduce sampling variance.

7.5 Assaying

The standard suite of analyses includes Au, Ag, Cu, As, Pb, Zn and Hg, though the standard analyses have varied over time. Gold analyses are by 50g fire assay with AAS finish. Ag, Cu, Pb and Zn are analysed by atomic absorption spectrometry ("AAS") following hydrochloric/perchloric digest. Arsenic is analysed by X-ray fluorescence ("XRF") and Hg by cold vapour AAS. Analyses for cyanide soluble Au, Ag and Cu are also carried out.

7.6 Quality Assurance/Quality Control ("QA/QC")

QA/QC protocols consist of insertion of standards and blanks, submitted at a rate of one per batch of 20 samples. In recent years certified standards supplied by Genalysis have been used; earlier uncertified standards were supplied by Normandy Exploration. Most standards relate primarily to gold, with a small number of standards used to check base metals. Blank material was provided by Normandy Exploration or sourced from local barren andesitic rock. Laboratory internal standards and duplicate pulp analysis provided additional QA/QC checks. Approximately 3% of pulps were sent to Genalysis in Australia.

Batches containing a standard that reported more than twice the standard deviation of the expected value were re-assayed. Most anomalous results were related to mis-labelling of inserted standards. No significant bias or long term drift of standard results were noted. Genalysis duplicate pulp gold assays gave comparable results to ITS. Silver assays showed ITS to be biased slightly high, particularly for higher grade results.

BDA notes that no duplicate samples from coarse or fine reject material were submitted; consequently there is no QA/QC monitoring of sample preparation other than the inserted blanks.

Overall the QA/QC programme has confirmed the general reliability of the data other than possibly high silver grades and the limited checking on sampling (as opposed to assaying) procedures. The sample and assay data has been reviewed in detail by Coffey Mining and is considered to provide an appropriate base for resource and reserve estimation.

7.7 Density

Bulk density measurements have been made on selected core samples of approximately 0.2m in length using the water immersion method, weighing in air and water. Samples were dried and then wrapped in plastic film before measurement. In total 2,939 samples have been tested from Pit 1, 2,437 from Ramba Joring and 468 from Barani. Mean densities have been determined for the various different rock types and values flagged against rock types in the resource model. Bulk densities for the main mineralised lithologies range from 2.40 to 2.52.

Conclusions

BDA has not undertaken an audit of the geological data as part of this review. From discussions with project staff, and review of geological logs and drill core, BDA considers that the geological investigations have been thorough and the drilling, logging, sampling and assaying procedures adopted are appropriate and in accordance with industry standards. Core recovery is good and sample preparation and assaying procedures are generally appropriate. QA/QC results indicate that the sampling and assaying data are generally reliable and without material bias, although QA/QC procedures could be improved by the submission of coarse and fine reject duplicate samples to monitor sample preparation in the laboratory. Bulk density determination procedures appear generally appropriate; BDA considers that a review of the bulk density database by oxidation zone would be worthwhile. Overall, in BDA's opinion, the geological data base forms an appropriate and reasonable basis for resource and reserve estimation.

8.0 RESOURCE AND RESERVE ESTIMATION

8.1 Standards and Definitions

A mineral resource is defined in the Australasian Joint Ore Reserve Committee JORC Code as an identified in-situ mineral occurrence from which valuable or useful minerals may be recovered. The Martabe resource figures represent the total tonnage of in-situ mineralisation delineated within the drilled areas and above the defined cut-off. Resources are classified as Measured, Indicated or Inferred according to the degree of confidence in the estimate. A Measured Resource is one which has been intersected and tested by drill holes or other sampling procedures at locations which are close enough to confirm continuity and where geoscientific data are reliably known. An Indicated Resource is one which has been sampled by drill holes or other sampling procedures at locations too widely spaced to ensure continuity, but close enough to give a reasonable indication of continuity and where geoscientific data are known with a reasonable level of reliability. An Inferred Resource is one where geoscientific evidence from drill holes or other sampling procedures is such that continuity cannot be predicted with confidence and where geoscientific data may not be known with a reasonable level of reliability.

An ore reserve is defined in the Australasian JORC Code as that part of a Measured or Indicated Resource which could be mined and from which valuable or useful minerals could be recovered economically under conditions reasonably assumed at the time of reporting. Reserve figures incorporate mining dilution and allow for mining losses, and are based on an appropriate level of mine planning, mine design and scheduling. OZ Minerals' Martabe reserves represent those portions of the resource which can be economically mined under the defined parameters, and which are planned to be mined within a designed open pit. The reserves are included within the overall resource figures. Proved and Probable Reserves are based on Measured and Indicated Resources respectively. Under the Australasian JORC Code, Inferred Resources are deemed to be too poorly delineated to be transferred into a reserve category.

OZ Minerals has published under the Australian Stock Exchange JORC Code requirements resource and reserve statements detailing the estimated resources and reserves and the relevant processes and procedures as of June 2008. Included in these statements are the names and consents of the relevant Competent Persons. In all cases, as well as OZ Minerals technical specialists, the Competent Persons include professional independent consultants from well-regarded consulting groups such as Coffey Mining and Golder Associates.

8.2 Resource Estimation

Geological Modelling

The Martabe resource estimate represents the tonnage of in-situ mineralisation delineated within the drilled area and above the defined cut-off. Resources have been estimated for Pit 1, Ramba Joring and Barani. The methodology adopted is broadly similar, but the specific description below relates principally to Pit 1. The estimates have been based on geological domains which have been defined on cross section and long section and in three dimensions to produce wireframes for resource estimation. The domains are based on lithological, alteration and oxidation boundaries interpreted by the project geologists and consultants from drill hole data and logging.

Ten lithological domains and six alteration domains have been defined and these have been combined into four principal mineralisation domains for grade estimation, comprising:

- *Zone 10* - soil, scree, colluvium
- *Zone 20 Waste Zone* - unaltered, propylitic or argillic altered rocks
- *Zone 30 High Grade Zone* - silicic altered sBPM, BFZ, VAN, VBX
- *Zone 40 Low Grade Halo Zone* - advance argillic altered sBPM, BFZ, VAN, VBX.

Zone 30 consisting of silicic alteration tends to define relatively high grade Au-Ag mineralisation while the advanced argillic alteration in Zone 40 contains more variable but in general lower grade Au-Ag mineralisation. Although the principal lithological and structural controls on mineralisation are reasonably well understood, Coffey noted that areas of high grade gold mineralisation in Pit 1 do not exhibit good continuity between 50m spaced drill holes; continuity between holes improved with the 25m x 25mm infill drilling but is still poor in some areas. A low grade 0.5g/t Au cut off was used to define an outer mineralisation envelope for Zones 30 and 40 in Pit 1 and Ramba Joring; this was dropped to 0.3g/t Au for Barani.

Three oxidation domains, oxide, transitional and fresh, were defined using a combination of geological logging of the degree of oxidation, and the ratios of cyanide soluble gold to total gold ("AuCN/Au") and cyanide soluble copper to total copper ("CuCN/Cu"). Ten metre composites of the gold and copper ratio data were used to reduce variability of the raw data. Coffey noted that the oxidation surfaces were smoothed in many areas and considered further interpretation of both the logging and assay data was required.

Oxidation domains were defined nominally as follows:

- *Oxide (code OXSTATE 1)* - >0.6 AuCN/Au and <0.3 CuCN/Cu
- *Transitional (code OXSTATE 0.5)* - 0.5-0.6 AuCN/Au and 0.3-0.6 CuCN/Cu
- *Fresh (code OXSTATE 0)* - <0.5 AuCN/Au and >0.6 CuCN/Cu

In the Pit 1 deposit, the oxide zone varies from 10-70m, averaging around 50m; the transitional zone also varies considerably with a maximum thickness of around 70m. Oxidation boundaries are irregular with oxidation locally extending down structures such as faults and breccia zones.

Geological modelling for Ramba Joring was carried out using similar procedures as for Pit 1, although the structure is slightly more complex, gold mineralisation is less pervasive and of a slightly lower tenor. Continuity of high grade gold mineralisation is generally lower than Pit 1, and the silver grades are substantially lower. The Ramba Joring deposit is divided by faulting into two sections, the main Ramba Joring section and the smaller Ramba Joring East section.

The epithermal gold distribution at Barani is slightly different, being primarily hosted by steeply dipping quartz veins, sheeted quartz veins and hydrothermal breccias and silicic alteration zones adjacent to the veins, cutting across the largely sub-horizontal lithologies. Five sub-vertical to steeply west-dipping mineralised zones were domained. Oxidation zones were defined only by AuCN/Au ratios; CuCN/Cu data was not available.

Resource Methodology and Estimation Procedures

BDA has reviewed the June 2008 resource processes and procedures and considers them reasonable, in accordance with industry standards and in compliance with the JORC code.

For all three deposits Coffey developed geological 3D models in conjunction with PTAR geologists using Datamine software. Coffey used Isatis software to carry out geostatistical analysis and variography and establish search criteria, and used Datamine to carry out the resource estimation using Ordinary Kriging for grade interpolation.

Resource parameters used by Coffey were as follows:

- drill hole samples for all three deposits were regularised to 2m composites
- high grade cuts based on spatial distribution and probability plots were applied to Au, Ag, Cu, AuCN, AgCN, and CuCN; gold values for Pit 1 were cut to 25-30 g/t Au and for Ramba Joring and Barani in the range 8-10g/t Au; generally high grade cuts affected less than 1% of the composites in each domain; cut composite data sets were used in both variography and kriging of Zones 30 and 40; values for Ag, Cu, AuCN, AgCN, and CuCN were also cut
- block size for all three deposits was 25m east-west, 25m north-south, and 10m RL, with sub-blocking to 6.25m east and north and 2.5m RL
- average bulk densities were flagged by lithology domain and block values calculated by the proportion of each lithology in the block; Pit 1 bulk densities for the mineralised domains ranged from 2.40 to 2.52; Ramba Joring values ranged from 2.24-2.26; a value of 2.40 was applied to all Barani mineralised domains
- variography for Pit 1 used correlograms for spatial analysis of grade data for Au, AuCN, Ag, AgCN, Cu, CuCN, As, Hg, S and C; for Ramba Joring correlograms were developed for Au, AuCN and Ag and for Barani only Au and AuCn; Coffey assessed the Pit 1 variography as moderate to good with well defined nugget effects and shallow northerly and easterly plunges
- variogram models in Pit 1 for Au, Ag and Cu typically consisted of moderately high nuggets with 30-35% of total variance, two spherical range structures with the first range of 10-80m with the shortest ranges in the RL direction and longest in the north-south direction; nugget and first range accounted for 70-80% of the total variance (variogram models varied slightly between Zones 30 and 40); Ramba Joring and Barani had similar combined percentages of total variance although nuggets and ranges tended to be lower
- grade interpolation was carried out in two passes with a progressively expanded search ellipse and less restrictive minimum sample search criteria; the first pass search ellipse was a maximum 80m for Au, AuCN, Ag, and AgCN and 125m for other variables; the second pass ellipse used twice the initial search dimensions;

minimum and maximum number of samples searched per block varied between domains; for Zones 30 and 40, minimum samples were 30-35 for the first pass and 20-25 for the second pass; there was no minimum octant search applied, however a maximum number of 8 samples from one hole was set; block discretisation was 12 x 12 x 6; parameters for Ramba Joring and Barani varied in some respects but a similar approach was taken with grade interpolation

- domain boundaries in Pit 1 and Ramba Joring for Zones 10, 20, 30 and 40 were treated as hard boundaries for grade interpolation
- block grade estimates were validated both geostatistically and visually against the raw data and sections.

Coffey categorised the resource into Measured, Indicated and Inferred for Au and Ag using a combination of factors including first/second pass search, distance to nearest sample, number of samples, block variance and confidence in the geological interpretation and perceived continuity of mineralisation in the various zones

Resource Results

The resource estimate as determined for the June 2008 resource statement at a 0.5g/t Au cut off is shown in Table 8.1.

Table 8.1

Summary of Martabe Resources - June 2008 (0.5g/t Au cut off)

Deposit	Category	Tonnage Mt	Gold Grade Au g/t	Silver Grade Ag g/t	Contained Au Mozs	Contained Ag Mozs
Pit 1	Measured	3.8	2.9	46	0.354	5.568
	Indicated	47.7	1.7	22	2.604	33.513
	Inferred	39.7	1.1	13	1.388	17.201
	Subtotal	*91.2*	*1.5*	*19*	*4.345*	*56.282*
Ramba Joring	Inferred	36.6	1.0	4	1.191	5.207
	Subtotal	*36.6*	*1.0*	*4*	*1.191*	*5.207*
Barani	Inferred	10.4	1.1	-	0.368	-
	Subtotal	*10.4*	*1.1*	*-*	*0.368*	*-*
Total	Measured	3.8	2.9	46	0.354	5.568
	Indicated	47.7	1.7	22	2.604	33.513
	Inferred	86.6	1.1	8	2.947	22.408
	Total	**138.1**	**1.3**	**14**	**5.905**	**61.489**

Note: cut off 0.5g/t Au; Ag grade not determined for Barani and therefore omitted from totals; Barani Ag grade estimated at 1-3g/t Ag but silver totals and grade calculated assuming no contribution from Barani

Additional infill drilling was carried out over a central portion (Years1-3 production, between sections 167000N and 167300N) of the Pit 1 pit in 2008. There has been no material change to the previous overall estimate but the infill drilling has allowed a portion of the deposit to be upgraded to a Measured category.

Further infill drilling will be carried out as part of detailed operational grade control work.

8.3 Reserve Estimation

Reserve Methodology

Under the JORC Code, reserves represent that part of a Measured or Indicated Resource which is planned to be mined, incorporating mining dilution and allowing for mining losses, and on which a sufficient level of mine planning, mine design and scheduling have been carried out to demonstrate economic viability. Under the JORC Code, Inferred Resources are deemed to be too poorly delineated to be transferred into a reserve category.

The only deposit at Martabe for which reserves have been estimated is the Pit 1 deposit. Coffey estimated the July 2008 ore reserve for Pit 1 based on the June 2008 resource block model. Coffey previously estimated ore reserves for Pit 1 in 2007 for the DFS.

Coffey used the following reserve parameters:

- reserves were based on a conventional open pit bulk mining operation with a production rate of 4.5Mtpa
- Whittle 4X pit optimisation was used to define the optimum pit shell using inputs including geotechnical parameters, mining parameters, metal prices, metallurgical recoveries, mining and processing costs and royalties
- pit optimisation used a gold price of US$700/oz and a silver price of US$11/oz

- mining dilution was set at 10% and mining recovery 95%
- pit slope angles ranged from 40-50º
- metallurgical recoveries were based on the four main ore types (SAH, SAL, AAH and AAL, being silica-altered, high and low oxidation, and advanced argillic altered, high and low oxidation) identified and tested for the DFS; gold recoveries range from 55% to 80% and silver recovery averages 52%; testwork showed correlation of gold head grade with gold recovery was poor and hence formulae were developed by Intermet Ltd which utilised the kriged resource block values for Au, AuCN/Au and Cu; similar formulae were developed for silver recovery
- mining and processing costs were estimated and appropriate allowances were made for royalties and other costs
- cut-off grade is expressed in terms of equivalent plant recovered dollars per tonne; on this basis, the cut-off grade has been estimated at US$13.46/t, approximately equivalent to a recovered grade of 0.6g/t Au or an in-situ grade of approximately 0.8g/t Au.

Reserve Results

Based on the above parameters an 'optimum' pit was defined containing the in-pit reserves shown in Table 8.3.

Table 8.3

Summary of Pit 1 Open Pit Reserves - June 2008

Category	Tonnage Mt	Gold Grade Au g/t	Silver Grade Ag g/t	Contained Au Ozs	Contained Ag Ozs
Proved	3.9	2.7	42	0.336	5.288
Probable	31.8	1.8	24	1.883	24.419
Total	**35.7**	**1.9**	**26**	**2.219**	**29.707**

Note: reserves estimated at a gold price of US$700/oz and silver price of US$11/oz

It should be noted that the designed open pit includes 1.9Mt of Inferred resource material at an average grade of 1.9g/t Au; this material has been designated as waste in the mining schedules but there are reasonable prospects that some of this material may be upgraded to ore based on detailed grade control drilling.

Based on the projected mining rate the defined tonnage would support a nine year mine life, with a waste to ore stripping ratio of approximately 0.7:1. The final pit extends to an RL of 240mRL, approximately to the RL of the western colluvial plain and around 270m below the current ridge elevation. However, as much of the ridge will be removed during mining, the final pit walls typically range from 60-200m in height.

8.4 Future Reserve Potential

In addition to the Pit 1 deposit, it is likely that mineable reserves will be defined at one or more of the adjacent prospects. Initially the resources at Ramba Joring and Barani must be upgraded to at least an Indicated category to provide sufficient level of confidence to undertake a reserve study. AMC Consultants Pty Limited ("AMC") in a 2008 review stated that a further two years reserve would be a reasonable projection. BDA concurs and considers that it is likely that the reserve could be extended beyond this, provided the current gold price is maintained. Exploration drilling in 2009 has continued to confirm the presence of significant mineralisation within the adjacent prospects. The area is considered prospective and BDA considers there is a high probability of defining additional mineable reserves.

Conclusions

The resource modelling has been professionally undertaken by an independent group, with input and overview from Oxiana, and more recently OZ Minerals staff. Data validation has been thorough and the resource methodology and categorisations are considered generally appropriate. The diamond drill data gives a reasonable coverage at Pit 1 and provides an appropriate basis for resource and reserve estimates. Additional drilling is required at Barani and Ramba Joring to bring the estimates to a comparable level of confidence. Measured resources have been defined by infill drilling at Pit 1; the resource categorisations are considered appropriate and may be slightly conservative given the broad mineralised zones, but overall are considered an appropriate reflection of the complex geology and alteration domains and the grade variability. Given the difficult topography BDA considers that further infill drilling at Pit 1 is best achieved when vehicle access has been established and systematic grade control drilling can be carried out

9.0 MINING

9.1 Overview

The mining studies carried out to date have progressed from conceptual, prepared in 2005, to reasonably detailed layouts, completed in 2007/08. From this work, it has been estimated that the open pit at Pit 1 is likely to extend to a depth of around 270m below the present ridge, and that the mineable reserve is likely to be of the order of 36Mt, with a waste to ore stripping ratio of 0.7:1. An initial mill production rate of 4.5Mtpa over nine years has been proposed, with an ore mining rate of around 6-7Mtpa for the first six years. Based on the projected schedule, referred to as the High Grade Martabe version, the higher grade ore will be processed while the lower grade ore will be stockpiled, to be reclaimed and processed in Years 6-9 after mining has been completed. If additional reserves are defined at the adjacent prospects, the operation is likely to be extended and the processing of the low grade ore may be deferred.

9.2 Mine Planning

Mine planning in the DFS and in the more recent work has been based on the following parameters and assumptions:

- *Geotechnical* - the original detailed assessment, prepared by Golder has been re-assessed by Coffey Mining and endorsed; berm angles of 60-70° have been assumed, with overall pit slopes of around 45-50°.
- *Mining Losses and Dilution* - dilution allowances of a nominal 10% have been included in the estimates and mining recovery has been assumed to be 95%; given the broadly distributed mineralisation within the pit, ore recovery within the pit limits would be expected to be high and mining dilution relatively low.
- *Mining Costs* - an average of around US$2.52/t has been estimated for all material over the LOM, based on fuel price of US$1.11/L of diesel. Plans involve the use of contract mining, drilling and blasting, using 40t all-wheel drive articulated trucks, loaded by hydraulic excavators in backhoe configuration, and supported by the normal ancillary equipment (drills, dozers, graders etc).
- *Ore and Waste Haulage* - the locations of the stockpiles are still to be finalised, and will be based on a combination of technical, cost and environmental factors; BDA understands that an area north of the TSF has been identified. The initial concept of mining at the 4.5Mtpa milling rate has been replaced by the High Grade Martabe version, which is an accelerated mining schedule that accesses the higher grade ore earlier in the schedule; this will result in a requirement to stockpile up to 15Mt of lower grade material.

The mine plan for the Pit 1 orebody, developed by Coffey Mining as part of the DFS, involves a single-stage low stripping ratio open pit, with all waste being contained within the TSF, either as part of the wall or as cover on the tailings. The pit design was optimised at a gold price of US$650/oz with Whittle Four-X® software in Vulcan®, using Ordinary Kriging to determine block grades. The mining assumptions include dilution of 10% (at adjacent block grades) and mining recovery of 95%, both of which are considered reasonable, given the massive nature of the mineralisation. In addition, because mining blocks will be defined by a cut-off grade, the risk of high levels of dilution is mitigated, in that the diluting material will commonly be low-grade mineralisation.

The DFS plan was for ore mining to match the milling rate at around 4.5Mtpa. However, further optimisation studies indicate that mining the orebody faster provides earlier access to higher grade ore and that the economics favour this approach. The schedule in the financial model "OZ_Minerals_Martabe_Asset_Model_Data_Room _V5[1]" adopts significantly higher mining rates than the DFS, peaking at around 13Mtpa (ore and waste) from 2010 to 2012, then progressively reducing. As a result, mining will effectively be conducted over approximately six years, starting in 2010 through 2015. The schedule differences require an additional excavator and five additional trucks when compared with the DFS; provision has been made in the financial model for the higher mining rates and stockpiling and reclaim costs, and the size of the mining fleet has been adjusted to suit the revised schedule. Details of the latest plans have not been provided, but BDA notes that the advanced mining scenario potentially represents some additional risk, particularly when it is stated in the DFS that there are limited areas available for stockpiling; however, it is noted that vertical advance rates remain relatively low and that the bench areas are large enough to accommodate the additional mining equipment. It should be noted that stockpiles are likely to build up from around 2.5Mt in 2011 to approximately 15Mt in 2015, excluding any provision for additional stockpiling of low-grade marginal material.

9.3 Mine Scheduling

A range of production rates were tested; as noted, the optimised schedule for mining is significantly different to that in the DFS. Based on current parameters, a six year mining life has been selected as the preferred option, commencing operations at 7.1Mtpa of ore and peaking at 7.5Mtpa. BDA notes that these levels of mining, which are significantly in excess of milling capacity, will require substantial stockpiles, starting at around 2.5Mt in 2011 and building up to around 15Mt in 2015. Over the full LOM, approximately 36Mt of ore will be mined and processed.

Mining operations will be conducted by contractors, using backhoe-configured 80t hydraulic excavators and articulated all-wheel drive 40t rear-dump trucks. The fleet selection is considered appropriate for both pioneering and production activities, as the high rainfall and soft ground conditions preclude the use of the more conventional rigid frame rear-drive dump trucks. The proposed contractor fleet is considered capable of handling the required material movements. The Martabe area is subject to an monsoonal conditions; allowance has been made in the schedule for lower mine productivity during the rainy months, with the ore stockpiles built up during the dry season to assist in maintaining scheduled mill production. It is planned that all haulroads will be sheeted with rock to ensure reasonable conditions for mining throughout the year.

The waste to ore stripping ratio over the LOM is approximately 0.7:1. Most of the material will be drilled and blasted in 5m high benches, with mining on 2.5-3m flitches. Grade control in the pit will be conducted using reverse circulation (“RC”) drills, with holes on a 12.5 x 12.5m pattern extending several benches below the current mining horizon. Mining block grade estimation will use OK, with ore and low-grade material being mined and stockpiled separately. Ore will be stockpiled according to rock-type and grade and the primary crusher will be fed by front-end loader working from stockpile, together with direct tipping from open pit dump trucks; 50-70% of ore is scheduled to be direct tipped.

9.4 Geotechnical and Hydrological Aspects

Geotechnical investigations based on drill-hole logs and core analysis have identified eleven basic rock types, with variable strengths and lithologies in different areas of the pit. Pit wall designs are based on stability analyses conducted by Golder in 2005 and reassessed by Coffey Mining in 2007. Pit walls within the weathered, oxide zones will be laid back at lower angles to ensure stability.

The main area of geotechnical concern appears to be an easterly-dipping clay breccia that will be present in the east wall in a zone about 40m thick and 60m below surface. It is proposed that this material will be mined at 6m inter-berm height, 60° batter angle, 9.4m berm width and 25° inter-ramp angle. In combination with the proposed water depressurisation drain holes, these parameters should provide reasonable levels of safety for the long-term integrity of the wall. The final pit walls are typically in a range from 60-200m in height, with the pit bottom at 240mRL, approximately 270m below the current ridge at 510mRL.

9.5 Life of Mine Plan/Production Schedule

The production schedule shown in Table 9.1, based on the current financial model, corresponds to the LOM plan for the US$650/oz gold price scenario. Under the optimised mine plan, mining will be complete after six years, with significant quantities of lower grade ore stockpiled and rehandled to the crusher as required by the plant. The location and size of the stockpiles has not been finalised, but BDA understands that an area north of the TSF has been identified; sufficient area will need to be available to accommodate around 15Mt to satisfy the proposed mining schedule. The schedule is based on the mining of 62Mt of ore and waste from 2010-2015.

Table 9.1

Martabe Operation - Projected Mining Production Schedule

Item	Unit	2010	2011	2012	2013	2014	2015	2016	Total
Ore Mined	Mt	7.12	6.12	6.96	7.46	5.95	2.09	0	35.7
Waste Mined	Mt	5.44	6.83	6.03	4.47	2.56	0.63	0	26.0
Total Material Mined	Mt	12.56	12.95	12.99	11.93	8.51	2.72		61.7
Strip Ratio	W:O	0.8	1.1	0.9	0.6	0.4	0.3	0	0.7

Conclusions

BDA considers that the mine planning estimates and schedules have been prepared in a professional and competent manner. The mining recovery and dilution estimates are considered realistic and provide a reasonable assessment of the practical issues. The mining equipment is considered generally appropriate to the conditions and the proposed scale of operations, although the fleet will be larger than originally proposed. Suitable precautions have been taken to minimise wet season delays. Geotechnical issues appear to have been appropriately addressed, although there is always some risk in high rainfall areas, particularly in regions prone to seismic activity. The proposed mining schedule is considered achievable, but a significant tonnage of ore will be consigned to stockpiles, starting with around 2.5Mt in 2010 and building up to around 15Mt. PTAR has identified an area north of the TSF as the probable stockpile location; however, the topography may force some modification of the schedule and a more modest build-up of stocks.

10.0 PROCESSING

10.1 General

Intermet Engineering Pty Ltd ("Intermet") were engaged to carry out the process and infrastructure design for the DFS for the Martabe project. A 4.5Mtpa carbon-in-leach circuit was selected, comprising primary crushing, stockpiling of crushed ore, two stage grinding in SAG and ball mills with the mills close-circuited by a crusher and cyclones respectively, cyanide leaching and CIL processing, cyanide detoxification and tailings thickening, and gold recovery from activated carbon using a conventional elution, electrowinning and smelting circuit to which a cold cyanide wash has been added to control copper adsorbed onto the carbon.

PTAR engaged Ausenco to review the metallurgical aspects of the DFS and subsequently Ausenco were engaged as the EPCM contractor.

Newmont initially proposed to construct a heap leach operation to process the Martabe ore. However, this alternative was replaced by a CIL plant, because of the environmental risk created by a heap leach operating in a very wet tropical climate and because of the high capital cost of heap leach pads in the mountainous topography at Martabe. BDA considers the change to conventional CIL processing to be prudent and appropriate.

10.2 Process Development Testwork

Process testwork has taken place in seven phases, the first five phases being carried out from 2002 to 2004 at Newmont Technical Services in Englewood, USA. Phase 6 testwork was mostly carried out at Independent Metallurgical Laboratories ("IML") in Perth, with cyanide detoxification and thickening tests carried out by Ammtec and Outotec in their Perth laboratories. A further phase of testwork, yet to be fully reported, has been carried out on a wide range of samples at Ammtec's Metcon laboratory in Sydney.

Testwork Phases 1 to 5

Phases 1 to 3 included progressively more detailed testwork which allowed the preliminary definition of a conventional CIL circuit and from which relationships for the prediction of gold and silver recovery were derived. Phase 4 was carried out to investigate the leaching characteristics of the Ramba Joring deposit, to improve the definition of comminution design parameters, and to verify the recovery predictions from Phases 1 to 4. However, gold recoveries were up to 10% lower than predicted from the earlier work and Newmont concluded that handling methods had compromised the samples; it was postulated that high pressure water washing of the samples had caused gold to be lost. Phase 5 was carried out to replace the Phase 4 work.

Phase 6 Testwork

RSG Global, now a division of Coffey Mining, was engaged to select samples for the Phase 6 metallurgical testwork. Elemental analyses of the Pit 1 master composites tested in Phase 6 and in the 2008 Ammtec Metcon testwork are shown in Table 10.1.

The Phase 6 samples were selected on the basis of the modelled mineralogical domains and the degree of alteration. The master composites selected represent high and low alteration states of both advanced argillic- and silica-altered lithologies.

The Phase 6 testwork, carried out in 2006 and 2007, investigated a wide range of process variables, including grind size and cyanide optimisation, testing of gravity and flotation processes, and the use of leach accelerants such as lead nitrate. The elevated mercury and cyanide-soluble copper assays evident in Table 10.1 had not been noted in previous testwork, and were sufficiently high to require consideration of changes to the process. Organic carbon level was quite low and no preg-robbing effects were evident in the testwork.

Table 10.1

Pit 1 Master Composite Chemical Analyses - Phase 6 and Ammtec Metcon Testwork

Element	Unit	Phase 6 IML Testwork AAH	AAL	SAH	SAL	2008 Ammtec Metcon Testwork SBPM-AA-MC	SBPM-SI-MC	VAN-AA-MC	VAN-SI-MC	VBX-AA-MC	VBX-SI-MC
Au	ppm	2.31	3.04	2.23	2.57	2.56	2.44	1.72	1.74	1.28	2.22
Ag	ppm	15.5	24.9	42.0	39.6	21	61	27	27	15	27
As	ppm	476	580	258	486	325	293	523	389	541	638
Bi	ppm	6.2	39.6	4.9	32.9	12	41	6	77	15	72
Cd	ppm	0.4	0.8	0	1.9	<0.5	0.6	0.8	22	5.1	9.6
Co	ppm	2.5	9.3	2.6	5.2	2	3	5	4	7	3
Cu	ppm	143	535	92.4	702	67	158	140	123	133	176
CN sol Cu	ppm	40	330	34	440	23	132	72	82	67	102
Hg	ppm	1.0	0.6	1.4	1.2	1.5	1.01	0.79	0.82	0.45	0.52
Mn	ppm	88	96	26	25	<0.01	<0.01	<0.01	0.01	0.01	0.01
Ni	ppm	5	22	9	10	7	7	5	6	22	14
Pb	ppm	341	334	152	311	365	321	461	369	864	628
Total S	%	0.93	3.34	0.61	2.41	0.55	1.02	1.25	1.47	2.42	1.68
Sulphide S	%	0.48	3.14	0.28	2.03	0.36	0.71	0.50	0.93	1.66	1.13
Sb	ppm	64.1	90.1	134	147	89	90	90	99	55	91
Se	ppm	14.2	13	10.8	12	na	na	na	na	na	na
Te	ppm	25	59	31	32	na	na	na	na	na	na
Total Org C	%	0.0493	0.0174	0.1148	0.0373	<0.03	0.04	<0.03	<0.03	0.04	0.03
$CO_3^{=}$	%	<0.02	<0.02	<0.02	<0.02	na	na	na	na	na	na
U	ppm	1.54	1.12	1.21	0.83	na	na	na	na	na	na
Zn	ppm	40.5	44.6	5.5	132	9	56	57	180	772	866

Note: Codes for Phase 6 Testwork - AAH is advanced argillic high oxidation, AAL is advanced argillic low oxidation, SAH is silica altered high oxidation, SAL is silica altered low oxidation; Codes for the 2008 Ammtec Metcon Testwork relate to the reclassification of lithology carried out during Phase 6 as described in the Geology and Resource Sections 6 and 8 - SBPM is silicified phreatomagmatic breccias, VAN is porphyritic andesite, VBX is volcanic breccias, AA is advanced argillite alteration; SI is silica alteration, MC is master composite.

The abrasion index data in Table 10.2 indicates that the ores are very abrasive. The rod and ball mill work indices and the JKMRC data indicate that the material is generally very competent.

Table 10.2

Comminution Design Parameters

Composite	Comminution Parameter Ai (g)	RMWi (kWh/t)	BMWi (kWh/t)	A x b
Silica Breccia - Argillic Alteration	0.85	18.75	16.77	42.6
Silica Breccia - Silica Alteration	0.74	19.86	21.48	37.0
Volcanic Breccia - Argillic Alteration	0.82	20.81	18.80	38.6
Volcanic Breccia - Silica alteration	0.86	18.10	22.94	35.4
Andesite - Argillic Alteration	1.25	20.31	19.14	50.6
Andesite - Silica alteration	0.87	19.64	18.88	45.3
Fault Zone	0.70	18.01	20.44	38.3

Note: ore types are those logged during testwork Phases 3, 4 and 5; values are 85th percentile design data from testwork carried out in Phase 4; Ai is abrasion index, RMWi is rod mill work index, BMWi is ball mill work index, A x b is the JKMRC comminution design parameter

Gravity testwork produced poor results, with low gold recoveries to concentrate being obtained in tests over a wide range of mass recovery to concentrate. There was no indication that gravity concentration is justifiable in the Martabe flowsheet.

Flotation testwork was carried out to determine whether precious metal recovery to concentrate was high enough for the flotation tailings to be classified as a final tailing. Only about 50-70% of the gold and up to 75% of the silver could be recovered to concentrate and further leaching testwork on the flotation products indicated that the improvement in recovery generated by separate treatment of the concentrate and tailing was relatively small. On an SAL sample regrinding of the flotation concentrate increased the extractable gold in the concentrate from 61% to 70%; extraction of gold from the flotation tailing was limited to 70%. The conclusions were that a significant proportion of the gold in the ore is associated with the non-sulphide minerals and that the gold associated with both the sulphides and the non-sulphides is overall quite fine. The selection of a whole-of-ore leaching process in these circumstances was reasonable since the benefits of fine grinding of the concentrate were marginal.

Grind optimisation testwork was carried out on the four master composites at grinds ranging from 80% passing ("p_{80}") 75-212 microns ("µm"). Intermet's analysis indicated that coarser grinds tended to produce the best economics. Additional leaching testwork was carried out to evaluate the effect of lead nitrate and oxygen on leaching rates. Neither appeared to produce improved gold extraction; gold leaching rate is initially fast and whilst both techniques produced faster initial leaching, overall gold recovery in 24 hours residence time was not improved. Silver recovery was, however, improved by higher cyanide tenor and replacement of sparged air by oxygen.

Due to the elevated mercury levels in all of the master composites, an assessment was made of the degree to which the mercury in the SAH composite solubilised in the leaching process. Results indicated that 14% of the mercury transferred to either solution or onto carbon. Intermet recommended that no further testwork be undertaken but that the issue should be reconsidered during detailed design. BDA considers that the relatively low capital cost of provision of gas extraction and scrubbing systems in sensitive areas in the gold room is justifiable.

Ammtec Metcon Testwork

The Ammtec Metcon testwork was initiated when re-examination of the earlier work indicated that a more thorough geo-metallurgical approach to sample selection would be likely to provide improved models for gold and silver from the range of ore types in the deposit. Six master composites were selected representing the three major lithologies and the two alteration types (silica and advanced argillite). Five further composites were selected representing minor ore types. The selected intercepts were sub-divided into three or four different sulphide sulphur levels and these, in turn, were further divided into two or three different gold grade composites. In total, six master composites, 35 sulphide sulphur composites, 62 gold grade composites and three high grade composites were selected.

The testwork is complete and the reports are currently being compiled. Preliminary assessment indicates that:

- the design grind size of p80 150µm and the 20 hour leach residence time have both been confirmed, but space for additional leach tankage would be recommended
- strong correlation exists between sulphide sulphur and gold extraction for all ore types and use of sulphide sulphur for gold recovery modelling will mean that delineation of oxidation zones becomes unnecessary
- lower gold extractions are indicated from silica alteration samples than in previous work;
- silver extraction depends on sulphide sulphur and silver head grade and is much higher than previously determined; it appears that some silver precipitation occurred after leaching in previous work and the presence of carbon in the leach in this phase of testwork minimised these losses
- gravity separation did not improve gold recovery; very high grade (+50g/t Au) composites were tested but gravity gold recovery was low.

The Ammtec Metcon testwork has increased the level of confidence in the leaching design parameters and provided algorithms for use in prediction of metal recoveries.

10.3 Plant Design

The plant design was reviewed when Ausenco was engaged as EPCM contractor. The most significant modifications made were:

- increase of 0.5m in the length of the ball mill to 9.51m to provide more confidence that design throughput can be maintained with all ore types
- inclusion of a mercury recovery retort in the gold room and provision of gas extraction over the regeneration kiln, the electrowinning cells and the furnace to minimise atmospheric mercury levels
- provision of an emergency feeder at the crushed ore stockpile to reduce the risk of feed interruptions to the grinding circuit due to stockpile reclaim blockages by wet ore
- modification of the water treatment system to enable acid rock drainage from the planned low grade stockpile to be controlled without impact on plant performance.

The proposed plant for the Martabe project now incorporates the following operations:

- a single stage crushing plant using a 2000mm x 1500mm single toggle jaw crusher fed from a run-of-mine ("ROM") bin via a variable speed apron feeder and a 150mm aperture vibrating grizzley
- a 6,500t live capacity crushed ore stockpile from which ore will be reclaimed with two variable speed apron feeders and an emergency feeder arrangement
- a grinding circuit comprising a 6.5MW 8.5m diameter x 4.95m long SAG mill, and a 6.5MW 6.1m diameter x 9.51m long ball mill; the SAG mill will operate in closed circuit with two cone crushers, the SAG mill discharge being sized on a vibrating screen; the ball mill will operate in closed circuit with eleven 500mm diameter cyclones which will produce overflow containing solids ground to a p_{80} of 150µm
- a leaching circuit comprising three leach tanks and seven adsorption tanks, each of approximately 1,250m^3 volume; trash and carbon safety screens preceding and following leaching will be 3m wide by 6m long vibrating units; high carbon inventories will be maintained in the adsorption circuit due to the high precious metals content of the ore
- a desorption circuit comprising two 14t capacity columns; each column will be used for acid washing and, when required, for a cold cyanide wash to remove copper from the carbon, prior to elution of precious metals from the carbon
- an eluate circuit in which the pregnant eluate will be pumped through ten electrowinning cells to produce a precious metals sludge which will be discharged at the end of each elution cycle to a holding tank, from where it will be pumped to a plate-and-frame filter for recovery as a filter cake which will be dried and smelted; carbon will be re-activated in a horizontal regeneration kiln
- a cyanide detoxification circuit in which safety screen undersize will be fed to two 922m^3 tanks in series for reaction with sodium metabisulphite, lime and copper solubilised from the ore to reduce weak acid dissociable cyanide ("CN_{WAD}") level from 150 milligrams/litre ("mg/L") to less than 50mg/L
- a 33m diameter thickener designed to produce a 65% solids underflow for discharge to the TSF.

The detoxification circuit will precede the thickener to maximise the TSF feed density and to reduce the recirculation of soluble base metals to the front end of the processing plant via the thickener overflow.

The high abrasion index measured on all samples tested has prompted a primary crushing plant design which ensures good access to the crusher for liner replacement.

CIL circuit residence time has been designed at 20 hours. Whilst most testwork used 24-hours residence time and analysis of the testwork programme assessed metal recovery in 24 hours, the fast initial leaching rates indicate that reduction of the residence time will not cause a significant reduction in metal recovery. The reduction in residence time probably also reduces copper adsorption onto the carbon to some degree.

The mine schedule predicts that copper levels in the ore will increase late in the third operating year and, as noted above, provision has been made for selective elution of copper from loaded carbon.

Conclusions

The testwork carried out on Martabe ore has been thorough and has demonstrated that moderate gold and silver recoveries can be obtained. The most recent testwork programme, carried out in 2008, has increased confidence in the projected gold recovery and significantly increased the silver recovery. The ore is relatively siliceous and is competent and highly abrasive. PTAR has opted for a CIL route for processing the ore and a 4.5Mtpa plant has been designed. BDA considers that the design is appropriate for a gold ore with a high silver content which also contains sufficient cyanide-soluble copper to potentially affect CIL plant performance.

11.0 INFRASTRUCTURE

11.1 Site Access

The project area lies approximately 3km north of the township of Batangtoru, adjacent to the Trans-Sumatra Highway. The Trans-Sumatra Highway joins the regional centre of Padangsidempuan, 25km to the south with the port of Sibolga, 40km to the north (see Figure 1) and continues to Medan, the provincial capital, 200km to the north.

Medan is serviced by regular commercial flights from Jakarta, Singapore and Kuala Lumpur. A commercial air service is available to the sealed airstrip south of Sibolga, one hour by road from the site, and a limited service is also available from Medan to Aek Godang, two hours by road from the site.

The road journey from Medan takes approximately eight hours by car. The road is generally a two-lane sealed rural highway and includes significant winding sections through mountainous terrain. Some sections of the road have minor to significant potholing; a number of structural steel truss bridges, with tie beams and consequential limited headroom and load-bearing capacity, provide river crossings. Sections of the road pass through regional towns and villages close to residential dwellings. The road is relatively heavily trafficked, particularly in and around the regional towns and villages. A logistical survey will be required to establish the optimum route and maximum load height, width and weight for transport of plant and equipment to site.

The port at Sibolga has limited wharf facilities. It is suitable only for general freight and not for large heavy items for the construction phase or high volumes of reagents and consumables for the operations phase.

PTAR has had a design prepared for the construction of a jetty on the coast to the west of Martabe to facilitate the transport of equipment and supplies to site. It is proposed to undertake the construction early in the project implementation phase at a location 16km south of Sibolga to provide reliable access to the project for the delivery of construction materials during the construction phase and reagents and consumables in the commissioning and operations phases. PTAR suggests that the overall transport logistics including port and jetty infrastructure should be reviewed on recommencement of the project.

11.2 Power Supply

The DFS proposal for supplying power to the project involved construction of a 33MW heavy fuel oil fired power station at the site.

It is now proposed to use power from the grid supply, and it has been determined that a sufficiently reliable supply can be assured. This entails the design and construction of a 150 kilovolt ("kV") overhead power line and a high voltage switchyard/substation plus diesel-powered generation facilities at site to provide emergency back-up.

Site power reticulation will be at 11kV to the plant substations where it will be transformed as required to power the motor control centres and distribution boards.

11.3 Water Supply

The project site is in an area of high, consistent rainfall. Ample water is available from streams and watercourses at the site to provide a reliable water supply.

Raw water for use at the plant site for fire water, gland water and use in the elution circuit and the potable water treatment plant is proposed to be supplied from a catchment dam to be constructed adjacent to the plant site. Process water will be provided from tailings thickener overflow and from tailings dam decant. Potable water for the plant site and the accommodation village will be provided from a treatment plant fed with raw water and subjected to filtration and UV sterilisation.

The Aek Pahu creek which flows through the Martabe valley and currently provides water for the local villages is to be dammed and the valley will be used for the TSF; an alternative potable water supply for Batangtoru and surrounding villages is to be provided initially from a borefield to be installed to the west of the mine site and in the long term by a pipeline to be constructed from an upstream project water supply dam to the existing town water supply aqueduct..

11.4 Workforce Accommodation

The workforce for steady state operations has been estimated in the DFS at around 600. The design of the site accommodation is based on the majority of the workforce being drawn from the local population and accommodated in villages in the area surrounding the project site. Allowance has been made in the site layout and the capital and operating cost estimates for a village for 200 persons to be constructed, operated and maintained. The workforce is proposed to be accommodated on a single status basis. No married or family quarters are included in the design.

The site accommodation facilities will include a mess, recreational facilities, games rooms, wet mess, laundry and drying rooms, etc. and will be equipped with a package sewage treatment plant. It is proposed that a contractor will construct and operate the site accommodation facilities.

11.5 Communications

It is proposed to update the current satellite telephone system for voice and data transmission. No details are provided in the DFS other than a comment that the proposed system will be similar to those at other similar Oxiana operations.

A VHF radio network is to be installed for communications at the site between departments and for emergency communications. Light vehicles and selected mobile equipment will be fitted with radio sets and selected personnel will be issued with hand-held radios. The mining contractor will be required to install a radio system compatible with the PTAR system.

11.6 Site Roads and Drainage

The major site road will be a ring road to access the mine area without traversing the plant area. The pioneer road constructed to allow access for earthmoving equipment to the process plant and mine areas during the period leading up to the suspension of construction will require upgrading for the longer term construction effort.

Site run-off water will be diverted to the TSF through an existing watercourse augmented with storm water channels and culverts where necessary.

11.7 Site Buildings

Administration, mining and process plant offices are to be constructed adjacent to the process plant. The existing administration and exploration offices at the exploration camp will be retained for use in the ongoing exploration programme and to accommodate security and community relations personnel.

Offices will generally be block-work construction, reinforced to meet appropriate seismic specifications. Workshops, warehouses and similar buildings are to be of steel portal construction with steel cladding and concrete floors.

Buildings to be provided include the following:

- administration building
- medical centre
- assay laboratory including metallurgical and environmental testing facilities and sample preparation area
- security gate houses
- training building
- ablutions buildings and change rooms with treated effluent being piped to the TSF
- plant control room
- plant workshop
- main plant offices
- reagent and flocculant store
- lime warehouse at the jetty
- a customs house at the jetty
- substation buildings equipped with fire detection and air conditioning systems.

11.8 Mobile Equipment and Light Vehicles

Mobile equipment to be provided for the process plant includes:

- two loaders
- a 100t mobile crane
- a 12t mobile crane
- three 2t forklifts
- a sea container forklift
- a tool carrier.

Light vehicles will be provided for managerial and supervisory staff.

Conclusions

The proposed infrastructure is generally adequate and appropriate to support the operation.

12.0 ENVIRONMENTAL PERMITTING AND TIMETABLE

BDA has not undertaken legal due diligence on the status of the COW or project approvals held by PTAR. The following notes are based on information provided by PTAR and represent a summary of the regulatory framework, status of permits and approvals, and outstanding project approvals required for development to proceed.

12.1 Indonesian Environmental Standards

Numerous Indonesian laws and regulations apply to the permitting of the Martabe project. PTAR has committed to comply with Indonesian standards for air, water, and ecological resources as set out in the AMDAL terms of reference and to meet, or where practicable, exceed, international standards and guidelines. Site-specific ecological and social risk assessments have been conducted as part of the formal impact assessment and permitting process. The results of these risk assessments will be incorporated into the project's design, operating plan, and management strategies. Closure and reclamation plans will be developed in conjunction with detailed design and engineering. Conceptual mine closure plans form part of the DFS.

12.2 Regulatory Framework and Environmental Permitting Requirements

Indonesian laws and regulations stipulate environmental standards and govern the preparation, submittal and approval of environmental impact assessments. Compliance with environmental laws and standards and the AMDAL environmental permitting process is generally administered by the National Agency for Environmental Impact Analysis. Other pertinent decrees are administered by the Minister of Mines and Energy. A detailed and systematic impact analysis and public consultation programme consistent with Indonesian law has been performed by the Indonesian consulting firm PT ERM as part of the formal permitting AMDAL (EIS) process.

12.3 Other Environmental Legal Requirements

Forestry Law (No 41/1999) prohibits mining activity in protected forests. Although a small area on the periphery of the Martabe COW is within the Protected Forest boundary, all known potential deposits and proposed mine infrastructure are outside the area designated as Protected Forest. The Forestry Law does not prohibit any proposed activity under the present project description. Article 26 (Environmental Management and Protection) of the COW contains some general provisions for compliance with applicable environmental laws and regulations, conducting an environmental impact assessment and government reporting requirements.

12.4 Jetty Facility at Muara Nibung

Following consultation with the national Government, Department of Mines and Energy, provincial and district governments, and the AMDAL committee, it was decided that PTAR's proposed development of jetty facilities at Muara Nibung to the west of the project area would not need to be included in the AMDAL assessment. Muaru Nibung lies outside South Tapanuli and the COW area. The proposed jetty length is less than 300m and therefore does not constitute a facility which requires an AMDAL. An Environmental Management and Monitoring Plan ("UPL" and "UKL") will be required for the jetty facility.

12.5 Construction Permit

PTAR received its Construction Permit for the Martabe project in April 2008, issued by the Department of Energy and Mineral Resources on behalf of the Government of the Republic of Indonesia. This permit is the final step in the approval process and allows construction of the Martabe project to commence, subject to satisfactory completion of the detailed design submissions. Construction commenced in the second half of 2008, but was suspended in November 2008. A resumption of activities is planned once the ownership arrangements are finalised and new EPCM contracts awarded.

Conclusions

A detailed and systematic environmental and social impact analysis and public consultation programme consistent with relevant Indonesian law has been prepared by ERM as part of the formal permitting AMDAL (EIS) process. BDA concurs with the approach being taken and the various environmental and social study programmes which support the AMDAL process. BDA notes that URS has undertaken a Social and Environmental GAP Analysis to consider environmental and social issues in relation to corporate standards and commitments. BDA has not undertaken a comparative analysis of Indonesian standards with the Equator Principles and associated IFC Performance Standards to confirm conformance with the Principles and IFC Standards and Guidelines.

13.0 ENVIRONMENTAL AND COMMUNITY ISSUES

BDA has reviewed those environmental aspects and social/community issues which are considered a material part of the project and which may have significant implications for project feasibility, costs and timing. The issues discussed below cover the main environmental and social risk areas identified from BDA's review of the DFS and subsequent documentation and a site visit to the Martabe project area.

13.1 Biophysical Setting

The Martabe project area is located some 3km north of the township of Batangtoru and adjoining villages (population 12,000). The nearest major town is Padangsidempuan (population 200,000), 25km to the south.

The topography of the project area is rugged, with steep-sided ridges and boulder/tallus slopes. Elevations vary from 100-700m above sea level. The terrain is covered with primary rain forest except in areas where the original vegetation has been replaced by subsistence farming, plantations and secondary growth. The known orebodies comprise steep outcrops within the hilly terrain. The project area lies at the southern end of a relatively large core of forest and wildlife reserve, bounded by roads and encroaching populated areas.

Two streams, the Aek Pahu and Aek Batujomba, drain the mineralised zones and are important drainages for the local Batangtoru population as they provide water for washing and irrigation purposes. Some natural springs and headwater impoundments have been used for drinking water for generations. Many of the households in the Batangtoru area use water from a pipeline installed by the state-owned rubber plantation company. This pipeline taps water from Aek Pahu. Management of community water supplies is a critical element in gaining project approval and community acceptance of the project.

13.2 Climate and Rainfall Catchments

The project site is located close to the equator and has a tropical climate. There is high rainfall from October to December, but rain falls throughout the year as the area is affected by both the northern and southern monsoons. The average annual precipitation recorded at nearby Pinangsori airfield is approximately 4,190mm. No evaporation data is available, however, an annual evaporation of 1,800mm is assumed for the region. A weather station has been in operation at the project site since 1999.

There are two main catchment areas within the vicinity of the project. The Aek Pahu catchment area covers approximately 5km^2 of the likely extent of the disturbed project area. The catchment area is flanked to the west by the Pit 1 and Ramba Joring orebodies and to the east by the Barani orebody (Figure 2). The Aek Pahu creek flows south for 5km from the watershed and then changes direction, flowing west past the Batangtoru settlement areas.

The Aek Batujomba Creek catchment area is flanked to the east by the Pit 1 and Ramba Joring orebodies. The Aek Batujomba creek flows south-southeast from the top of the catchment and bypasses the northern extent of the Batangtoru settlement areas.

13.3 Seismicity

Seismicity evaluations for the Martabe project are particularly important given that the project lies in a seismically active area. The feasibility study identified the need for a detailed seismic assessment of design structures because of the high seismic activity. A number of seismicity assessments have been performed over recent years, by KP in 2002 and 2003, Golder in 2004 and most recently by GHD in 2008. The Global Seismic Hazard map shows the Martabe project area in a high seismic activity zone, around 3.2-4.1 metres per second squared ("m/s^2") or 0.32-0.34g PGA (note: $g = 9.8m/s^2$).

The GHD 2007 geotechnics study concluded that "it seems unlikely that any additional studies would result in a significant increase in the Peak Ground Acceleration value above 0.8-0.9g for the Maximum Credible Earthquake ("MCE"), nor is it likely that accuracy would be improved." The MCE is the largest conceivable earthquake that will potentially occur in the vicinity of Martabe. GHD has recommended that consideration could be given to conducting sensitivity analysis and designing for a range of seismic conditions including those at the upper end of the PGA estimations. GHD has also suggested a number of design precautions that could be considered for large embankments such as the TSF.

The Golder seismic assessment concluded that the Operating Base Earthquake ("OBE") for the Martabe project was an event with a 475-year return period, alternatively expressed as an event with a 10% probability of exceedance in 50 years. Golder's recommendations for the OBE and MCE, assuming the site to be 10km from the Sumatra Fault are: MCE - a magnitude 8.5 earthquake with a PGA of 0.8-0.9g, and OBE - a magnitude 6.5 earthquake with a PGA of 0.45g. GHD (2007) recommended a detailed seismic investigation and sensitivity analyses of the site to evaluate variability in OBE and MCE acceleration coefficients. GHD (December 2008) used the following peak ground acceleration coefficients in their stability analysis of the various embankments: OBE: 0.53g and MCE: 0.66g.

13.4 Status of Environmental Studies

Baseline Studies

Normandy initiated baseline investigations at Martabe in 1998 to begin characterising climatic conditions, surface water and groundwater resources, and terrestrial and aquatic ecology. In 2000 and 2001, PT Horas Nauli commissioned PT Dames and Moore (now URS Corporation) to complete a series of studies examining the environmental and socio-economic setting of the project. PTAR has since expanded the baseline data collection programme based on recommendations presented in a 2002 data gap analysis conducted by Lorax Environmental Services Limited.

Baseline environmental studies completed included detailed terrestrial and aquatic ecology surveys for site environmental planning purposes and provide information used in compiling the Environmental Impact Statement (*Analise Dampak Lingkungan* or AMDAL). In addition, a meteorological data collection programme was established in 2000, with the installation of a full meteorological station near the town of Batangtoru (near the Batangtoru helipad) and a separate rainfall monitoring station at a higher elevation at Martabe.

In November 2007 PTAR commissioned URS to undertake a gap analysis of environmental baseline data, incorporating the AMDAL terms of reference. This work involved the review of all known environmental baseline data, and production of a report detailing its quality and completeness. The review also involved preparation of a work programme to collect supplementary environmental baseline data as part of the AMDAL process before commencing construction.

As part of the environmental investigations undertaken to date, potential project impacts to physical and biological resources have been assessed to identify key environmental risks that may arise from the construction, operation and eventual closure of the Martabe project. Formal assessment, documentation and communication of potential project-related impacts, including the anticipated scope, magnitude, extent and duration, have been completed in conjunction with the AMDAL permitting process.

Air Quality and Noise

Background air quality and noise were measured in and around the Martabe project area by PT Hatfindo Prima, a Canadian-Indonesian environmental consultancy based in Bogor, West Java, in two monitoring programmes in 2004. In general, ambient air quality and noise levels in areas sampled in the project area are within Government of Indonesia ambient standards.

Surface Hydrology

Surface water hydrology baseline evaluations have been conducted in the Martabe area since September 2000. The principal river close to the Martabe project is the Batangtoru River (Figure 2), which originates close to Lake Toba, and flows approximately 150km to the south to discharge to the Indian Ocean southwest of the Martabe project. The river passes within 4km of the Pit 1 deposit, flowing from northeast to southwest, and attains a width of approximately 200m.

The main catchment in the project area is the Aek Pahu. The two subcatchments likely to be impacted b y the project are the Aek Pahu Hutamosu (east of Pit 1) and the Aek Pahu Tomlak (west of Pit 1). Stream height and discharge monitoring has been conducted at five hydrological monitoring stations in the project area.

Surface water quality baseline evaluations in the Martabe project area began in 1998. The baseline programme was expanded from six monitoring stations to 23 stations in 2003. In general, surface water in the project area can be characterised as soft, with low ionic strength, neutral to acidic pH, and exhibiting generally low concentrations of trace metals. Localised zones of lower pH were observed in the headwaters of the mineralised zone in the Pit 1 area.

Geochemical Characterisation Studies

Baseline geochemical characterisation studies have been conducted to determine the potential acid generating nature and leaching behaviour of ore and waste units that would be exposed during mining of the Pit 1 and potentially Ramba Joring deposits. Based on the core sample geochemical analyses performed, silver, arsenic, cadmium, copper, molybdenum, and antimony concentrations are all found to be elevated in the rocks at Martabe. Manganese and zinc concentrations are also elevated in the dacite and clay breccia rock types, respectively. Field column testing to date supports Net Carbonate Value ("NCV") classifications indicating that the majority of Martabe waste rock and ore rock types are likely to be acid forming when exposed to air and water. Metals present in significant concentrations in leachate from the test columns include aluminium, arsenic, cadmium, cobalt, copper, iron, manganese, nickel, and zinc. Because the potential for ARD generation is not specific to individual lithologies, it will be difficult to isolate potential acid generators by selectively handling waste rock or other material.

Flora and Fauna

Terrestrial flora and fauna surveys were undertaken in 2003 and 2004 by PT Hatfindo Prima, with additional scientific technical assistance provided by several national and international research organisations. Field surveys were implemented in the dry and wet seasons and included collection of biological and ecological data through an inventory of major taxonomic groups comprising plants, birds, mammals, reptiles/amphibians, and insects (butterflies and moths). Specific components were incorporated targeting threatened species known or expected to be present in the area, including Sumatran orang-utan, Sumatran tiger and serow (a small bovid). The proposed mining development is expected to have an impact on the local terrestrial flora and fauna communities, however, the project area is located in an unprotected forest, where pressures from logging and general encroachment of villages have already had a significant impact on species density and diversity.

Freshwater Ecosystems

A baseline freshwater ecosystem assessment of project area streams was undertaken between 2003 and 2004, with the objective of conducting an examination of the freshwater fauna and flora of streams in the project area and reference areas, focusing on fish and macro-crustaceans, macrophytes, macro-invertebrates and stream habitat composition and quality. Eighteen sampling sites were selected. At each site, qualitative freshwater ecological conditions were measured, including diversity, abundance, biomass, overall stream condition and metal concentrations in select organisms.

13.5 Tailings Storage Facility

Given the location of the project in a seismically active area, and being upstream of nearby communities, the proposed Tailings Storage Facility location and design is a particularly important component of the project.

GHD was appointed by PTAR to carry out a preliminary TSF design for the Martabe DFS in 2004 and a TSF feasibility design in 2006/2007. Subsequent to the 2006/2007 feasibility design, GHD completed the TSF detailed design in December 2008. This design includes geotechnical investigations carried out to-date, the design of the TSF, the design of stormwater interception and diversion structures (Water Dams 1 and 2), and design of sediment containment ponds (SP1 and SP2) located downstream of the TSF. This detailed design by GHD was submitted to the government in February 2009 for assessment and approval.

The site proposed for the TSF is located in the Aek Pahu valley approximately 2km to the east of, and at a lower elevation than, the proposed Pit 1 open pit (Figure 2). It is proposed to construct the TSF mainly with waste material (approximately 10Mt) from the Pit 1 open pit. During start-up, borrow materials will be used to construct coffer dams and the starter embankment for the TSF. In order to divert surface run-off around the TSF, two water diversion dams are proposed upstream of the TSF. Two settling ponds are located downstream of the TSF to intercept contaminated run-off and seepage from the TSF. A water treatment plant ("WTP") located near the settling ponds is proposed to treat any contaminated water prior to its discharge into the Aek Pahu valley. GHD has recommended that the capacity of the WTP should be set at 1,000m^3/hr in the base case model where all water flows report to the TSF.

It is proposed that tailings from the plant CIL circuit will be pumped to a detoxification circuit in which the cyanide is destroyed using sodium metabisulphite, lime and copper, solubilised from the ore, to reduce the CN_{WAD} level from 150mg/L to less than 50mg/L. The detoxified tailings will be thickened in a high rate thickener and then directed to the TSF. Water from the TSF is collected in a decant system for return to the process plant as process water.

Water Dam 1 is located upstream of the TSF in the Aek Pahu valley. The purpose of the dam is to reduce the TSF catchment, intercept run-off and divert the clean water into the adjacent catchment to the east of the TSF. Clean water from Dam 1 will be piped to the town's aquaduct. Clean run-off water from the upper portion of the tailings catchment will be intercepted and diverted, rather than allowing it to enter the TSF and add to the overall water balance and water treatment requirements. It is important to ensure stable foundation conditions for this facility, as failure of the upstream dam could have serious consequences on the TSF downstream.

Water Dam 2 is located to the northwest of the TSF, between the process plant site and the TSF and is also located to intercept and divert surface run-off around the TSF. Due to its location, it also serves as a source of process water for the plant and potable water for the township via a pipeline to the aquaduct.

Two settling dams (SD1 and SD2) are located downstream of the TSF in the Aek Pahu valley. These ponds will intercept contaminated run-off from the downstream slope of the TSF and seepage from the TSF. The solids in suspension will settle out and the supernatant will be returned to the TSF or pumped to the WTP before being released to the environment. At this stage of project design, there is limited detail on the actual process to be employed in the WTP to treat excess water before release via a pipeline into the Batangtoro River. BDA considers it prudent that given the Martabe geochemical characterisation study results to date, that a suitable metals and trace ion removal process such as using ferric chloride, lime and flocculants be employed, rather than simply mixing with clean water to meet discharge limits; blending of contaminated water with ambient quality water to meet statutory limits is not considered best practice.

Given the large amount of potentially acid forming ("PAF") material which is utilised to construct the TSF embankment, and the PAF tailings, there is a strong possibility that the Water Treatment Plant will need to be retained for an unspecified time following mine closure to handle potential acid rock drainage from the TSF embankment and tailings.

The process plant is located between the Pit 1 open pit and the TSF. The plant, ROM pad and associated infrastructure are upstream of the TSF and any seepage and contamination from the plant area should, therefore, end up in the TSF.

With regard to seismicity of the area, Golder completed a deterministic and probabilistic site-specific seismic assessment of the site as part of its study in 2004. The study included the effect of the earthquake that resulted in the catastrophic tsunami at Aceh on 26 December 2004. Peak Ground Acceleration coefficients for the OBE and MCE, based on the Golder studies, are listed below:

- OBE (magnitude 6.5 earthquake) - PGA of 0.53g
- MCE (magnitude 8.5 earthquake) - PGA of 0.66g.

During the detailed design phase, GHD (2008) undertook a further assessment of the peak ground acceleration coefficients of the study area and estimated a PGA of 0.50g for the OBE and a PGA of 0.59g for the MCE. Although these results are lower than those earlier defined by Golder, GHD decided to use the higher PGA values, which might be considered conservative, in the design of the TSF and infrastructure.

The OBE is generally used to assess embankment stability during operation of the facility, whereas the MCE is used to assess stability and crest settlement post-closure. These acceleration coefficients were used in the stability analyses completed as part of the DFS and detailed TSF design by GHD.

The waste rock model was used in the staged development of the TSF embankment. It is proposed to construct a starter embankment from local borrow materials, to provide storage for the first year of tailings deposition. During this period, mine waste will become available and the first stage of embankment raising will commence.

The starter embankment will be constructed from clay material, borrowed from the plant foundation excavations and/or clay material inside the basin. The starter embankment will be approximately 30m high with a 15m wide crest, 1:3 downstream slope and 1:2.5 upstream slope. Foundation preparation will include removal of the soft and loose material in the footprint. A sub-vertical filter drain along the centre line is recommended to ensure that seepage through the upstream slope is intercepted and discharged without pressure build-up along the downstream slope. Future raises will be constructed mainly from mine waste using downstream construction methods.

From the waste model it is clear that the majority of waste produced up to Year 3 comprises PAF material. From Year 3 onwards, large quantities of clayey material will become available according to the waste model. The main TSF embankment is designed to accommodate the waste as it becomes available. Due to the waste sequencing, the bulk of the embankment in the first three to four years will comprise PAF material. This material will be used along the upstream side of the embankment. When the clayey material becomes available, it will be used along the downstream slope. This is contradictory to conventional embankment design where the clayey material is usually used along the upstream side or along the centre and the stronger rock material used along the downstream slope for stability purposes. The advantage of having the clay along the downstream side is that it can be used to contain potential acid drainage, comprising the seepage generated from the PAF materials. The clay also has potential to generate acid, but it is considered that this risk is much reduced by compacting the material to reduce its permeability to air and water. In order to reduce seepage through the PAF upstream slope during operation and construction of the downstream raises, it is proposed to line the upstream slope of the TSF with a 5m wide clay layer.

The TSF forms the central water storage for the Martabe operation. It not only stores tailings, but also acts as a process water supply dam and containment facility that prevents the release of ARD. Due to the fact that previous studies related to the Martabe project did not have a TSF in the current location, a water balance for the specific site had not been previously developed. GHD has developed a new water balance for the TSF site, using available rainfall and hydrological data.

PTAR has indicated that the preferred closure criteria for the Martabe TSF will be a 'wet cover'. Tailings will be submerged to assist with the reduction of acid formation and the complete TSF surface will be covered by 1-2m of water.

PTAR engaged a third-party consultant to review the conceptual design of the TSF and associated infrastructure. Dr N Mattes, Senior Principal from URS Australia, reviewed the drawings and design concepts in June 2007. Dr Mattes concluded that the design was carried out in accordance with current good practice and that the proposed TSF was considered to be appropriate to the conditions revealed by the site investigations carried out to date. An additional independent third-party expert review was undertaken in January 2009 by DE Cooper & Associates Pty Ltd who reviewed GHD's detailed TSF design documentation. This review comments on those design assumptions which have yet to be demonstrated, including tailings in-situ density, chemical condition of the tailings in storage, rate of embankment construction, embankment crest width reduction if insufficient waste rock is not available for construction, and control of ARD from the downstream face of the TSF embankment.

The TSF embankments form the primary defence against failure and the completed stability assessments confirm that these structures will be stable under static loading. However, the factors of safety against slope failure under pseudo-static loading conditions fall below unity, indicating that the dam will deform under these conditions. Maximum crest deformations in the range of 0.5-4.0m are expected under the OBE and MCE loadings used for Martabe. The approach adopted in the GHD study has been to design a suitably robust embankment that can accommodate the anticipated ground movements and accelerations with tolerable deformations.

GHD has identified possible operational hazards and probable consequences of a TSF embankment failure and these are covered in some detail. The GHD study highlights that the consequences of a TSF tailings dam failure are likely to be significant. Accordingly, GHD's primary focus for the embankment design is to ensure that it is able to accommodate any likely ground movements resulting from a seismic event and that TSF freeboard is sufficient to prevent overtopping.

At closure, the elevation of the base of the Pit 1 pit, as currently designed, will be approximately 240mRL. The pit rim elevation will vary between approximately 420mRL and 460mRL at that stage. Due to the relatively high rainfall conditions at Martabe, the pit will fill with water and a pit lake will develop, once dewatering bores and pumping systems are decommissioned upon mine closure. To control water levels in the pit, it is proposed to excavate a spillway/outflow along the eastern perimeter, at the haul road entry point.

13.6 Social, Community and Land Issues

Social Setting

The Martabe project lies 2-3km north of the Batangtoru District (*Kecamatan Batangtoru*) centre of population which comprises four urban neighbourhood units (*Kelurahan*) of the town of Batangtoru and eight villages (*desa*) within the influence of the project. These population centres are on the north side of the Batangtoru River and straddle the main Padangsidempuan-Sibolga highway. The population of the four *Kelurahan* and eight *desa* totals about 12,500 persons, or nearly 30% of the total population of the *Kecamatan* of 45,000 people. The number of household units registered in the project area total about 2,500 with an average of five household members. The average population density in the area is 165 persons per square kilometre, ranging from around 45 persons to 430 persons per km^2 in the densest *Kelurahan* of Batangtoru. Approximately 34% of the population are under 15 years of age.

Planning for the social aspects associated with the Martabe project was initiated in 2000 and a solid baseline of social, economic, cultural and public health data has been collected. Baseline research has been undertaken by qualified Indonesian and international researchers. Land and ownership mapping has formed a major component of baseline social data collection.

PTAR has committed to understanding and addressing stakeholder concerns and the social, economic and cultural context within which it operates. PTAR commissioned ERM to prepare the AMDAL documentation, the Indonesian version of an Environmental Impact Assessment. The AMDAL process involved the preparation of terms of reference, local government and community consultation, environmental and social data gathering and impact analysis, and preparation of management and monitoring plans.

The main social, cultural and economic issues pertaining to the development of the Martabe project identified so far include:

- land acquisition
- resettlement and potential marginalisation of ethnic minorities
- interface of environmental impact issues, such as noise, dust disturbances, water and waste management
- public perception of risk and benefits, such as failure of the TSF
- employment, business and training opportunities.

To date the issues of most concern to the local communities appear to be:

- the ability of the Martabe project to protect water resources
- the creation of jobs or other business/economic opportunities
- the disturbances and effects of explosives handling and blasting close to populations.

To manage community perceptions and address concerns as the project moves forward, PTAR plans to develop a Community Relations and Development Investment Plan or CRDIP to provide a framework for strategic social investments. PTAR envisages that the CRDIP will provide a model for maximising positive impacts of the project and mitigating any potential adverse impacts to ultimately improve the quality of life of affected individuals, groups and communities. It specifically addresses those significant potential adverse impacts such as uncontrolled population growth with strategies to minimise in-migration to, and around, the mine site and COW, and for shielding the Batangtoru area from some of the negative aspects of development by promoting economic development activity outside of the environmentally sensitive areas.

The development of a public consultation and disclosure plan is a high priority gap that has been identified. PTAR will develop a communications and public consultation and disclosure plan in 2008 and this will be informed by key input from the public consultation meetings held as part of the AMDAL process.

Resettlement

A small number of people reside in the project footprint area, and these are due to be resettled by end June. PTAR embarked on a mapping, and planning exercise to identify people in the project area and prepare a resettlement action plan that addresses each impact or issue associated with the resettlement and defines specific mitigation strategies, including income restitution activities and targets, schedule and budget. This plan will be reviewed by a third party to ensure that leading practice standards are applied and adhered to.

Local Employment

It is estimated that the project will employ up to 1,600 people during construction with a workforce of approximately 700 people when in operation. It is anticipated that 70% of the workforce will be recruited from local communities and the majority of the balance from elsewhere in North Sumatra and Indonesia.

Conclusions

The main environmental risk of the project relates to the potential for offsite water contamination via site contaminated water run-off, acid rock drainage from the TSF, excess tailings decant or tailings seepage following an earthquake event and settlement of the TSF main embankment. The inclusion of two downstream environmental (settling) dams and water treatment plant will mitigate the risk of offsite water contamination during operations. Water treatment may be necessary for an unspecified time following mine closure to handle potential acid mine drainage from the TSF embankment.

PTAR appears to have been successful to date in its approach to dealing with the local community and land access issues. However, land ownership, community relations and local/regional political issues remain key risks to the Martabe project if not administered knowledgeably and sensitively. Local communities may become disenchanted from re-settlement issues, land compensation, employment, in-migration, disturbance from traffic or other social issues. To date however there appears to be a large measure of good will, and anticipation of the employment and other benefits which the proposed mine development will bring. To manage community perceptions and address concerns, the proposed CRDIP will provide a framework for strategic social investments. PTAR advises that the Central, Provincial and Local government and district authorities remain strongly supportive of the project.

14.0 PRODUCTION SCHEDULE

The production schedule adopted by BDA for this review is based on the financial model provided in the data room "OZ_Minerals_Martabe_Asset_Model_Data_Room_V5[1]". A summary is shown in Table 14.1. In contrast to the DFS, which assumed mining at around 4.5Mtpa of ore (to match the milling schedule), the optimised schedule adopted in the financial model is based on mining the deposit from 2010 to 2016 at rates of up to 13.0Mtpa of ore and waste. Over the mine life the strip ratio is projected to be 0.7:1 (waste:ore). The plant is planned to operate from 2010 to 2018 at a rate of 4.5Mtpa, with head grade ranging from 2.3-2.5g/t Au from 2010 to 2014. From 2015 to 2018 the plant treats lower grade material which has been stockpiled in the earlier years and the head grade is projected to fall to around 1.0g/t Au. Silver grades are projected to vary in a similar manner, ranging from 25-33g/t Ag while the mine is operational, and dropping to 18g/t Ag when the plant is treating stockpiles.

Table 14.1

Martabe Operation - Projected Production Schedule

Item	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Ore Mined	Mt	7.1	6.1	7.0	7.5	6.0	2.1				35.7
Waste Mined	Mt	5.4	6.8	6.0	4.5	2.6	0.6				26.0
Material Mined	Mt	12.6	13.0	13.0	11.9	8.5	2.7				61.7
Ore Milled	Mt	3.1	4.5	4.5	4.5	4.5	4.5	4.5	4.5	1.1	35.7
Ore Grade	g/t Au	2.3	2.3	2.3	2.4	2.5	1.9	1.0	1.0	1.0	1.93
	g/t Ag	25.2	28.6	31.4	33.3	30.2	24.5	17.9	17.9	17.9	25.9
Au Recovery	%	80.1	76.3	72.6	73.7	75.2	70.1	77.7	76.0	76.0	74.9
Ag Recovery	%	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
Au Production	kozs	187	253	245	260	272	188	116	112	28	1,661
Ag Production	kozs	1,769	2,893	3,175	3,368	3,055	2,480	1,818	1,808	444	20,810

Note: treatment of low grade stockpiles from 2015-2018

Gold and silver recoveries are consistent with testwork results, with gold in the range of 70-80% and a fixed level of 70% set for silver. Silver recovery models have not yet been finalised but, based on an inspection of the results from the recent Ammtec Metcon testwork, 70% silver recovery appears to be a reasonable assumption.

BDA notes that no allowance appears to have been made for ramp-up in metal recoveries in the initial stages of operation. BDA also recommends that an allowance for ramp-up in throughput following commissioning should be made. While the operation is not complex, BDA considers that it could take up to 12 months to achieve rated throughput and recovery performance as shown in Table 14.2.

Table 14.2

Proposed Ramp-Up Schedule for Martabe Gold Process Plant.

Parameter	Units	Month After Start of Commissioning of Plant						
		1	2	3	4-6	7-9	10-12	13
Feed Rate	% of Design	50	75	85	95	98	100	100
Operating Time	% of Plan	50	80	85	86	92	98	100
Throughput	% of Design/Plan	25	60	72	82	90	98	100
Au and Ag Recovery	% of Plan	80	85	87	93	95	98	100

Conclusions

Overall, BDA considers the nine year LOM plan represents a reasonable projection of likely performance. BDA notes that the accelerated mining schedule (compared to the DFS) involves the creation of significant ore stockpiles, as well as relatively high mining rates. While the Year 1 mining rate may be optimistic, the ore mining rate is well in excess of the milling rate and the main downside would be marginally lower ore grades than scheduled, fed to the mill. The processing ramp-up is considered optimistic and BDA suggests that it could take up to 12 months to reach design throughput and recoveries.

Gold and silver recovery estimates appear reasonable and take into account projected performance on altered and unaltered lithologies. Throughput is consistent with plant design parameters.

15.0 CAPITAL COSTS

15.1 Estimate Summaries

The LOM capital cost for the project was estimated by PTAR in the DFS at US$309.9M. The estimate was subsequently updated by PTAR in November 2008 following a review carried out in conjunction with Ausenco, to US$357.8M. At the time of the termination of the EPCM contracts in December 2008 the forecast cost at completion was US$360.2M. This forecast is summarised in Table 15.1.

Table 15.1

December 2008 Forecast of Capital Expenditure

Item	Total Capital US$M
Mining Capital Costs	10.3
Process Plant and Infrastructure Direct Costs	211.2
Contractor's Indirect Costs	10.5
EPCM Costs	44.3
Other Owners Costs	66.4
Project Contingency	17.5
Total	**360.2**

No allowance has been made for the following items:

- Value Added Tax ("VAT"), import duties or tariffs
- exchange rate fluctuations
- escalation should the project not proceed as per the Implementation Schedule.

PTAR advises that it has received advice from its Indonesian tax advisors that the conditions of the COW should protect it from any costs for VAT, import duties and tariffs. BDA assumes that prospective project acquirers will independently review these assumptions.

A US$/A$ exchange rate of 0.85 has been used to convert costs expected to be incurred in A$. The current exchange rate is around 0.72. The outstanding A$ denominated expenditure is advised by PTAR to be in excess of A$100M which means that if exchange rates remain at current levels for the remainder of the project development period there is a potential reduction of more than US$13.0M in capital costs.

At the time the work was suspended in November 2008, the Ausenco Monthly Report showed that around US$109.4M had been committed and US$57.3M had been expended, so that the remaining capital expenditure was around US$302.9M. Since the suspension, additional expenditure of around US$18.4M has been incurred on orders for critical long delivery mechanical equipment so that the forecast remaining cost to completion at the end of April 2009 is around US$284.5M.

15.2 Mining Capital

The initial capital cost for mining has been estimated at US$10.3M. A breakdown of these estimated costs is shown in Table 15.2.

Table 15.2

Mining Capital Cost Forecast Summary

Item	US$M
Mining Implementation	0.3
Prestripping	3.7
Site Preparation, Roads and Drains	0.4
Clearing and Topsoil Removal	2.0
Dewatering Bore	0.4
Escalation	1.6
Mining Contingency	1.9
Mining Capital Total	**10.3**

The DFS estimate of capital costs for the open pit mine and associated facilities was prepared by Coffey Mining. This estimate has been re-assessed in the light of experience gained from the initial earthworks activities carried out before the project was suspended and some of the costs, in particular the cost of site preparation not associated with the mining development have been transferred to the process plant and infrastructure costs. The estimate of costs for mining implementation is, in the main, mobilisation and demobilisation costs; the mobilisation costs for the earthworks contractor are included in the process plant and infrastructure costs. The costs of site preparation roads and drains are based on quantities derived from preliminary designs prepared on the basis of geotechnical investigations applied to budget unit rates obtained from the earthworks contractor for the access road and site preparation.

Pre-stripping is to be carried out by the mining contractor. The costs have been estimated by Coffey Mining on the basis of the quantities taken from the preliminary mine plan and schedule applied to budget unit mining rates obtained from prospective mining contractors.

BDA notes that additional geotechnical investigations have been carried out since BDA's previous review and that the level of foundations and suitable foundation and fill materials have now been identified with a reasonable level of certainty. In addition, as noted in the section on contingency below, the allowance for contingency on the mining activities is around 18% of direct costs. Such an allowance in normal circumstances should be adequate.

15.3 Process Plant and Infrastructure Capital

The PTAR forecast at completion of direct costs for the process plant and infrastructure is US$211.2M, as summarised in Table 15.3.

Table 15.3

Process Plant and Infrastructure Capital Cost Forecast Summary

Item	US$M
Preliminary Costs	5.2
Process Plant	106.8
Services and Utilities	4.3
Power Supply	13.0
Accommodation Camp	0.3
Tailings Storage Facility	0.2
Raw Water Dams & Settlement Ponds	19.4
Site Buildings	6.6
Mobile Plant	7.5
Sewage Treatment	0.7
Plant Diesel Services	0.1
Jetty Infrastructure and Services	18.9
Access Roads	3.2
Initial and Commissioning Spares	15.6
Freight	9.6
Direct Total Process Plant and Infrastructure Costs	**211.2**

The forecast of direct costs has been prepared by Ausenco using its industry standard cost control system and computer software and is generally based on engineering which was reported by Ausenco to be 32% complete at the end of November 2008 and includes process flow diagrams approved by PTAR, and final process design criteria, major equipment specifications and site layout.

The engineering designs have been used to prepare quantity take-offs for bulk materials and fabricated items which have been applied to prices taken from budget prices from prospective contractors and the Ausenco database. Prices have been obtained from reputable suppliers for the majority of equipment and a significant number of orders placed. Quotations were also obtained from suppliers for packaged plants for water treatment, waste water treatment and emergency power.

Labour rates and productivities are based on information obtained by Ausenco from contractors with experience in the region. Freight costs have been estimated on the basis of quotations and Ausenco historical data. For equipment and materials where freight was not included by the supplier, an allowance for freight has been included. Allowances have been included for design growth.

The estimated costs for the power supply line, switchyard and substation, power reticulation facilities and water reticulation facilities are included in the process plant capital. The power supply costs are based on tendered prices. Power reticulation costs are based on single line diagrams, layouts and equipment lists prepared by Ausenco applied to budget unit rates obtained from qualified contractors. Similarly water reticulation costs are based on piping diagrams, layouts and equipment lists prepared by Ausenco applied to budget unit rates obtained from qualified contractors.

In BDA's opinion the methodology used to prepare the forecast cost at completion for the process plant and infrastructure is reasonable, subject to an appropriate contingency being applied, as discussed in the section on contingency below. The estimation accuracy is considered to be between a feasibility study estimate standard, typically around ±15% and a definitive estimate standard, typically around ±5%.

15.4 Contractors' Indirect Costs

Contractors' indirect costs of US$10.5M include the cost of temporary construction facilities including temporary office accommodation, temporary power supply, temporary water supply, construction workforce accommodation, and catering and heavy lift craneage.

These costs have been estimated by Ausenco using historical data from previous projects in similar locations.

15.5 EPCM Costs

The forecast cost at completion of the provision of EPCM services is US$44.3M. A breakdown of these forecast costs is shown in Table 15.4.

Table 15.4

EPCM Cost Forecast Summary

Item	US$M
Engineering	9.7
Drawing Office	6.9
Home Offices Project Management and Services	7.5
Construction Management and Services	0.3
Commissioning Management and Services	1.0
Construction Management (Expatriates)	5.8
Construction Management (Nationals)	1.3
EPCM Expenses	5.2
EPCM Mobilisation Fee	2.0
EPCM Contractor Fee	4.7
Mining Capital Total	**44.3**

Ausenco has prepared the forecast of EPCM costs on the basis of manhours assessed for each discipline to produce the required deliverables, applied to Ausenco proposed hourly rates for home office and site personnel. Expenses were estimated to support the home office and site effort. Allowance was made in the manhour estimates to carry out all necessary design, procurement, expediting, inspection, site supervision, management, scheduling, cost control, accounting, monitoring, reporting and commissioning activities.

The EPCM costs of US$44.3M equate to around 20% of the estimated direct costs of US$211.2M for the process plant and infrastructure. Such a percentage is considered reasonable for a project such as Martabe.

15.6 Other Owners Costs

The forecast cost at completion of Owners Costs excluding mining costs and project contingency is US$66.4M. A breakdown of these estimated costs is shown in Table 15.5.

Table 15.5
Owners Costs Forecast Summary

Item	US$M
General Owners Costs	20.3
Land Acquisition Costs	22.1
Consultants	0.9
Contractor's Mobilisation	2.8
IT Capital	3.2
Camp	7.7
Light Vehicles	2.9
Miscellaneous Equipment	3.4
Offshore Offices	3.0
Owners Costs Total	**66.4**

General Owners Costs include the costs of salaries and wages and associated administration costs, business expenses and project-specific corporate costs and include a specific contingency for Owners Costs of US$2.0M.

Estimates of the costs of the Owners salaries, wages and overheads have been prepared by PTAR on the basis of organisation charts and staffing schedules applied to market rates for expatriate and national staff.

PTAR has advised that of the US$22.1M forecast for land acquisition costs, US$16.6M had been expended to date with approximately US$1.7M required for remaining land to be acquired; no other significant expenditure is expected. On this basis the forecast for this cost centre may be overstated by around US$4.0M.

First fills, initial consumables and spares would normally be included in the Owners Cost estimate. These costs are included in the direct costs of the process plant and infrastructure facilities.

PTAR advises that the costs of project insurances premiums are included in the corporate overhead costs in the General Owners Costs cost centre.

15.7 Contingency

Specific contingency allowances are included in the Mining Costs (US$1.9M) and Other Owners Costs (US$2.0M) and a general project contingency allowance is included in the overall project cost forecast (US$17.5M). The total of these contingency allowances is US$21.4M.

At the time the work was suspended in November 2008, the Ausenco Monthly Report showed that around US$109.4M had been committed and US$57.3M had been expended. A rule of thumb for calculating the required contingency allowance for projects during the implementation phase is that a feasibility study level contingency percentage, typically 10%, should be maintained on costs yet to be committed and a lesser contingency percentage, typically 3%, should be applied to costs committed but not expended. On that basis, the required contingency would be around US$26.5M. In BDA’s opinion the contingency allowance should be increased by around US$5.0M.

15.8 Deferred, Sustaining and Exploration Capital

Nominal allowances only have been made in the project financial model for deferred and sustaining capital and no allowance has been made for mining exploration capital.

Deferred capital includes such items as ongoing raising of the tailings dam and mobile equipment purchases. Sustaining capital needs to be included for the plant, mine and administration areas; BDA suggests that the level of such capital should be around US$2Mpa.

BDA also considers that it is likely that mine exploration costs will be ongoing once the project is in operation. There are significant areas of known mineralisation within the project area, but additional drilling is required to prove up resources and mineable reserves. It is suggested that an allowance of US$1.5Mpa should be included for ongoing mine exploration from 2010 through to 2018; this does not include any allowance for regional exploration.

15.9 Working Capital

Working capital is separately addressed in the financial model which shows a total working capital injection during the first two operating years of around US$18M. This is around 20% of annual operating costs, or between 2 and 3 months of operating costs, an allowance which is considered reasonable by BDA.

15.10 Adjusted Estimate

BDA considers that a number of minor adjustments could be made to the forecast to take into account the effect of changes to exchange rates, the status of land acquisition costs and inadequate contingency allowances. These adjustments would have a net effect of reducing the total forecast by around US$12M.

However, it is noted that expenditure for care and maintenance of the site is on-going and that the costs of restarting the project and recruiting and mobilising personnel and equipment redeployed since the suspension of the project is subject to some uncertainty. For that reason BDA would recommend that the current capital cost forecast of US284.5M to complete the project from end April be maintained at this time.

15.11 Overrun Facility

Any capital cost estimate is only as reliable as the information on which it is based. Historically, in the case of process-based projects of this type, once more detailed engineering design is undertaken, the bulk quantities, particularly for concrete, structural steel, piping and electrical tend to increase, often in excess of the individual contingency allowances. In addition there may be contractor claims and other costs associated with delays in construction and commissioning or delayed ramp-up. A combination of these factors can result in cost increases during construction, not uncommonly beyond the total capital allowance.

BDA recommends that, in any project financing plan, a cost overrun allowance should be established of around 10% of the estimated remaining capital cost, in this instance of around US$28M. Such an allowance would not be planned to be spent and would not be included in any analysis of project cashflows. BDA suggests that it would be prudent to have a plan for accessing such an allowance at the commencement of the re-establishment of the project development rather than risk such funds not being available in the event of a cost overrun not being identified until the project is nearly complete.

Conclusions

The current project capital cost forecast totals US$360.2M, at the end of April 2009 around US$284.5M remained to be expended. The estimating methodology for individual cost centres is considered generally reasonable and appropriate.

When the timing of the project re-start is established it is recommended that adjustments be made to the forecast for currency movements, a likely reduction in land acquisition costs and an increase in the contingency allowance. Overall these adjustments may result in a net reduction of around US$12M. However at this stage, with the costs of restarting the project still to be accurately determined, BDA is of the opinion that it would be prudent to maintain the forecast at the current level.

No allowance has been made in the estimate for Indonesian VAT, import duties or tariffs. While PTAR has advice that none of these costs should be payable, BDA suggests that there is some risk that at least some of these costs may be incurred, and would suggest that the new prospective owners seek separate specialist advice..

Sustaining capital estimates should probably be increased to around US$2Mpa to account for replacement capital for process plant and administration equipment and tailings dam raising plus around US$1.5Mpa for ongoing mine exploration.

The final capital cost will be affected by future movements in exchange rates against the US dollar and by any escalation trends in materials and construction rates. BDA recommends an overrun allowance of 10% of the estimated remaining capital cost, amounting to a further US$28M.

16.0 OPERATING COSTS

Site operating costs as set out in the High Grade version of the January 2009 financial model, identified as "OZ_Minerals_Martabe_Asset_Model_Data_Room_V5[1]", are shown in Table 16.1 and are based on mid-2007 estimates, apparently adjusted to January 2009 for input to the financial model. Total site costs are projected to be US$639.5M over the life of mine; process plant and mine operating costs comprise 62% and 24% of the total respectively. Mining costs are mostly incurred during the initial five years of the operation, while plant costs are distributed evenly over the operational life of the mine. Cash cost of gold produced, taking into account the silver credits, is projected to be between US$184-283/oz for the first six years of the mine life when the plant feed grade is higher. Projected costs increase to around US$340/oz in the last three operating years when the plant feed is from lower grade stockpiles.

Mine operating costs are based on the lowest price contractor bid, adjusted upward for the use of all-wheel drive articulated trucks and based on a diesel price of US$1.11/L. As part of the mining cost estimation process, the cost of owner-operator mining was also determined, and comparison with the contract price provided reasonable support for the prices bid. BDA notes that, based on the DFS estimates, the diesel component of the mining cost represents around 16% of the total, indicating the level of exposure that the mining costs would have to fuel price fluctuations above US$1.11/L. BDA suggests that the mining cost estimates could be higher by up to 20%, to take account of exposure to fuel prices and work outside contract, dayworks and unexpected conditions.

Table 16.1

Operating Costs for the Martabe Gold Project

Item	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Costs											
Mining	US$M	29.9	28.9	29.8	29.7	23.8	13.3				155.5
Milling	US$M	35.0	50.8	49.7	49.5	49.7	49.9	49.6	49.6	12.2	396.2
Administration	US$M	6.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	2.1	67.3
Realisation	US$M	1.8	2.9	3.1	3.3	3.0	2.4	1.8	1.7	1.4	20.4
Total Site Costs	US$M	73.1	91.0	91.1	90.9	85.0	74.1	59.5	59.8	14.7	639.5
Royalties	US$M	1.7	2.3	2.5	2.7	2.8	1.9	1.2	1.2	0.3	16.5
Silver Credit	US$M	-21.9	-35.8	-39.3	-41.7	-37.8	-30.7	-22.5	-22.4	-5.5	-257.5
Total Cash Cost	US$M	52.9	57.5	54.3	51.9	49.9	45.3	38.5	38.6	9.5	398.4
Production											
Au Production	kozs	187	253	245	260	272	188	116	112	28	1,661
Ag Production	kozs	1,769	2,893	3,175	3,368	3,055	2,480	1,818	1,808	444	20,810
Unit Costs											
Mining	US$/t*	2.38	2.23	2.30	2.49	2.79	4.91				2.52
Processing	US$/t	11.21	11.29	11.05	11.00	11.05	11.09	11.02	11.09	11.09	11.10
Administration	US$/t	2.05	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.91	1.89
Total Cash Cost	US$/oz	283	228	222	199	184	241	332	343	344	240

**Note: unit mining costs are per tonne of material moved; they equate to US $3.46/t ore for the LOM*

The processing costs shown in the financial model, which average US$11.10/t milled, are 12% higher than those listed in the DFS, which average US$9.93/t milled. The processing cost estimate appears to have a mid-2008 cost base. The methodology used to update the processing costs appears to be conventional. Labour costs were estimated by applying appropriate salary and on-cost estimates to a manning schedule; power costs were estimated by using a previously developed power draw schedule and applying a cost of US$73.3 per megawatt hour ("MWh") for grid-supplied power and US$306/MWh for minor site-based diesel-generated power; reagent and consumable costs were estimated by applying units costs to projected consumption rates. Maintenance spares costs do not appear to be covered in the budget file. BDA estimates annual maintenance spares costs would be about 4% of the plant equipment cost, adding about US$2M to plant annual operating costs.

BDA considers that G&A charges could be significantly under-estimated in the financial model. Insurance costs could be significantly higher than budgeted; no allowance has been made for any head office recharge to the site. BDA considers G&A costs could be US$12Mpa, US$3.5M/a higher than estimated, based on experience at other southeast Asian operations.

OZ Minerals does not specify the cost base for the operating cost estimates but the financial model refers to a valuation date of 1 January 2009; BDA has assumed a January 2009 cost base. BDA considers that costs are unlikely to have increased significantly in the four months since that date due to the fall in demand for supplies created by the current global economic slowdown.

Overall BDA considers the operating costs accurate to ±20%.

Conclusions

Operating costs have been based either on bid contract prices, adjusted upward for unforeseen or excluded activities, or estimated using established practices and could be considered accurate to within ±20% as of the date of estimation. Plant maintenance spares costs do not appear to be considered in the budget document reviewed and BDA considers that G&A costs could be significantly higher than estimated. These potential increases total US$5.5Mpa. Due to the global economic slowdown cost increases since the assumed January 2009 estimate should be minimal. Overall BDA considers that the operating cost estimate should be considered accurate to ±20%.

17.0 PROJECT IMPLEMENTATION

17.1 Contracting Strategy

Two major contracts, an Engineering, Procurement and Commissioning Contract and a Construction Management Contract, were awarded by PTAR in 2008 for the design and construction of the project. The contractors were given authorisation to proceed in March 2008. The Engineering, Procurement and Commissioning Contract was executed between Ausenco Services Pty Ltd and PTAR on 20 August 2008 and the Construction Management Contract was executed between Ausenco Asia Pty Ltd, PT Trantekindo Nindyatama and PTAR on 20 October 2008. An Interface Deed linking the two contracts was also executed by the parties to the contracts. The contracts were terminated on 2 December 2008. It is proposed that similar contracts be reinstated, either with Ausenco or with another suitably qualified contractor when the project re-starts.

PTAR proposes to directly contract for the mine development and operations and will also arrange some minor aspects of infrastructure including telecommunications.

The PTAR project team is responsible for overall project management, government liaison, communications and management of the environment; the members of the project team whom BDA has met appear to have good experience in managing projects in the region. In addition PTAR has had access through OZ Minerals to experienced process and mining management personnel who have worked with PTAR to ensure that the process plant and mine design meet expectations. BDA recommends that any acquirer of the project ensure that it has access to similarly experienced technical personnel.

The scope of EPCM services for the contract with Ausenco included:

- detailed engineering design
- procurement, including contract administration and purchasing, expediting, inspecting and managing the transport of materials and equipment to the site; transport will be contracted to an experienced local freight forwarder
- construction management including supervision and inspection of all construction activities
- commissioning including testing, pre-commissioning and the management commissioning
- project controls including cost, schedule and quality monitoring and reporting
- commissioning.

The approach taken by Ausenco and which it is proposed will be taken by the future EPCM Contractor, whether Ausenco or a similar engineering and construction company, is to let contracts in separate horizontal discipline packages for concrete, structural steel, tanks, mechanical, piping, electrical and instrumentation works and that, where practicable, to let contracts on a fixed firm-price basis, using standard internationally recognised conditions of contract.

Construction of the site access roads is well advanced but may require some rehabilitation and upgrading prior to the re-commencement of construction. The construction of the jetty and site buildings and services will be made a priority so that they can be used by the EPCM Contractor's personnel. Temporary facilities will be provided until the permanent buildings and services are available. PTAR advises that beach landings are possible and have been discussed with logistics providers, should there be any delay in the completion of the jetty facilities.

BDA generally concurs with the proposed method of implementation, and notes that any acquirer of the project will require access to operational personnel with the expertise and experience to provide the necessary input into the design and construction of the processing facilities. This is important to ensure that the design of the plant meets all expectations in relation to operability and maintainability. BDA also suggests that the PTAR process plant operational management should be recruited at an early stage and become directly involved in the supervision of the design and construction activities.

17.2 Status of Implementation Activities

The EPCM Contract Construction commenced in July 2008 and at that stage mining was planned to commence late in 2009 with the first gold pour was planned for January 2010. Construction was suspended in November 2008, at which stage the forecast date for the first gold pour had been revised to March 2010.

The current project schedule shows a total project duration of 15 months from the recommencement of project activities. The procurement of long delivery equipment items, including the critical milling equipment is proceeding and allowance is made for the re-establishment of the EPCM Contracts and re-mobilisation of EPCM personnel. BDA generally concurs with the contracting strategy and the project schedule, however it should be recognised that the schedule will be delayed until the project ownership is resolved and project development activities resume.

The Ausenco Monthly Report for November 2008 and the Ausenco Project Closeout Report shows the following status of implementation activities as at the end of November 2008:

- the Project Execution Plan and associated management plans had been prepared and implemented
- Process Design Criteria, Process Flow Diagrams and Piping and Instrumentation Diagrams had been prepared and were in the process of being approved by PTAR
- major engineering deliverables were nearing completion
- a number of major equipment orders had been placed including orders for long delivery items, the jaw crusher, the ball mill, the SAG mill, agitators and intertank screens, which currently continue to be manufactured
- quotations had been received for the majority of the remaining equipment purchases
- of the planned 20 site construction contract packages, tenders had been received for seven and awards had been made for two, these being a bulk earthworks and civil works package and a roadworks package
- preliminary bulk earthworks and civil works had been completed including:
    - clearing and grubbing of the process plant site
    - the waste dump road formation
    - clearing and grubbing of the initial waste dump
    - initial camp accommodation
    - part of the cut and fill in the plant site area
    - the village road between the Trans-Sumatra Highway and the exploration camp
    - a pioneer road from the Trans-Sumatra Highway to the process plant site
    - the materials and equipment laydown area formation
    - the construction camp pads and temporary explosives magazine formation
    - the Aek Pahu river crossing.

BDA visited the site in April 2009 to verify the reported site progress.

At the time of the suspension of work on the project, first gold production was forecast for end March 2010.

17.3 Project Schedule

The project schedule prepared for the Ausenco closeout report in November 2008 showed a total project duration of 15 months from the recommencement of project activities. This schedule recognised that the procurement of long delivery equipment items, including the critical milling equipment, is proceeding but made only nominal time allowances for the re-establishment of the EPCM Contracts and re-mobilisation of EPCM personnel.

BDA understands that the acquisition transaction is expected to be completed by the beginning of July 2009 and that finance is expected to be in place by October 2009 to allow project development to resume with a full Owner's project team having been recruited and mobilised. On that basis, BDA would expect that support staff and the EPCM contractors can be re-engaged and mobilised, orders for major equipment and materials re-established and construction contractors re-engaged and mobilised by around the end of 2009 so that the project can be constructed and commissioned by around the end of the first quarter of 2011.

BDA generally concurs with the contracting strategy and the project schedule, however it should be recognised that the schedule will not be able to be finalised until the project ownership is resolved and project development activities resume.

The mining contract is planned to be awarded so that the contractor can mobilise to site around three months prior to the commencement of feeding ore to the process plant.

The current forecast date for the first gold pour as reported in the Ausenco November 2008 Monthly Report is end March 2010.

The Ausenco November 2008 Monthly Report shows that engineering progress was lagging at 32.0% actual completion compared with a planned 39.2% complete, procurement was reported to be 1.7% complete and construction 4.9% complete. Engineering capability in the resources industry which was extremely stretched when the project commenced has now become more available and there is a reasonable prospect that this slippage can be retrieved. The long delivery equipment items on the project critical path, the ball mill and SAG mill have been ordered and at this stage are reported to be on schedule for delivery around mid-2009.

Conclusions

PTAR was implementing the project by means of an EPCM approach with EPCM Contracts having been let for the processing and infrastructure facilities. These contracts were terminated in December 2008. It is proposed that when the project is re-activated, contracts similar to those previously in place would be entered into either with Ausenco or with another similarly qualified engineering and construction company. PTAR will directly contract for the mine development and operations and is arranging some minor infrastructure items including telecommunications.

The responsibility for managing the overall project is currently with the PTAR project team, the members of which have appropriate experience in managing projects in the region. In addition PTAR has had access through OZ Minerals to experienced process plant and mine management personnel to ensure that the process plant and mine design meets expectations. It will be important for any acquirer of the project to have access to similar expertise.

The project schedule current at the time the project was suspended shows a total project duration of 15 months from the reactivation of the project which, if the acquisition and financing activities are completed by October 2009 and reasonable allowances are made for re-establishment of the project, means that the project can be completed and commissioned by around the end of the first quarter of 2011.

BDA generally concurs with the contracting strategy and the project schedule, however it should be recognised that following the cessation of project activities, there may be further delays in re-activating the project, entering into new contracts, re-mobilisation and in ramping up the implementation effort.

18.0 STATEMENT OF CAPABILITY

This report has been prepared by Mr Malcolm Hancock and Mr John McIntyre, Executive Directors of Behre Dolbear Australia Pty Limited, together with Mr Ian White, Mr Richard Frew and Mr Adrian Brett, Senior Associates of BDA.

Behre Dolbear has offices in Denver, New York, Toronto, Vancouver, Hong Kong, London, Sydney, Guadalajara and Santiago. The parent company, Behre Dolbear & Company Inc., was founded in 1911 and is the oldest continuously operating mineral industry consulting firm in North America. The firm specialises in mineral evaluations, due diligence assessments, independent expert reports and strategic planning as well as technical geological, mining and process consulting.

The principal consultants engaged in the review on behalf of BDA are as follows:

Mr Malcolm Hancock (BA, MA, FAusIMM, FGS, MIMM, MGSA, MMICA) is Executive Director of BDA and a geologist with over 30 years experience of exploration and mining projects principally in Australia, Africa and South East Asia. He has extensive experience in the areas of resource/reserve estimation, reconciliation, project feasibility and review, independent expert and due diligence reports, mine geology and mining operations. He has been involved in the feasibility, construction, and commissioning of several mining operations. He has worked on both open pit and underground mines.

Mr John McIntyre (BEng. (Mining) Hon, FAusIMM, MMICA, CPMin) is Managing Director of BDA and a mining engineer who has been involved in the mining industry for more than 30 years, with operational and management experience in base metals, gold and coal. He has been involved in numerous mining projects and operations, feasibility studies and technical and operational reviews in Australia, West Africa, New Zealand, North and South America, PNG and South East Asia.

Mr Ian White (MSc, BSc(Hon), DIC, MAusIMM) is a Senior Associate of BDA with more than 25 years experience in the Australian mining industry. He has held senior management positions in operating mines, and has been involved in plant design and optimisation, process design testwork, feasibility studies and plant commissioning and project valuation. He is experienced in CIP/CIL technology, flotation, gravity separation, heap leaching, SX/EW, comminution, magnetic separation and pelletising. He has worked with a range of commodities including gold, copper, iron ore and base metals.

Mr Richard Frew (BE Civil, MIE Aust) is a Senior Associate of BDA with more than 35 years experience as a planning, estimation and contracts engineer. He is experienced in contract management, feasibility study review, financial modelling, capital cost estimation, infrastructure, project controls and implementation. He has worked on a large number of projects providing management and project services to the owners or financiers, including major projects in Australia, the Philippines, Argentina, Mauritania, New Zealand and Romania. Mr Frew has reviewed the proposed infrastructure, the capital costs and the implementation strategy.

Mr Adrian Brett (BSc. (Hon) Geol., MSc. Envir., M. Envir. Law) is a Senior Associate of BDA with more than 25 years experience in environmental and geo-science, including the fields of environmental planning and impact assessment, site contamination assessments, environmental audit, environmental law and policy analysis and the development of environmental guidelines and training manuals. He has worked in an advisory capacity with several United Nations and Australian government agencies. He has completed assignments in Australia, Indonesia, Laos, Myanmar, Thailand, the Philippines, Africa and South America.

19.0 STATEMENT OF INDEPENDENCE

Neither the principals nor associates of BDA have any material interest or entitlement in the securities or assets of OZ Minerals, CST or Smart Rich. BDA will be paid a fee for this report comprising its normal professional rates and reimbursable expenses. The fee is not contingent on the conclusions of this report.

20.0 LIMITATIONS AND CONSENT

This assessment has been based on data, reports and other information made available to BDA by OZ Minerals and PTAR and referred to in this report. BDA has been advised that the information is complete as to material details and is not misleading. A draft copy of this report has been provided to OZ Minerals, CST, Smart Rich and Azure Capital for comment as to any errors of fact, omissions or incorrect assumptions.

BDA has reviewed the data, reports and information provided and has used consultants with appropriate experience and expertise relevant to the various technical aspects. The opinions stated herein are given in good faith. BDA believes that the basic assumptions are factual and correct and the interpretations reasonable.

BDA does not accept any liability other than its statutory liability to any individual, organisation or company and takes no responsibility for any loss or damage arising from the use of this report, or information, data, or assumptions contained therein. With respect to the BDA report and use thereof, Smart Rich agrees to indemnify and hold harmless BDA, its shareholders, directors, officers, and associates against any and all losses, claims, damages, liabilities or actions to which they or any of them may become subject under any securities act, statute or common law and will reimburse them on a current basis for any legal or other expenses incurred by them in connection with investigating any claims or defending any actions.

The report is provided to the Directors of Smart Rich for the purpose of assisting them in assessing the technical issues and associated risks of the proposed project development and for use in a circular to Smart Rich shareholders; it should not be used or relied upon for any other purpose. The report does not constitute a technical or legal audit. Neither the whole nor any part of this report nor any reference thereto may be included in, or with, or attached to any document or used for any purpose without BDA's written consent to the form and context in which it appears.

Yours faithfully

BEHRE DOLBEAR AUSTRALIA PTY LTD

Malcolm C Hancock
Executive Director - BDA

John S McIntyre
Managing Director - BDA

APPENDIX I

GLOSSARY

APPENDIX I

GLOSSARY

Term/Abbreviation	Description
AAS	Atomic Absorption Spectrometry
Ag	Silver
AMC	AMC Consultants Pty Limited
AMDAL	Analise Dampak Lingkungan or EIS
ANA	PT Artha Nugraha Agung
Antam	PT Antam Tbk
ARD	Acid Rock Drainage
ARL	Agincourt Resources Limited
Au	Gold
Ausenco	Ausenco Services Pty Limited/Ausenco Asia Pty Limited
A$	Australian Dollar
BDA	Behre Dolbear Australia Pty Limited
Behre Dolbear	Behre Dolbear & Company Inc.
CIL	Carbon in Leach
CN_{WAD}	Weak Acid Dissociable Cyanide
Coffey Mining	Coffey Mining Pty Limited
COW	Contract of Work
CRDIP	Community Relations and Development Investment Plans
CST	China Sci-Tech Holdings
Cu	Copper
DFS	Definitive Feasibility Study
EIS	Environmental Impact Statement
EPCM	Engineering, Procurement and Construction Management
ERM	PT ERM
g	Gram
g/t	Grams per Tonne
GHD	GHD Pty Limited
Golder	Golder Associates Pty Limited
ha	Hectare
HKSE	Hong Kong Stock Exchange
IML	Independent Metallurgical Laboratories
Intermet	Intermet Engineering Pty Limited
ITS	PT Intertek Testing Services
JORC	Joint Ore Reserve Committee
km	Kilometre
km^2	Square Kilometre
KP	Knight Piesold Pty Limited
kV	Kilovolts
kWh/t	Kilowatt Hours per Tonne
L	Litre
LOM	Life of Mine
m	Metre
µm	Micron (10^{-6})
M	Million
m^3	Cubic Metre
MCE	Maximum Credible Earthquake
mg	Milligrams
mg/L	Milligrams per Litre
mm	Millimetre
Mozs	Million Ounces
m/s^2	Metres per Second Squared
Mt	Million Tonnes
Mtpa	Million Tonnes Per Annum
MW	Megawatt
MWh	Megawatt Hour

GLOSSARY CONTINUED

Term/Abbreviation	Description
NCV	Net Carbonate Value
Newmont	Newmont Mining Corporation
Normandy	Normandy Mining Limited
OBE	Operating Base Earthquake
OK	Ordinary Kriging
Oxiana	Oxiana Limited
OZ Minerals	OZ Minerals Limited
ozs	Ounces
P_{80}	80% Passing
PAF	Potentially Acid Forming
PGA	Peak Ground Acceleration
ppm	Parts Per Million
PTAR	PT Agincourt Resources
RC	Reverse Circulation
ROM	Run-of-Mine
RSG Global	RSG Global Pty Limited
SAG	Semi Autogenous Grinding
SFS	Sumatran Fault System
t	Tonne
tpa	Tonnes Per Annum
TSF	Tailings Storage Facility
UKL	Environment Monitoring Plan
UPL	Environment Management Plan
URS	URS Australia Pty Limited
US$	US Dollar
V	Volt
VAT	Value Added Tax
WTP	Water Treatment Plant
XRF	X-Ray Fluorescence