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NORD GOLD

CPR Report on the Assets of Nord Gold for Burkina Faso, Guinea, Kazakhstan and the Russian Federation

January 2011

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Wardell Armstrong International
Wheal Jane, Baldhu, Truro, Cornwall, TR3 6EH, United Kingdom
Telephone: +44 (0)1872 560738 Fax: +44 (0)1872 561079 www.wardell-armstrong.com

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CPR Report on the Assets of Nord Gold for Burkina Faso, Guinea, Kazakhstan and the Russian Federation

January 2011

PREPARED BY:

Phil Newall	BSc (ARSM), PhD (ACSM), CEng, FIMMM
Mark Owen	BSc (Hons), MSc, MCSM, CGeol, EurGeol, FGS
Daniil Lunev	PhD (SPMI), DipEng (SPMI), ProgGradIMMM
Phil King	ARSM, BSc, FIMMM
John Eyre	FRICS, MIMMM, MRIN, MIQ
Adam Wheeler	BSc, MSc, CEng, MIMMM
Richard Ellis	MCSM, BSc, MSc, FGS

APPROVED BY:

Dr P S Newall	Director of Minerals

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27 January 2011

The Directors
Nord Gold N.V
Strawinskylaan 3105,
1077 ZX Amsterdam,
The Netherlands

Dear Sirs

Nord Gold N.V. – Competent Person's Report

Background

Nord Gold N.V. (the "Client" or "Nord Gold") commissioned Wardell Armstrong International Ltd ("WAI") to prepare a Competent Person's Report (the "CPR") on its gold mining, development and exploration assets. WAI understands that the CPR will be included as part of a prospectus (the "Prospectus") to be published in connection with a proposed offering of ordinary shares by Nord Gold to be admitted to the premium listing segment of the Official List of the United Kingdom Financial Services Authority and to trading on the main market for listed securities of the London Stock Exchange Main Listing (together, "Admission").

WAI hereby consents to the inclusion of this letter and the CPR in the Prospectus, with the inclusion of its name, in the form and context in which it appears in the Prospectus, to be published in connection with Admission.

For the purposes of Item 1.1 and 23.1 of Annex I and Item 1.1 and 10.3 of Annex III to Commission Regulation (EC) No. 809/2004 of 29 April 2004 (the "Prospectus Directive Regulation") WAI is responsible for this letter and the CPR as part of the Prospectus and declares that it has taken all reasonable care to ensure that the information contained in this letter and the CPR is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import. This declaration is included in the Prospectus in accordance with Item 1.2 of Annex 1 and 1.2 of Annex III to the Prospectus Directive Regulation.

The principal Mineral Assets in which the Client is interested comprise Taparko, Bissa and other exploration assets in Burkina Faso, Lefa in Guinea, Suzdal, Zherek and Balazhal in Kazakhstan, and Berezitovy, Irokinda, Zun-Holba, Tabornoe, Aprelkovo, Gross, Prognoz, Nercha, and Uryakh in Russia.

In the CPR "Aprelkovo" means "Pogromnoe occurrence", "Irokinda" means "Irokindinskoe gold deposit", "Zun-Holba" means "Zun-Holbinskoe gold deposit", "Nercha" means "Nerchinskaya perspective field", "Berezitovy" means "Berezitovoe deposit", "Suzdal" means "Suzdalskoe gold deposit".

These projects are at various stages of exploration and development, all of which are discussed in detail in the CPR. WAI considers that the relevant areas have sufficient technical merit to justify proposed programmes and associated expenditures.

The Prospectus contains an appropriate summary of each of the assets, and WAI is satisfied with the integrity of the information contained in the Prospectus based on the limited validation work performed by WAI, but more importantly, reliance on the legal due diligence performed by Nord Gold and its subsidiaries in the projects geographical locations.

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Requirement and Structure of the CPR

WAI has prepared the CPR in accordance with the requirements set out in article 23(1) of the Prospectus Directive Regulation and item 133 of CESR'S Recommendations for the consistent implementation of the European Commission's Regulation on prospectuses No 809/2004 (the "CESR Recommendations").

WAI has reviewed the resources and reserves as presented by Nord Gold and in many cases prepared independent resource and reserve estimates in accordance with the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the "JORC Code"), all of which are shown in the CPR.

The CPR has been structured on a technical discipline basis into sections on Geology, Mineral Resources and Ore Reserves, Mining Engineering, Mineral Processing, Infrastructure, Occupational Health and Safety, Environmental Management, and a Financial Assessment for each of the Mineral Assets.

Site visits were made by WAI to all the assets mentioned above with the exception of Prognoz in Russia.

Verification, Validation and Reliance

The CPR is dependent upon technical, financial and legal input. The technical information as provided by Nord Gold to, and taken in good faith by, WAI has not been independently verified by means of re-calculation, but all reserve and resource estimates have been substantiated, or re-modelled, by evidence from WAI's site visits and observations, are supported by details of exploration results, analyses and other evidence and take account of all relevant information supplied by Nord Gold. WAI has conducted a review

and assessment of all material technical issues likely to influence the future performance of the Mineral Assets which included the following:

- Inspection visits to the mining operations, processing facilities, surface structures and associated infrastructure, undertaken in the last two quarters of 2009 the second quarter 2010 and first quarter 2011, with:
  - discussion and enquiry following access to key on-site and corporate personnel;
  - an examination of historical information and results made available by Nord Gold in respect of the Mining;
  - a review of Nord Gold's resource estimates with re-modelling where appropriate; and
  - a review of Nord Gold's production forecasts and costs.
- undertaken all necessary investigations to ensure compliance with the Prospectus Directive Regulation in conjunction with the CESR Recommendations and the JORC Code (where appropriate) in terms of the level of disclosure.

The majority of the resource and reserve estimates presented in the CPR have been prepared in accordance with JORC Code by WAI or other international consultants, with the remainder classified under the Russian system upon which WAI has made comment.

WAI has placed reliance on Nord Gold that the following information provided by Nord Gold to WAI is both valid and accurate for the purpose of compiling the CPR:

- all technical information; and
- that the legal ownership of all mineral and surface rights has been verified and save as disclosed in the CPR that no significant legal issues exists which would affect the likely viability of a project and/or the mineral resources and ore reserves as reported herein.

Limitations, Declarations, Consent and Copyright

Limitations

Nord Gold has confirmed to WAI that to its knowledge the information provided by Nord Gold was true, accurate and complete and not incorrect, misleading or irrelevant in any aspect. WAI has no reason to believe that any facts have been withheld.

The achievability of production forecasts and costs are neither warranted nor guaranteed by WAI. The forecasts as presented and discussed herein have been proposed by Nord Gold management and adjusted where appropriate by WAI, based on up-to-date reserve estimates, and cannot be assured. They are necessarily based on economic assumptions, many of which are beyond the control of Nord Gold.

Declarations

WAI will receive a fee for the preparation of the CPR in accordance with normal professional consulting practice. This fee is not contingent on the outcome of the Admission or value of Nord Gold and WAI will receive no other benefit for the preparation of the CPR.

None of WAI or its directors, staff or subcontractors who contributed to the CPR have, at the date of this letter, and has not had within the previous two years, any shareholding in or other relationship with Nord Gold or the principal current assets in which Nord Gold is interested which comprise of Taparko, Lefa, Suzdal, Berezitovy, Zun Holba, Irokinda, Tabornoe, Aprelkovo, Gross, Bissa, Prognoz, Balazhal, Zherek, Uryakh, Nercha and other exploration assets in Burkina Faso, and considers itself to be independent of Nord Gold and Severstal. None of WAI or its directors, staff or subcontractors who contributed to the CPR has any interest in the proposed offering of ordinary shares in the capital of Nord Gold.

In the CPR, WAI provides assurances to the Directors of Nord Gold that certain Technical and Economic data including production profiles, operating expenditures and capital expenditures, of the Mineral Assets as provided to WAI by Nord Gold and reviewed and where appropriately modified by WAI are reasonable.

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

Furthermore, WAI is responsible for this letter and the CPR as part of the Prospectus and declares that it has taken all reasonable care to ensure that the information contained in this letter and the CPR is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import.

Consent and Copyright

WAI consents to the inclusion of its name and all references to WAI in the Prospectus, the issuing of this letter and the CPR in the form and content in which it is to be included in the Prospectus.

Neither the whole nor any part of this letter and the CPR nor any reference thereto may be included in any other document without the prior written consent of WAI regarding the form and context in which it appears.

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

Responsibility for the Competent Person's Report and No Material Change

WAI accepts responsibility for the CPR for the purposes of Item 1.2 of Annex 1 and 1.2 of Annex III to the Prospectus Directive Regulation. The CPR is complete up to and including 27 January 2011. Having taken all reasonable care to ensure that such is the case, WAI confirms that, to the best of its knowledge, the information contained in the CPR is in accordance with the facts, contains no omission likely to affect its import, and no material change has occurred from 17 January 2011 to the date hereof that would require any amendment to the CPR.

Qualification of Consultants

WAI comprises over 50 staff, offering expertise in a wide range of resource and engineering disciplines. WAI's independence is ensured by the fact that it holds no equity in any project. This permits WAI to provide its clients with conflict-free and objective recommendations on crucial judgment issues. WAI has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, MER's and CPR's, and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide.

The CPR has been prepared based on a technical and economic review by a team of consultants sourced from the WAI offices in Europe over a 18 month period. These consultants are specialists in the fields of geology, resource and reserve estimation and classification, open pit mining, rock engineering, mineral processing, hydrogeology and hydrology, tailings management, infrastructure, environmental management and mineral economics.

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

- Phil Newall, MCSM, BSc, PhD , CEng, FIMMM, is Director of Minerals and Geologist with WAI and has practised his profession as a mine and exploration geologist for over 25 years for both base and precious metals;
- Mark Owen, MCSM, BSc, MSc, CGeol, EurGeol, FGS, is a Technical Director and Geologist with WAI and has over 25 years international experience as a mine and exploration geologist in both surface and underground mining operations;
- Daniil Lunev, DipEng (SPMI), PhD (SPMI) specialist area is mining machinery.
- Bruce Pilcher BE(Mining)Syd, MAusIMM(CP), MIMMM, CEng, Eur Ing is a Chartered Mining Engineer with 25 years experience in underground and surface mining operations;
- Phil King, ARSM, BSc, FIMMM is a Technical Director and Metallurgist with WAI and has over 25 years experience within the minerals industry in both process testwork and design for metallic and industrial minerals worldwide;
- John Eyre, FRICS, MIMMM, MRIN, MIQ, CEnv, is a Technical Director and Environmental Scientist with WAI, and has over 30 years experience in the international minerals industry as, variously, mineral surveyor, minerals and environmental manager, lecturer, consultant and mineral agent in over 30 countries throughout the world;
- Julia Boiko, BSc, Regional Manager - Kazakhstan, has worked for Western mining companies in Kazakhstan on nickel and gold projects as logistics manager and technical translator;
- Adam Wheeler, BSc MSc CEng EurIng, MIMMM; is Principal Resource Analyst and Mining Engineer specialising in the application, customisation and management of mining and geological software systems; and
- Richard Ellis, MCSM BSc MSc FGS; is a Senior Resource Geologist with some 8 years operational experience within the industrial minerals sector in the UK.

The Competent Person who has supervised the production of the CPR is Dr Phil Newall who is Director of Minerals with WAI.

Yours faithfully
for and on behalf of
Wardell Armstrong International Ltd

P Newall
Director of Minerals

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EXECUTIVE SUMMARY

Wardell Armstrong International ('WAI') was commissioned by Nord Gold N.V. ("Nord Gold") to prepare a Competent Person's Report (CPR) of their gold assets for the purposes of fulfilling the requirements of the London Stock Exchange Main Listing Rules and London Stock Exchange Main Listing Notes for Mining and Oil and Gas Companies (June 2009) with respect to a proposed offering of ordinary shares of Nord Gold to be admitted to the premium listing segment of the official list of the UKLA.

Nord Gold has acquired a significant portfolio of gold assets in Burkina Faso, Guinea, Kazakhstan and Russia. These vary from mature mining operations through to grass-roots exploration terrain.

In summary, WAI believes that these assets can be categorised as follows:

New Open Pit Operations – these include the Taparko mine in Burkina Faso, Lefa mine in Guinea, the Berezitovy mine and the Aprelkovo mine in Eastern Siberia, Russia.

The Taparko and Bouroum gold deposits comprise sulphide-poor quartz veins hosted by shear zones of various attitudes. Mining at Taparko mine commenced in late 2007 and currently extracts gold ore from the 3/5 open pit by conventional drill & blast with truck haulage to a comminution-gravity-CIL processing circuit. Ore has also been produced from the GT pit at Taparko and from the Bouroum project to the west. The current daily rate of excavation is approximately 4,400tpd of ore with an average of 17,000t of waste, whilst the mill feed rate is approximately 180t/hr and is expected to increase to 210t/hr due to an upgrade in the processing plant that have taken place in September 2010. This will trigger an increase in the mining production rate from 1.3Mtpa to 1.7Mtpa. Deposits in the Bouroum area, such as F-12 and Welcome Stranger and other exploration targets adjacent to the Taparko mine are likely to provide additional feed in the future. Key performance indicators for Tarparko are given in the table below.

Taparko Key Performance Indicators for 2008 to 9m 2010

	Unit	2008	2009	9m 2010
Rock mined	Kt	N/A	6,845	8,194
Ore mined	Kt	266	814	963
Ore milled	Kt	369	815	912
Average Au grade	g/t	3.0	4.0	3.3
Ore stripped	Kt	N/A	6,030	7,819
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	kg	954	3,039	2,826
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	koz	30.7	97.7	90.9
Recovery rate	%	91.4	94.9	91.4
Full cash cost	$/oz		499	386
Normalised TCC	$/oz		484	379
Ore mining costs	$/t		1.85	1.34
Waste mining costs	$/t		1.85	1.34
Ore processing costs	$/t		22.71	14.72
General and administration costs	$M		3.4	2.1
CAPEX	$M		5.7	3.3
Depreciation	$M		19.7	10.1

Notes
***Including exploration and evaluation**
**** including 250 GEO and 207 GEO of silver production in 2009 and 1H 2010**

A Life of Mine Production Schedule for Taparko-Boroum is shown in the table below.

Taparko-Boroum Life of Mine Assumptions and Input Data						
Year	***TOTAL***	**Nov-Dec2010**	**2011**	**2012**	**2013**	**2014**
Gold Price,US $/Oz	***0***	900	900	900	900	900
Ore production (diluted), kt	***7,122***	282	1,732	1,732	1,733	1,642
Waste mined, kt	***30,386***	1,794	7,723	7,790	7,669	5,410
Ore Mining cost, US$/t	***1.33***	1.33	1.33	1.33	1.33	1.33
Waste Mining cost, US$/t	***1.33***	1.33	1.33	1.33	1.33	1.33
Mining OPEX, k US$	***49,885***	2,761	12,575	12,665	12,505	9,379
Au Grade, g/t	***2.74***	3.34	3.08	2.56	2.92	2.28
Gold mined, kg	***19,516***	943	5,335	4,430	5,063	3,745
Recovery, %	***95.0%***	95.0%	95.0%	95.0%	95.0%	95.0%
Gold recovered, kg	***18,540***	896	5,068	4,209	4,810	3,557
Gold recovered, Oz	***596,089***	28,814	162,951	135,321	154,633	114,370
Processing cost, US$/Oz	***180***	150	163	196	171	220
Proc and Mining Costs US$/Oz	***266***	246	240	289	252	302
Revenue, k US$	***536,480***	25,933	146,656	121,789	139,170	102,933
Operating Costs, k US$	***158,849***	7,083	39,077	39,167	39,024	34,498
G&A, Sales, k US$	***78,462***	2,906	17,436	17,436	17,436	17,436
Royalty, 3%, k US$	***16,094***	778	4,400	3,654	4,175	3,088
CAPEX, k US$	***12,209***	1,450	5,524	2,000	1,000	1,000

The Lefa gold property in NE Guinea was brought into introduction is 1995 by SMD as an open pit heap leach project. In 2006, Crew Gold Corporate acquired 100% of the property with the intention of expanding operations using CIL technology. The mine produced 198,000oz of gold in 2008, and 178,000oz in 2009. However, the property contains significant gold resources and increased production is imminent.

The historic production data and Life of Mine Production Schedule for Lefa are shown in the tables below.

Lefa Key Performance Indicators for 2008-9m 2010				
	Unit	**2008**	**2009**	**9m 2010**
Ore mined	Kt	3,885	4,774	4,491
Ore milled	Kt	3,085	4,422	3,807
Average Au grade	g/t	2.2	1.4	1.3
Gold recovered	kg	6,145	5,523	3,846
Gold recovered	koz	198	178	138.1
Recovery rate	%	93	90	89
Normalised TCC	US$/oz	827	809	802

Lefa Financial Model Assumptions and Input Data														
Year	**TOTAL**	**Nov-Dec 2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Gold Price, $/Oz	-	900	900	900	900	900	900	900	900	900	900	900	900	900
Ore production (diluted) kt	88,199	1,048	6,000	7,500	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	6,000	3,651
Waste mined, kt	292,590	3,477	19,904	24,881	26,539	26,539	26,539	26,539	26,539	26,539	26,539	26,539	19,904	12,112
Ore Mining cost, $/t	1.71	1.8	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Waste Mining cost, $/t	1.41	1.5	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Mining OPEX, k$	560,019	7,101	38,066	47,583	50,755	50,755	50,755	50,755	50,755	50,755	50,755	50,755	38,066	23,163
Au Grade g/t	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Gold mined, kg	118,186	1,404	8,040	10,050	10,720	10,720	10,720	10,720	10,720	10,720	10,720	10,720	8,040	4,892
Recovery	0.9	0.89	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Gold recovered, kg	106,354	1,250	7,236	9,045	9,648	9,648	9,648	9,648	9,648	9,648	9,648	9,648	7,236	4,403
Gold recovered, Oz	3,419,355	40,183	232,643	290,803	310,190	310,190	310,190	310,190	310,190	310,190	310,190	310,190	232,643	141,563
Processing cost, $/Oz	314	365	309	309	309	309	309	309	309	309	309	309	309	309
Processing cost, $/t	12.15	14	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Proc and Mining Costs $/Oz	478	542	473	473	473	473	473	473	473	473	473	473	473	473
Depreciation (total) k$	348,000	4,000	25,000	29,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	20,000
Revenue, k$	3,077,419	36,165	209,378	261,723	279,171	279,171	279,171	279,171	279,171	279,171	279,171	279,171	209,378	127,407
Operating Costs, k$	1,620,503	21,773	110,066	137,583	146,755	146,755	146,755	146,755	146,755	146,755	146,755	146,755	110,066	66,975
G&A, Sales	174,600	2,600	15,400	15,400	15,400	15,400	15,400	15,400	15,400	15,400	15,400	15,400	12,000	6,000
Royalty, 5.4%	166,178	1,953	11,306	14,133	15,075	15,075	15,075	15,075	15,075	15,075	15,075	15,075	11,306	6,880
CAPEX, k$	91,649	3,342	37,742	20,565	5,000	5,000	5,000	5,000	3,000	2,000	2,000	2,000	1,000	-

At Berezitovy, gold mineralisation is related to explosive breccia within granitic gneisses which is present within a north-northwest trending and steeply southwest dipping zone of brecciated and hydrothermally altered granodiorite. In addition, gold mineralisation is associated with metasomatic alteration and quartz flooding in granitic and granodioritic rocks. The near surface oxidation zone is very shallow (5-7m deep) and mineralisation throughout is predominantly sulphides. Modern mining operations began in December 2007. The deposit is mined by conventional open pit techniques with drill and blast, and haulage utilising CAT and Belaz trucks. The mine has a throughput of approximately 1.3Mtpa (full 2009 production), with 184t/hr through the CIP plant to a dry paste plant at a nominal average grade of 2.4g/t Au. Around Berezitovy, Nord Gold has identified some exciting exploration targets that require further work. The key performance indicators and Life of Mine Schedule for Berezitovy are shown in the tables below.

Berezitovy Key Performance Indicators for 2008 - 9m 2010

	Unit	2008	2009	9m 2010
Rock mined	kt	N/A	10,435	12,522
Ore mined	kt	833	1,342	1,400.1
Ore milled	kt	691	1,092	799
Average Au grade	g/t	2.5	2.8	2.3
Ore stripped	kt	N/A	9,344	11,122
Gold recovered (2008 - dore, 2009, 9m2010 - refined gold and silver)**	kg	1,365	2,715	1,718
Gold recovered (2008 - dore, 2009, 1H 2010 - refined gold and silver)**	koz	43.9	87.3	55.2
Recovery rate	%	89.4	87.3	89.6
Full cash cost	US$/oz		570	651
Normalised TCC	US$/oz		544	623
Ore mining costs	US$/t		1.61	1.50
Waste mining costs	US$/t		1.61	1.50
Ore processing costs	US$/t		11.96	15.75
General and administration costs	US$M		1.96	3.97
CAPEX	US$M		11.87	18.00
Depreciation	US$M		12.04	8.75

Note:
*** including Exploration and Evaluation**
**** including 1.15 kGEO and 0.64 kGEO of silver production in 2009 and 1H 2010; 903 and 1,017 GEO of silver production for 9 and 10 months 2010**

Berezitovy Life Of Mine Model Assumptions and Input Data										
Year	***TOTAL***	**Nov-Dec2010***	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Gold Price,US $/Oz	**-**	900	900	900	900	900	900	900	900	900
Ore production (diluted) kt	***16,770***	310	1,871	2,076	2,075	2,077	2,074	2,078	2,077	2,131
Waste mined, kt	***64,592***	2,808	6,166	6,769	6,853	6,764	7,788	9,905	9,641	7,899
Ore Mining cost, US$/t	***1.55***	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Waste Mining cost, US$/t	***1.55***	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Mining OPEX, k US$	***126,110***	4,832	12,457	13,710	13,839	13,703	15,286	18,573	18,163	15,547
Au Grade g/t	***1.92***	2.23	2.38	1.99	1.72	1.63	2.11	1.93	2.01	1.58
Gold mined, kg	***32,166***	691	4,453	4,130	3,577	3,386	4,366	4,018	4,179	3,365
Recovery, %	***0.90***	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Gold recovered, kg	***28,965***	622	4,010	3,719	3,221	3,049	3,932	3,618	3,763	3,031
Gold recovered, Oz	***931,253***	19,998	128,919	119,571	103,572	98,031	126,414	116,319	120,993	97,436
Processing cost, US$/Oz	***228***	217	182	218	251	266	206	224	215	274
Processing cost, US$/t	***13***	14	13	13	13	13	13	13	13	13
Proc and Mining Costs US$/Oz	***375***	459	279	333	385	406	327	384	366	434
Depreciation (total) k US$	***97,052***	1,747	13,884	13,884	13,884	13,884	13,884	13,884	6,000	6,001
Revenue, k US$	***838,128***	17,998	116,027	107,614	93,215	88,228	113,772	104,687	108,894	87,692
Operating Costs, k US$	***337,021***	9,171	35,938	39,766	39,887	39,774	41,309	44,656	44,227	42,292
G&A, Sales	***158,263***	2,885	17,307	19,038	19,038	19,038	19,038	19,038	19,038	19,038
Royalty, 6%	***50,288***	1,080	6,962	6,457	5,593	5,294	6,826	6,281	6,534	5,262
CAPEX, k US$	***22,281***	1,781	8,500	2,000	2,000	2,000	2,000	2,000	1,000	1,000

Note:
Based on the Company forecast

At Aprelkovo, the current pit is exploiting a generally northeast-southwest trending sequence of oxidised ore lenses of variable thickness and length. The mine which has approximately 16t remaining is designed to extract 1.6Mt of ore per year with some 5-7Mt of waste. The ore is mined by open pit using conventional drill & blast techniques followed by a truck & shovel operation to haul the ore to the crushing plant and waste to waste dumps and low grade ore stockpile. Gold is recovered from heap leaching. The key performance indicators and Life of Mine Schedule for Aprelkovo are shown in the tables below.

Aprelkovo Key Performance Indicators for 2008 – 9m 2010

	Unit	2008	2009	9m 2010
Rock mined	Kt	4,765	8,718	7,472
Ore mined	Kt	863	1,586	1,237
Ore processed	Kt	1,351	1,704	1,284
Average Au grade (ore processed)	g/t	1.01	1.04	1.17
Ore stripped	Kt	3,305	7,071	6,004
Gold recovered**	kg	924	898	747
Gold recovered**	koz	29.7	28.9	24.0
Recovery rate	%	74.4	70.7	N/A
Full cash cost	US$/oz	616	754	819
Normalised TCC	US$/oz	586	666	651
Ore mining costs	US$/t	1.9	1.2	1.0
Waste mining costs (US$/t)	US$/t	1.9	1.1	0.9
Ore processing costs (US$/t)	US$/t	5.4	4.9	5.4
General and administration costs	US$M	2.2	1.4	2.3
CAPEX*	US$M	13.3	4.9	3.7
Depreciation	US$M	4.8	6.9	5.1

Note:
*** including Exploration and Evaluation**
**** including 74GEO of Silver production in 2010**

Aprelkovo life of mine Model Assumptions and Input Data

Year	TOTAL	Nov-Dec 2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Gold Price, US$/Oz	-	900	900	900	900	900	900	900	900	900	900	900
Ore Ox.+Trans. production (diluted) kt	1,561	-	804	231	121	83	93	53	144	7	-	25
Waste Ox.+Trans. mined, kt	20,644	1,187	1,855	2,057	1,887	1,927	2,052	2,333	2,308	2,285	2,365	389
Ore Ox.+Trans. Mining cost, US$/t	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Waste Ox.+Trans. Mining cost, US$/t	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Mining Ox.+Trans. OPEX, k US$	27,484	1,460	3,359	2,839	2,484	2,480	2,649	2,941	3,031	2,820	2,909	511
Au Ox.+Trans. Grade g/t	0.65	-	0.95	0.95	1.07	0.89	0.60	0.65	0.80	0.44	-	0.77
Gold Ox.+Trans. mined, kg	1,411	-	760	220	130	73	56	35	115	3	-	19
Recovery Ox.+Trans. , %	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%	71.0%
Gold Ox.+Trans. recovered, kg	1,002	-	540	156	93	52	40	25	82	2	-	14
Gold Ox.+Trans. recovered, Oz	32,218	-	17,359	5,013	2,974	1,670	1,274	789	2,629	71	-	439
Processing Ox.+Trans. cost, US$/Oz	-	-	232	230	204	247	365	338	274	498	-	285
Processing Ox.+Trans. cost, US$/t	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Proc and Mining Ox.+Trans. Costs US$/Oz	-	-	425	797	1,039	1,732	2,445	4,064	1,427	40,269	-	1,451
Ore Sulph. production (diluted) kt	13,722	182	796	1,370	1,478	1,518	1,506	1,547	1,456	1,593	1,601	676
Waste Sulph. mined, kt	-	-	-	-	-	-	-	-	-	-	-	-
Ore Sulph. Mining cost, US$/t	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Waste Sulph. Mining cost, US$/t	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Mining Sulph. OPEX, k US$	18,387	244	1,066	1,835	1,981	2,035	2,018	2,072	1,951	2,134	2,145	905
Au Sulph. Grade g/t	1.09	1.17	1.12	1.07	1.20	1.09	1.14	1.00	0.93	1.01	1.09	1.11
Gold Sulph. mined, kg	14,747	213	894	1,467	1,778	1,658	1,723	1,545	1,360	1,608	1,748	753
Recovery Sulph. , %	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%	52.7%
Gold Sulph. recovered, kg	7,772	112	471	773	937	874	908	814	717	847	921	397
Gold Sulph. recovered, Oz	249,861	3,611	15,143	24,851	30,130	28,097	29,191	26,173	23,050	27,245	29,621	12,751
Processing Sulph. cost, US$/Oz	273	252	263	276	245	270	258	295	316	292	270	265
Processing Sulph. cost, US$/t	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Proc and Mining Sulph. Costs US$/Oz	346	320	333	349	311	343	327	375	400	371	343	336
Gold Recovered TOTAL, Oz	282,079	3,611	32,502	29,864	33,104	29,767	30,465	26,962	25,679	27,316	29,621	13,189
Proc and Mining TOTAL Costs US$/Oz	411	320	382	425	376	421	416	483	506	474	343	373
Depreciation (total) k US$	52,476	3,326	4,915	4,915	4,915	4,915	4,915	4,915	4,915	4,915	4,915	4,915
Revenue, k US$	253,871	3,249	29,252	26,877	29,794	26,791	27,418	24,266	23,111	24,585	26,658	11,870
Operating Costs, k US$	117,920	1,155	12,426	12,677	12,463	12,520	12,663	13,013	12,982	12,953	10,149	4,920
G&A, Sales	60,529	952	5,714	5,714	5,714	5,714	5,714	5,714	5,714	5,714	5,714	5,714
Rolyalty 6%	15,232	195	1,755	1,613	1,788	1,607	1,645	1,456	1,387	1,475	1,600	712
CAPEX, k US$	16,201	1,234	3,967	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000	-

Mature Open Pit Operation – this consists of the Tabornoe gold mine in Far East Russia.

The Tabornoe mine exploits a metasomatite zone striking E-W which has a shallow dip to the south. Preliminary mining began in 2002 utilising open pit methods incorporating ripping and drill and blast techniques. Ore is transported to a crushing plant that prepares the ore for cyanidation by heap leaching. In 2009 a total of 2.2Mt of ore was crushed. Significant reserves remain in the main pit, while other exploration properties nearby represent the future of this operation. The key performance indicators and Life of Mine Schedule for Tabornoe are shown in the tables below.

Tabornoe Key Performance Indicators for 2008 to 9m 2010				
	Unit	2008	2009	9m 2010
Rock mined	Kt	5,735	10,479	8,906
Ore mined	Kt	1,526	2,230	1,696
Ore processed	Kt	1,677	2,251	1,711
Average Au grade (ore processed)	g/t	1.13	1.12	1.22
Ore stripped	Kt	4,208	8,238	7,210
Gold recovered**	kg	1,166	1,562	1,076
Gold recovered**	koz	37.5	50.2	34.6
Recovery rate	%	75	75.0	N/A
Full cash cost	$/oz	567	659	819
Normalised TCC	$/oz	530	539	679
Ore mining costs	$/t	1.5	1.3	1.3
Waste mining costs	$/t	1.5	1.2	1.2
Ore processing costs	$/t	5	5	5
General and administration costs	$M	2.7	3.4	3.1
CAPEX*	$M	34.1	28.1	19.5
Depreciation	$M	6.6	6.7	5.5

Note:
*** including Exploration and Evaluation**
**** including 73 GEO of silver production in March 2010**

Tabornoe Life Of Mine Model Assumptions and Input Data													
Year	***TOTAL***	**Nov-Dec 2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Gold Price, US$/Oz	-	900	900	900	900	900	900	900	900	900	900	900	900
Ore production (diluted) kt	***23,129***	39	2,209	2,191	2,200	2,201	2,203	2,198	2,203	2,195	2,201	2,207	1,081
Waste mined, kt	***64,618***	1,727	4,293	4,105	4,024	5,093	4,037	7,410	8,069	7,977	8,288	8,113	1,482
Ore Mining cost, US$/t	***1.34***	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Waste Mining cost, US$/t	***1.23***	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Mining OPEX, k US$	***110,474***	2,176	8,240	7,986	7,898	9,213	7,917	12,060	12,877	12,754	13,144	12,936	3,272
Au Grade g/t	***0.80***	1.20	0.84	0.89	0.85	0.90	0.84	0.80	0.69	0.72	0.79	0.80	0.55
Gold mined, kg	***18,536***	46	1,855	1,953	1,879	1,978	1,859	1,769	1,526	1,577	1,744	1,756	592
Recovery, %	***71%***	71%	71%	71%	71%	71%	71%	71%	71%	71%	71%	71%	71%
Gold recovered, kg	***13,645***	517	1,317	1,387	1,334	1,405	1,320	1,256	1,084	1,120	1,238	1,247	420
Gold recovered, Oz	***438,682***	16,622	42,349	44,582	42,887	45,160	42,440	40,388	34,838	36,003	39,811	40,083	13,519
Processing cost, US$/Oz	***260***	12	261	246	257	244	259	272	316	305	276	275	400
Processing cost, US$/t	***5.0***	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Proc and Mining Costs US$/Oz	***510***	143	455	425	441	448	446	571	686	659	607	598	642
Depreciation (total) k US$	***77,093***	5,020	7,439	7,439	7,439	7,439	7,439	7,439	7,439	5,000	5,000	5,000	5,000
Revenue, k US$	***394,813***	14,960	38,114	40,124	38,598	40,644	38,196	36,350	31,354	32,403	35,830	36,075	12,167
Operating Costs, k US$	***226,120***	2,369	19,283	18,943	18,900	20,218	18,930	23,051	23,893	23,730	24,150	23,973	8,679
G&A, Sales	***86,866***	4,355	7,501	7,501	7,501	7,501	7,501	7,501	7,501	7,501	7,501	7,501	7,501
Royalty, 6%	***23,689***	898	2,287	2,407	2,316	2,439	2,292	2,181	1,881	1,944	2,150	2,164	730
CAPEX, k US$	***29,400***	4,400	8,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000	1,000	1,000

New Underground Operations – oxide ores at the Suzdal mine in northeast Kazakhstan were originally exploited by open pit and treated by heap leaching. However, the real potential of the deposit lay in the refractory sulphide ores at depth. In 2005, a plant was commissioned to produce a gold concentrate treatable by the BIOX (bio oxidation) technology from the sulphide ores, being exploited via underground mining methods. The principal mining method utilised at Suzdal is a modified sub-level open stoping method, which is well suited to steeply dipping ore bodies (70°-80°). This method is also suitable as it allows for variations in orebody thickness. Mining currently takes place at a rate of some 330ktpa from Orebody 1-3. Opportunities exist at Suzdal for further resource definition. Historical production data and the Life of Mine Schedule for Suzdal are shown in the tables below.

Summary of Underground Production for Suzdal Mine 2008 to 9m 2010

	Unit	2008	2009	9m 2010
Ore mined	Kt	331	340	245
Ore milled	Kt	302	317	232
Average Au grade	g/t	14.5	13.4	10.3
Gold recovered*	kg	3,201	3,212	1,913
Gold recovered	koz	102.9	103.3	61.5
Recovery rate	%	71.8	74.8	75.9
Full cash cost	$/oz	372	425	485
Normalised TCC	$/oz	376	398	434
Ore mining costs	$/t	38	26	31
Ore processing costs	$/t	57	50	51
General and administration costs	$M	2.6	2.8	2.3
CAPEX	$M	33.4	33.2	26.8
Depreciation	$M	25.6	25.5	19.4

Note
*** Dore alloy**

Suzdal Life of Mine Model Assumptions and Input Data								
Year	***TOTAL***	**Nov-Dec 2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Gold Price, US$/Oz		900	900	900	900	900	900	900
Ore production (diluted), kt	***3,087***	76	492	519	500	500	500	500
Ore Mining cost, US$/t	***33***	33	33	33	33	33	33	33
Mining OPEX, k US$	***101,871***	2,508	16,236	17,127	16,500	16,500	16,500	16,500
Au Grade, g/t	***6.89***	9.30	7.74	6.65	6.65	6.65	6.65	6.65
Gold mined, kg	***21,275***	707	3,808	3,453	3,327	3,327	3,327	3,327
Recovery, %	***80.0%***	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%	80.0%
Gold recovered, kg	***17,020***	565	3,046	2,762	2,661	2,661	2,661	2,661
Gold recovered, Oz	***547,200***	18,179	97,946	88,816	85,565	85,565	85,565	85,565
Processing cost, US$/Oz		171	206	240	240	240	240	240
Proc and Mining Costs US$/Oz		309	372	432	432	432	432	432
Revenue, k US$	***492,480***	16,361	88,151	79,935	77,008	77,008	77,008	77,008
Additional Concentrate Processing Earnings	***49,700***	1,700	8,000	8,000	8,000	8,000	8,000	8,000
Operating Costs, k US$	***228,438***	5,624	36,408	38,406	37,000	37,000	37,000	37,000
G&A, Sales, k US$	***62,000***	2,000	12,000	12,000	12,000	12,000	6,000	6,000
Royalty, 5%, kUS$	***30,783***	1,023	5,510	4,996	4,814	4,814	4,814	4,814
CAPEX, k US$	***37,816***	7,940	10,876	5,000	5,000	5,000	3,000	1,000

Mature Underground Operations - comprise the Irokinda and Zun-Holba mines located in mountainous terrain in Baikal Region of Russia. Irokinda exploits variably dipping quartz veins and alteration zones with gold extraction by gravity-flotation, whilst at Zun-Holba, various mining techniques exploit the sub-vertical narrow quartz veins with gold extraction by gravity-flotation-CIP. Flotation concentrates are trucked from Irokinda to Zun-Holba for leaching and doré production. At Irokinda, Nord Gold is undertaking significant exploration to test the below water table potential of the existing orebodies, whilst at Zun-Holba, a number of new targets and orebody extensions have been identified which will prolong the mine life. Historical production and Company Life of Mine Schedule for Irokinda is shown in the tables below.

Production for Irokinda Mine (1985 - H1 2010)

Year	Run-of-Mine Diluted Ore (t)	Average gold grade (g/t)	Contained gold (kg)	Ore, Processed at Plant (t)	Refined gold (kg)
1985	-	-	-	3,310	125.0
1986	-	-	-	7,630	154.0
1987	-	-	-	11,800	142.0
*1988**	*7,430*	-	-	23,800	241.0
*1989**	*35,278*	-	-	32,000	344.2
*1990**	*31,600*	-	-	28,030	431.8
1991	28,840	14.6	419.8	32,460	341.7
1992	38,380	18.1	696.0	34,760	515.8
1993	50,079	15.2	762.8	48,000	685.8
1994	44,192	11.1	491.9	50,497	364.3
1995	58,057	9.9	573.2	62,888	545.2
1996	96,784	11.5	1,117.4	96,128	773.9
1997	87,618	12.9	1,133.4	83,057	891.6
1998	83,492	13.6	1,137.7	85,284	1,001.0
1999	106,556	12.5	1,331.2	96,786	1,029.1
2000	158,538	11.9	1,879.7	152,106	1,625.3
2001	235,816	11.4	2,676.7	220,691	2,274.6
2002	245,971	11.6	2,844.7	234,609	2,530.8
2003	287,929	10.4	2,980.3	255,913	2,610.9
2004	327,015	9.0	2,934.9	308,127	2,658.8
2005	329,080	8.9	2,922.0	300,317	2,590.3
2006	307,592	9.7	2,987.4	280,097	2,490.3
2007	301,954	9.2	2,783.7	275,485	2,339.7
2008	310,627	8.6	2,684.3	290,792	2,313.0
2009	332,693	8.5	2,827.0	316,004	2,340.7
1H2010	152,939			148,680	1,069.8

Irokinda - Buryatzoloto Projected LOM 'Reserve' Base

		2011	2012	2013	2014	2015
Gold 'Reserves' (beginning of the year)	**kg**	6,727	5,497	5,505	4,514	2,522
Grade (before dilution)	**g/t**	18	14	11	9	7
Ore	**000t**	382	383	502	503	375
Additional 'Reserves'	**kg**	2,000	3,000	2,000	1,000	0
Grade in Additional 'Reserves'	**g/t**	8	8	8	8	0
Ore	**000t**	244	375	256	128	0

At Zun-Holba, historical production data and the Company Life of Mine Schedule is shown in the tables below.

Zun Holba - Buryatzoloto Projected LOM 'Reserve' Base							
		2011	**2012**	**2013**	**2014**	**2015**	**2016**
Gold 'Reserves' (beginning of the year)	**kg**	9,093	7,368	6,977	5,587	4,196	2,805
Grade (before dilution)	**g/t**	13	13	12	12	10	8
Ore	**000t**	699	586	564	451	402	353
Additional 'Reserves'	**kg**	2,000	3,000	2,000	2,000	2,000	0
Grade in Additional 'Reserves'	**g/t**	11	11	11	8	8	0
Ore	**000t**	185	278	185	250	250	0

The key performance indicators for Buryatzoloto (Irokinda and Zun Holba combined) are given in the table below.

Buryatzoloto (Irokinda and Zun-Holba Combined) Key Performance Indicators for 2008 to 9m 2010				
	Unit	**2008**	**2009**	**9m 2010**
Rock mined	Kt	596	626	467
Ore mined	Kt	596	626	467
Ore milled	Kt	563	632	487
Average Au grade	g/t	8.3	7.9	6.9
Ore stripped	Kt	n/a	n/a	n/a
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	kg	4,535	4,808	3,118
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	koz	145.8	154.6	100.3
Recovery rate	%	95.4	92.7	91.7
Full cash cost	US$/oz		466	651
Normalised TCC	US$/oz		412	512
Ore mining costs	US$/t		33.1	34.3
Waste mining costs	US$/t			
Ore processing costs	US$/t		13.4	15.7
General and administration costs	US$M		4.8	4.4
CAPEX*	US$M		13.4	19.9
Depreciation	US$M		13.4	10.6
Note: * including Exploration and Evaluation ** excluding 3.96 kGEO and 0.94 kGEO of silver production in 2009 and 1H 2010; 1,359 GEO of silver production for 9 and 10 months 2010				

The key company assumptions for Buryatzoloto Financial Model are shown in the table below.

Buryatzoloto Key Assumptions used for Financial Model						
Year	**Total**	**2011**	**2012**	**2013**	**2014**	**2015**
Gold price, US$/Oz	900	900	900	900	900	900
Ore production (diluted), kt	3,061	699	699	699	648	316
Au grade, g/t	32	6.4	6.4	6.4	6.4	6.7
Gold mined, kg	19,682	4,468	4,468	4,468	4,138	2,140
Recovery, %	5	93%	93%	93%	93%	92%
Gold recovered, kg	18,194	4,163	4,163	4,163	3,851	1,854
Gold recovered, Oz	584,966	133,854	133,854	133,854	123,798	59,606
Revenue, m US$	524	120	120	120	111	53
Mining cost, US$/t	180	36	36	36	36	36
Mining costs, m US$	109	25	25	25	23	11
Processing cost, US$/t	75	15	15	15	15	15
Processing cost, m US$	45	10	10	10	10	5
Operating costs, m US$	157	36	36	36	33	16
Operating costs, US$/Oz	1,340	266	266	266	267	275
G&A, Sales, m US$	175	39	39	39	39	19
Depreciation, m US$	68	15	15	15	15	8
CAPEX, m US$	40	15	12	9	4	0

Near Depletion Open Pit Operations – these include the Zherek mine, close to Suzdal in Kazakhstan, and Balazhal further to the southeast.

At Balazhal, previous open pit mining and heap leach operation has depleted a significant low grade oxide gold resource. However, the sulphidic orebody is continuous at depth, although considerable work is required to ascertain whether this represents an economic proposition.

The Zherek mine also exploited near surface oxide ores which are nearing depletion. Like Balazhal, a deeper, refractory sulphide zone has been delineated, but sufficient work has not been done to ascertain the viability of extracting this material, which would more than likely be treated at the nearby Suzdal plant.

Advanced Exploration Projects – The Bissa deposit in Burkina Faso represents an exciting late stage development project with a Feasibility Study due for completion in 2010. This project, which comprises typical Birimian greenstone shear-hosted gold mineralization, is scheduled for open pit production, with gold recovery by CIL. Over and above the main deposit, the Bissa licence and adjacent exploration properties contain significant additional resources, and it is likely that in due course, these will be incorporated into the operation. Presently, the planned mining method for this project is open pit, with an expected extraction rate of 3Mt of ore per year. The zone of mining extraction consists of several open pits dispersed along approximately 5.5km of the southwest/northeast oriented mineralised zone.

Gross lies adjacent to the well established Tabornoe open pit and heap leach operation. Preliminary drilling has identified a large tonnage, low grade resource which requires further infill drilling to define high grade pay shoots previously discovered. The proximity of Tabornoe greatly enhances the project economics.

Prognoz is a remote Ag (Pb and Zn) project situated in the Verkhoyanskiy District, Republic of Yakutia, north Russia. Considerable exploration from 1985 onwards has defined over 30 mineralised veins distributed in four areas. A significant JORC classified silver resource has been defined and considerable further potential exists nearby for additional resources.

Early Stage Exploration Projects - The Nercha greenfield prospect is located proximal to the well established mining project at Aprelkovo, in the Transbaikal region of Russia. This prospect represents potential strike extension to this highly mineralised belt. Trenching over five anomalies, previously established by soil geochemistry, has returned encouraging results (over considerable strike lengths) on two of them, both of

which will require additional trenching and possibly some follow-up drilling to investigate their potential at depth in 2010.

At Uryakh, which is a remote greenfield site located in the same region as Irokinda, the licence covers a very large area of prospective mineralised ground, within which a number of different types of ore body and vein morphology exhibiting a number of different mineralisation styles have been identified. Based on the trenching and drilling conducted to date, several of the ore types clearly show the potential to hold significant resources of gold and perhaps silver, but WAI believes that considerable exploration effort will be required before the magnitude of such resources can be quantified.

> ***WAI Comment:*** *Historically, the majority of Nord Gold's assets were underexplored as a result of insufficient capital expenditure programs and liquidity issues suffered by the owners. As a result, the current reserve and resource base does not reflect the true potential of these assets. Nord Gold has implemented a significant ongoing exploration and drilling program which WAI expect to continue yielding positive results in areas around current producing mines, thereby significantly increasing the reserve and resource base and extending mine life across the asset base.*

CONSULTANTS AND INTERESTS

Wardell Armstrong International ("WAI") is an internationally recognised, independent minerals industry consultancy. All consultants used in the preparation of this report are employed directly by WAI or are Associates of WAI and have relevant professional experience, including prior field experience of the geology and mineralisation of gold deposits in Russia, Kazakastan, Burkina Faso and Guinea.

Details of the principal consultants involved in the preparation of this document are as follows:

Phil Newall, BSc (ARSM), PhD (ACSM), CEng, FIMMM is a Mining Geologist with over 25 years experience of providing consultancy services to minerals companies throughout the world, with particular specialisation in CIS, Europe, Central and West Africa, and China. He has developed an extensive portfolio of exploration and mining-related contracts, from project management through to technical audits of a large variety of metalliferous and industrial mineral deposits. In particular, Phil has recently managed the Kempirsai Pre-feasibility Study for Bekem Metals on a Ni laterite in Kazakhstan, ARICOM's London CPR on their Fe assets in Russia, CPR for Kazakhaltyn for their London listing, PHM's London MER report, a large technical Due Diligence for Kazakhmys and the Feasibility Study for Oriel Resources on their Shevchenko Ni project.

Mark Owen, BSc, MSc (MCSM), CGeol, FGS, EurGeol, has over 27 years as a Mining Geologist, in both the metalliferous and industrial mineral mining sectors. He has considerable expertise of front line production mining, both in the underground and exploration environments, working on mines in the UK, Saudi Arabia and Venezuela. Throughout his experience he has had responsibility for technical teams addressing resource estimation, exploration planning and management, mining and process issues and environmental impact assessment. At WAI over the last 10 years, he has gained considerable experience of completing gold projects in Russia and the CIS, from scoping level through to full Bankable Feasibility Study and at the same time is fully conversant with the requirements of both the London and North American stock exchanges both acting as a Competent Person and author of numerous NI 43-101 reports.

Daniil Lunev, DipEng (SPMI), PhD (SPMI) specialist area is mining machinery. His skills include the following: optimisation of schemes of underground and land mining equipment; calculations of mining transport systems and estimation of efficiency and reliability of mining machinery. He is particularly experienced in belt conveyor system development, modernisation of construction, and resolving conveyor application problems. He has 5 patents related to belt conveyor innovation. His has recently been involved in the Bapy Fe Ore Project in Kazakhstan, which involved the review of a feasibility study, advising on mining operation and scheduling, and the Feasibility Study of the Akbakai gold project in the same country.

Philip King, BSc (Eng) Mineral Technology (Hons), Technical Director, WAI, has 20 years minerals processing experience ranging from laboratory test work and pilot plant operations through to plant commissioning, operations and trouble-shooting. He has considerable experience in the technical and financial evaluation of many mining projects through the completion of both pre-feasibility and feasibility studies, and has been involved in process design and engineering studies, equipment selection, and capital and operating cost estimates. He has also participated in a number of multi-disciplinary projects throughout Central Asia, Africa and Europe involving base and precious metals, industrial minerals and coal. In particular, Phil has considerable experience of the metallurgy and extraction from gold ores.

John Eyre, FRICS, MIMMM, MRIN, MIQ, Technical Director, WAI, has over 30 years experience in the international minerals industry as, variously, mineral surveyor, minerals and environmental manager, lecturer, consultant and mineral agent in over 30 countries throughout the world. He has headed minerals market analysis, environmental auditing, and environmental impact assessment, technical and economic studies, over the last 15 years. Most recently this has included work in Armenia (EBRD), Albania (NATO grant), Bosnia-Herzegovina (EU programme), Ghana Industrial Minerals (World Bank funded), Kazakhstan, Uzbekistan, (EIA), Namibia, Jamaica, Afghanistan and Costa Rica (DfID). John is currently managing the environmental aspects for Ovoca in Far East Russia.

Ian Jackson, currently works as a consultant for GBM MEC Ltd and has 22 years' experience of mineral processing including operations, process development, process optimisation, process plant design and commissioning. Minerals include free milling and refractory gold, uranium, PGM, antimony, copper and nickel sulphides, chromite, mineral sands and iron ore. Unit processes include crushing, milling (AG/SAG, ball and pebble), gravity concentration, flotation, thickening, leaching, filtration, carbon-in-pulp, biological oxidation, electrowinning and volatilisation roasting. Most experience has been gained in Southern Africa with recent exposure in Kazakhstan and Russia.

Julia Boiko, BSc, Regional Manager - Kazakhstan, has worked for Western mining companies in Kazakhstan on nickel and gold projects as logistics manager and technical translator. She currently manages WAI's Almaty office and is training in environmental sciences abroad, specifically related to mining issues.

Neither WAI, its directors, employees nor company associates hold any securities in Nord Gold, its subsidiaries or affiliates, nor have:

- Any rights to subscribe for any Nord Gold securities either now or in the future;
- Any vested interest or any rights to subscribe to any interest in any properties or concessions, or in any adjacent properties and concessions held by Nord Gold; and
- Been promised or led to believe that any such rights would be granted to WAI.

The only commercial interest WAI has in relation to Nord Gold is the right to charge professional fees to Nord Gold at normal commercial rates, plus normal overhead costs, for work carried out in connection with the investigations reported herein.

Disclaimer/Reliance on Experts

The observations, comments and results of technical analyses presented in these reports represent the opinion of WAI as of 14th January 2011 and are based on the work as stated in the report. While WAI is confident that the opinions presented are reasonable, a substantial amount of data has been accepted in good faith. Although WAI has visited all of the assets described in this report, WAI did not conduct any verification or quality control sampling. WAI cannot therefore accept any liability, either direct or consequential, for the validity of such information accepted in good faith.

1 INTRODUCTION

1.1 Background

Wardell Armstrong International ('WAI') was commissioned by Nord Gold N.V. ("Nord Gold") to prepare a Competent Person's Report (CPR) of the gold assets for the purposes of fulfilling the requirements of the London Stock Exchange Main Listing Rules and London Stock Exchange Main Listing Notes for Mining and Oil and Gas Companies (June 2009) for a proposed admission of ordinary shares of Nord Gold to trading on London Stock Exchange Main Listing.

To undertake this commission, WAI personnel undertook site visits to the various assets as follows:

BURKINA FASO

Taparko-Bouroum

A team of WAI consultants visited the Taparko-Bouroum area during the period 8 and 9 December 2009. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI visiting the Bissa and Taparko-Bouroum projects comprised Phil Newall, Director of Minerals and Mining Geologist; Bruce Pilcher, Technical Director and Mining Engineer; Phil King, Technical Director and Processing Engineer; and John Eyre, Technical Director Environment. All the technical team are full time employees of WAI. During the time in Burkina Faso a visit was also paid to the Jilbey office located in Ouagadougou.

Phil Newall, Bruce Pilcher and Alan Clarke re-visited Bissa and some exploration permits during July 2010.

Bissa

A team of WAI consultants visited the Bissa area during the period 10 and 11 December 2009. The team visited the Bissa site, Bouly where air-core drilling is currently taking place, Gougre which may represent a continuation of the Bissa trend, and Guibare further to the south again which is a very active orpailleur mining area.

GUINEA

Lefa

A team of WAI consultants visted the Lefa project during the period 22 – 26 July 2010 comprising Bruce Pilcher, Technical Director and Mining Engineer, Anne Boulter, Environmental Scientist and Barrie O'Connell, Mineral Process Engineer. All the team are full time employees of WAI.

KAZAKHSTAN

Suzdal

A team of WAI consultants visited the Suzdal mine during the period 14 - 16 November 2009, as well as the Alel office located in Semipalatinsk. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Stuart Richardson, Mining Engineer; Phil King, Technical Director and Processing Engineer; and Kim-Marie Clothier, Senior Environmental Scientist. All the technical team are full time employees of WAI.

Zherek

A team of WAI consultants visited the Zherek mine during the period 14 - 15 November 2009, as well as the Alel office located in Semipalatinsk. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Stuart Richardson, Mining Engineer; Phil King, Technical Director and Processing Engineer; and Kim-Marie Clothier, Senior Environmental Scientist. All the technical team are full time employees of WAI.

Balazhal

A team of WAI consultants visited the Balazhal mine on 12 November 2009, as well as the Nord Gold office located in Semipalatinsk. During the site visit the WAI team inspected production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Stuart Richardson, Mining Engineer; Phil King, Technical Director and Processing Engineer; and Kim-Marie Clothier, Senior Environmental Scientist. All the technical team are full time employees of WAI.

RUSSIA

Berezitovy

A team of WAI consultants visited the Berezitovy mine during the period 17 - 19 October 2009. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Mark Owen, Technical Director and Mining Geologist; Daniil Lunev, Mining Engineer; Phil King, Technical Director and Processing Engineer; and John Eyre, Technical Director Environment. All the technical team are full time employees of WAI.

Irokinda

A team of WAI consultants visited the Irokinda during the period 23 - 26 of August 2009, as well as the Buryatzoloto office located in Ulan-Ude. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Mark Owen, Technical Director and Mining Geologist; Daniil Lunev, Mining Engineer; Phil King, Technical Director and Processing Engineer; John Eyre, Technical Director Environment; and Julia Boiko; Regional Manager. All the technical team are full time employees of WAI.

Zun-Holba

A team of WAI consultants visited the Zun-Holba mine during the period 28 - 31 of August 2009, as well as the Buryatzoloto office located in Ulan-Ude. During the site visit the WAI team inspected current exploration,

production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the studies.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Mark Owen, Technical Director and Mining Geologist; Daniil Lunev, Mining Engineer; Phil King, Technical Director and Processing Engineer; and John Eyre, Technical Director Environment. All the technical team are full time employees of WAI.

The property was re-visited in July 2010 by Mark Owen and Colin Hunter, Metallurgist, as part of technical update on the assets.

Neryunrgri

A team of WAI consultants visited the Neryungri mine (Tabornoe deposit) site during the period 08 - 15 of July 2009, as well as the Nord Gold office located in Neryungri. During the site visit the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Nord Gold technical staff and collected sufficient data to complete the study.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Mark Owen, Technical Director and Mining Geologist; Daniil Lunev, Mining Engineer; Ian Jackson, Mineral Processing Engineer; and Julia Boiko; Regional Manager. All the technical team, apart from Ian Jackson, are full time employees of WAI. Ian Jackson is a consultant for GBM MEC Ltd.

Aprelkovo

A team of WAI consultants visited the Aprelkovo site during the period 11 - 14 of July 2009, as well as the Client's area office in Chita. During the site visit the WAI team has inspected current exploration and production activities, discussed all aspects of the project with Nord Gold technical staff and collected sufficient data to complete the study.

The team from WAI comprised Phil Newall, Director of Minerals and Mining Geologist; Mark Owen, Technical Director and Mining Geologist; Daniil Lunev, Mining Engineer; Ian Jackson, Mineral Processing Engineer; and Julia Boiko; Regional Manager. All the technical team, apart from Ian Jackson, are full time employees of WAI. Ian Jackson is a consultant for GBM MEC Ltd.

Gross

Mark Owen, Technical Director and Mining Geologist with WAI first visited the Gross gold exploration project prior to commencement of the 2009 drilling programme on 08 - 15 July 2009 and re-visited the project during the period 10 - 12 of November 2009.

During the most recent site visit, WAI inspected the current exploration activities, including the results of the 2009 diamond drilling programme, sample preparation and assay procedures and discussed many aspects of the project with Nord Gold technical staff.

Prognoz

WAI has not visited this property and bases any opinion on a review of data provided by the Company.

Nercha

Mark Owen, Technical Director and Mining Geologist with WAI visited the Nerchinsk exploration site during the period 13 - 15 of October 2009. During the site visit, WAI inspected the current exploration activities, including the results from trenching, geological mapping, geophysical and geochemical surveys and discussed many aspects of the project with Nord Gold technical staff.

Uryakh

Mark Owen, Technical Director and Mining Geologist with WAI visited the Uryakh site during the period 11 - 15 of August 2009. During the site visit, WAI inspected the current exploration activities, including the results from trenching, geological mapping, geophysical and geochemical surveys and diamond drilling and discussed many aspects of the project with Nord Gold technical staff.

1.2 Study Strategy

The basic strategy for this CPR has been to examine and report on the existing information available on the properties held globally by the Client, which includes geological, resources/reserves, mining and metallurgical data and basic economic parameters. During the visits, further information was gathered on infrastructure, equipment, costs, potential mining methods, permitting and environmental issues.

Locally-based and publicly available documentation was viewed by WAI and in addition, WAI held meetings with key staff at the project sites.

2 OVERVIEW OF THE REGIONS, LOCATIONS AND ASSETS

2.1 Introduction

This CPR covers all the main project technical areas including geology, resources, mining methods, processing, infrastructure, markets, Capex, Opex and environmental. The core assets form the basis of the CPR and comprise the following as shown in Figure 2.1 below.

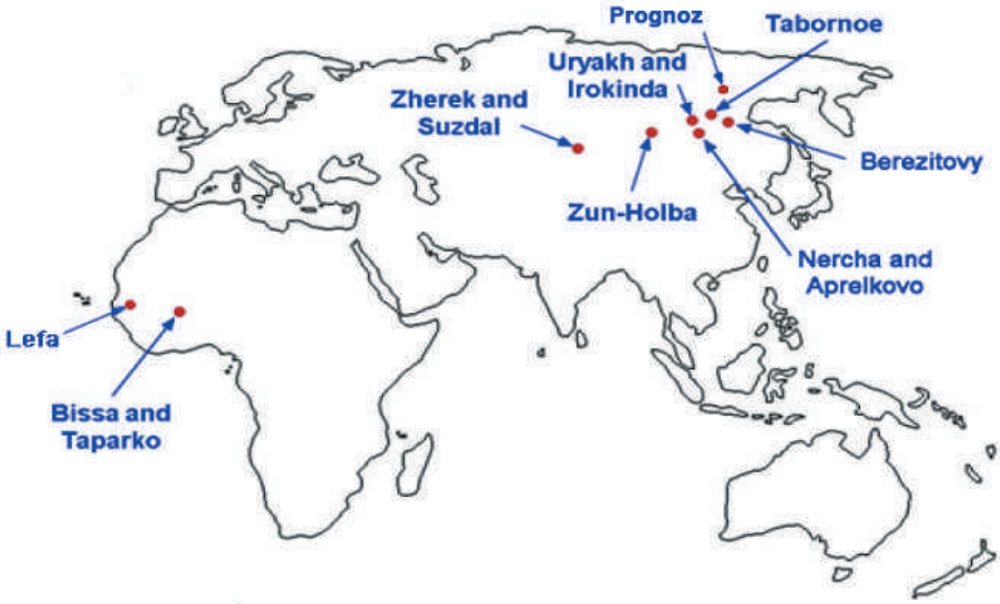

Figure 2.1: Location of Nord Gold Assets Worldwide

2.2 Summary of Assets

A summary of the Assets is provided in Table 2.1 below.

Table 2.1: Summary of Assets

Country	Asset	Holder	Interest	Status	Licence Expiry Date	Licence Area (km^2)	Comments
Burkina Faso	Taparko and Bouroum	Somita SA	90%	Mining	2012 (can be renewed for 3 years)	395.7	2 permits
	30 exploration permits in Burkina Faso	Jilbey Explortion Burkina Sarl, High River Gold Exploration Burkina Sarl	100%	Exploration	2010-2012 (can be renewed for 3 years)	4,290.9	30 permits
	Bissa	Jilbey Exploration Burkina Sarl	90%	Exploration	2010-2012	981.27	Zandkom Permit
Guinea	Lefa and 6 adjacent exploration licences	Crew Gold Corporation	93%	Exploration Mining	2030	2,500	6 permits
Kazakhstan	Balazhal	LLP "Semgeo"	100%	Exploration	2025	0.458km^2	Valid for production down to 150m
	Suzdal	JSC FIC Alel	100%	Mining	2017	5.9km^2	Valid for production down to -820m
	Zherek	JSC FIC Alel	100%	Exploitation	2021	1.35km^2	Valid for exploitation down to 120m
Russia	Berezitovy	LLC "Berezitovyi Rudnik"	99%	Mining	2017	17	
	Irokinda	OJSC "Buryatzoloto"	100%	Mining	31/12/2012	227	
	Zun-Holba	OJSC "Buryatzoloto"	100%	Mining	11/01/2019	242.2HA	
	Tabornoe	LLC "Neryungri-Metallic"	100%	Mining	31/12/2020	0.93	
	Aprelkovo	CJSC Mine Aprelkovo	100%	Mining	31/12/2020	6.62	
	Gross	LLC "Neryungri-Metallic"	100%	Exploration	31/12/2011	58	
	Prognoz	High River Gold Mines Ltd	50%	Exploration	30/08/2025	56	50% interest in the project
	Nercha	LLC «North Gold Mining Company»	100%	Exploration	01/07/2033	34.6	
	Uryakh	LLC«North Gold Mining Company»	100%	Exploration	20/11/2032	52.17	

As of 01 November 2010, the resources (quoted in either JORC or JORC Equivalent – this latter based on transfer of Russian B to *Measured*, C_1 to *Indicated* and C_2 to *Inferred*) held by Nord Gold in Burkina Faso, Guinea, Kazakhstan and Russia are provided in Table 2.2, whilst reserves derived from these are given in Table 2.3 below.

Table 2.2: Au Resource Estimate (01 November 2010, WAI) (In Accordance with the Guidelines of the JORC Code (2004)

Area	Deposit	Ore Type	Cut-off (g/t)	Measured				Indicated				Measured + Indicated				Inferred			
				Tonnage (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Tonnage (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Tonnage (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Tonnage (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)
Burkina-Faso	Zingma	All Types	0.5	-	-	-	-	-	-	-	-	-	-	-	-	3,687	1.17	4,317	139
	Bissa	All Types	0.5	497	3.33	1,657	53	57,570	1.40	80,730	2,596	58,068	1.42	82,386	2,649	5,657	1.20	6,768	218
	Bouly	All Types	0.6	-	-	-	-	-	-	-	-	-	-	-	-	9,607	0.82	7,877	253
	Gougre	All Types	0.5	-	-	-	-	-	-	-	-	-	-	-	-	2,930	2.39	7,002	225
	Taparko Mine	Zone 3/5	0.5	-	-	-	-	3,998	2.95	11,785	379	3,998	2.95	11,785	379	691	2.34	1,618	52
		Zone 2N2K	0.5	-	-	-	-	1,515	1.93	2,927	94	1,515	1.93	2,927	94	531	1.97	1,048	34
		Zone GT	0.5	-	-	-	-	640	4.55	2,913	94	640	4.55	2,913	94	67	4.46	300	10
		All Zones	0.5	-	-	-	-	6,153	2.86	17,625	567	6,153	2.86	17,625	567	1,290	2.30	2,967	95
	Bouroum – Taparko Explorations Areas	F12	0.5	-	-	-	-	2,364	2.52	5,948	191	2,364	2.52	5,948	191	646	2.74	1,772	57
		Welcome Stranger	0.5	-	-	-	-	-	-	-	-	-	-	-	-	210	5.03	1,054	34
	Yeou	All Types	0.4	-	-	-	-	-	-	-	-	-	-	-	-	1,066	2.39	2,550	82
	Ankouma	All Types	0.5	-	-	-	-	-	-	-	-	-	-	-	-	1,816	1.26	2,296	74
	Area Total			497	3.33	1,657	53	66,087	1.58	104,303	3,353	66,585	1.59	105,959	3,407	26,909	1.36	36,603	1,177
Guinea	Lefa Corridor	All Types	Various	86,708	1.16	100,931	3,245	35,866	1.24	44,447	1,429	122,574	1.19	145,378	4,674	24,511	1.12	27,433	882
	Regional	All Types	Various	2,196	1.70	3,701	119	598	1.50	902	29	2,794	1.65	4,603	148	4,805	1.40	6,656	214
	Area Total			88,904	1.18	104,632	3,364	36,464	1.24	45,349	1,458	125,368	1.20	149,981	4,822	29,316	1.16	34,089	1,096
Kazakhstan	Balazhal	All Types	0.4	49	3.01	146	5	174	2.87	500	16	223	2.90	646	21	5,081	3.21	16,310	524
	Suzdal	Sulphide	1.5	128	8.77	1,119	36	4,123	6.11	25,205	810	4,250	6.19	26,325	846	2,893	6.11	17,687	569
	Zherek	All Types		-	-	-	-	346	1.86	641	21	346	1.86	641	21	1,603	4.17	6,647	214
	Area Total			177	7.15	1,265	41	4,643	5.67	26,346	847	4,819	5.73	27,612	888	9,577	4.24	40,644	1,307
Russia	Berezitovoye	Sulphide	0.3	10,764	2.00	21,492	691	10,357	1.64	17,008	547	22,121	1.82	38,499	1,238	2,571	1.59	4,098	132
	Irokinda	All Types		-	-	-	-	157	16.30	2,574	83	147	16.30	2,574	83	192	18.30	3,506	113
	Zun-Holba	All Types		-	-	-	-	41	14.30	591	19	41	14.30	591	19	553	13.20	7,285	235
	Tabornoe	Sulphide	0.3	5,079	0.98	4,966	160	25,097	0.79	19,757	635	30,177	0.82	24,724	795	73,315	0.63	46,453	1,493
	Aprelkovo	Total	0.5	7,592	1.31	9,928	319	8,029	1.03	8,250	265	15,621	1.16	18,178	584	8,638	0.84	7,298	235
	Gross	Oxide	0.5	-	-	-	-	21,834	0.73	15,884	511	21,834	0.73	15,884	511	220,389	0.68	150,873	4,851
	Visokiy	All Types	0.5	-	-	-	-	-	-	-	-	-	-	-	-	1,048	0.96	1,005	32
	Area Total			23,435	1.55	36,386	1,170	65,515	0.98	64,064	2,060	88,941	1.13	100,450	3,229	306,706	0.72	220,518	7,090
Total	All Areas			113,013	1.27	143,940	4,628	172,709	1.39	240,062	7,718	285,713	1.34	384,002	12,346	372,508	0.89	331,854	10,670

Ag Resource Estimate (01 November 2010

Area	Deposit	Ore Type	Cut-off (g/t)	Measured				Indicated				Measured + Indicated				Inferred			
				Tonnage (Mt)	Ag (g/t)	Ag Metal (t)	Ag Metal (Moz)	Tonnage (Mt)	Ag (g/t)	Ag Metal (t)	Ag Metal (Moz)	Tonnage (Mt)	Ag (g/t)	Ag Metal (t)	Ag Metal (Moz)	Tonnage (Mt)	Ag (g/t)	Ag Metal (t)	Ag Metal (Moz)
Russia	Prognoz	All Types	100	-	-	-	-	4.49	704.00	3,165	102	4.49	704.00	3,165	102	4.87	659.00	3,209	103

Table 2.3: Nord Gold Reserve Summary (01 November 2010, WAI)

Area	Deposit	Category	*Oxide/Transitional/Weathered Zone*					*Primary/Fresh*					*Total*				*Pit Summary*	
			Cut-off (g/t)	Tonnes (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Cut-off	Tonnes (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Tonnes (kt)	Au (g/t)	Au Metal (kg)	Au Metal (koz)	Mining Parameters (Mt	
Burkina Faso	Taparko Mine	Proven	-	-	-	-	-	0.55	-	-	-	-	-	-	-	-	Ore	6.12
																	Waste	27.49
		Probable		-	-	-	-		**6,122**	**2.75**	16,854	542	**6,122**	**2.75**	16,854	542	Strip Ratio	4.49
		Proven + Probable		-	-	-	-		**6,122**	**2.75**	16,854	542	**6'122**	**2.75**	16,854	542	**Total Rock**	**33.62**
	Bouroum F12	Proven	-	-	-	-	-	0.90	-	-	-	-	-	-	-	-	Ore	0.99
																	Waste	2.83
		Probable							**999**	**2.64**	**2,639**	**85**	**999**	**2.64**	**2,639**	**85**	Strip Ratio	2.80
		Proven + Probable							**999**	**2.64**	**2,639**	**85**	**999**	**2.64**	**2,639**	**85**	**Total Rock**	**3.83**
	Bissa	Proven	0.62	-	-	-	-	0.62	487	3.23	1,572	51	487	3.23	1,572	51	Ore	29.20
																	Waste	106.60
		Probable		22,729	1.58	35,896	1,154		5,947	2.35	13,950	449	28,676	1.74	49,845	2	Strip Ratio	3.67
		Proven + Probable		**22,729**	**1.58**	**35,896**	**1,154**		**6,434**	**2.41**	**15,521**	**499**	**29,163**	**1.76**	**51,417**	**1,653**	**Total Rock**	**135.80**
	Area Total	Proven + Probable		**22,729**	**1.58**	**35,896**	**1,154**		**13,555**	**2.58**	**35,014**	**1,126**	**36,284**	**1.95**	**70,910**	**2,280**		
Guinea	**All Assets**	Proven	Various	67,873	1.28	86,877	2,798	Various					67,873	1.28	86,877	2,798	**Note: Material consists of 56% Fresh rock**	
		Probable		20,277	1.53	31,024	1,001						20,277	1.53	31,024	1,001		
		Proven + Probable		**88,151**	**1.34**	**118,122**	**3,796**						**88,151**	**1.34**	**118,122**	**3,796**		
Kazakhstan	Suzdal*	Proven						4.00	266*	7.57	2,014	65	266	7.57	2,014	65	Minimum Width	1.20
		Probable							2,821	6.83	19,263	619	2,821	6.83	19,263	619	17% dilution and 95% mining recovery applied. * includes 100kt at 5.4g/t Au in stockpiles	
		Proven + Probable							3,087	6.89	21,277	684	3,087	6.89	21,277	684		
	Area Total	Proven + Probable							**3,087**	**6.89**	**21,277**	**684**	**3,087**	**6.89**	**21,277**	**684**		
Russia	Berezitovoye	Proven	-	-	-	-	-	0.51	10,129	1.98	20,105	646	10,129	1.98	20,105	646	Ore	16.33
																	Waste	65.54
		Probable		-	-	-	-		6.199	1.95	12,085	389	6,199	1.95	12,085	389	Strip Ratio	4.01
		Proven + Probable		-	-	-	-		**16,328**	**1.97**	**32,190**	**1,035**	**16,328**	**1.97**	**32,190**	**1,305**	**Total Rock**	**81.87**
	Tabornoe	Proven	-	-	-	-	-	0.27	5,194	0.91	4,703	151	5,194	0.91	4,703	151	Ore	23.06
																	Waste	64.53
		Probable		-	-	-	-		17,867	0.77	13,773	443	17,867	0.77	13,773	443	Strip Ratio	2.80
		Proven + Probable		-	-	-	-		**23,062**	**0.80**	**18,475**	**594**	**23,062**	**0.80**	**18,475**	**594**	**Total Rock**	**87.60**
	Aprelkovo	Proven	0.27	733	1.06	774	25	0.36	7,080	1.19	8,433	271	7,814	1.18	9,206	296	Ore	15.28
																	Waste	20.63
		Probable		812	0.77	626	20		6,650	0.95	6,309	203	7,462	0.93	6,935	223	Strip Ratio	1.35
		Proven + Probable		**1,546**	**0.90**	**1,399**	**45**		**13,730**	**1.07**	**14,742**	**474**	**15,275**	**1.06**	**16,141**	**519**	**Total Rock**	**35.91**
	Area Total	Proven + Probable		**1,546**	**0.90**	**1.399**	**45**		**53,120**	**1.23**	**65,407**	**2,103**	**54,665**	**1.22**	**66,806**	**2,148**		
TOTAL	**ALL AREAS**			**112,426**	**1.38**	**155,417**	**4,995**		**69,762**	**1.74**	**121,698**	**3,913**	**182,187**	**1.52**	**277,115**	**8,908**		

Notes:* Includes 100kt at 5.4g/t Au of stockpiles

SECTION A: BURKINA FASO ASSETS

1 TAPARKO-BOUROUM

1.1 Introduction

1.1.1 Terms of Reference

Wardell Armstrong International (WAI) was commissioned by Nord Gold to undertake a technical due diligence of the Taparko open pit gold mine and nearby Bouroum project, as well as related exploration projects, northeast Burkina Faso (Figure 1.1).

The study was undertaken as part of the preparation of a Competent Person's Report (CPR) for Nord Gold of all their gold assets in Russia, Kazakhstan and Burkina Faso.

This study considered all aspects of the mine from geology and resources, exploration potential, mining, processing, economics, and environmental and social issues.

1.1.2 Site Visit

A team of WAI consultants visited the Taparko-Bouroum area during the period 08 - 11 December 2009, as well as the SOMITA SA/Nord Gold office located in Ouagadougou.

During the site visit, the WAI team inspected current exploration, production and process activities, discussed many aspects of the project with Somita SA/Nord Gold technical staff.

This report relies also to a large extent on the results of a previous independent audit (March 2008) by SRK Consulting, which was commissioned by High River Gold.

1.2 Location, Access & Infrastructure

1.2.1 Background

Nord Gold has an interest in the Taparko gold mine through their 72.64% interest in High River Gold (HRGWA), the previous owners whose right to the Taparko-Bouroum gold project is held through the Société des Mines de Taparko, SOMITA SA, a Burkinabe subsidiary. SOMITA SA is 90% owned by HRG with the remaining 10% carried interest held by the Government of Burkina Faso.

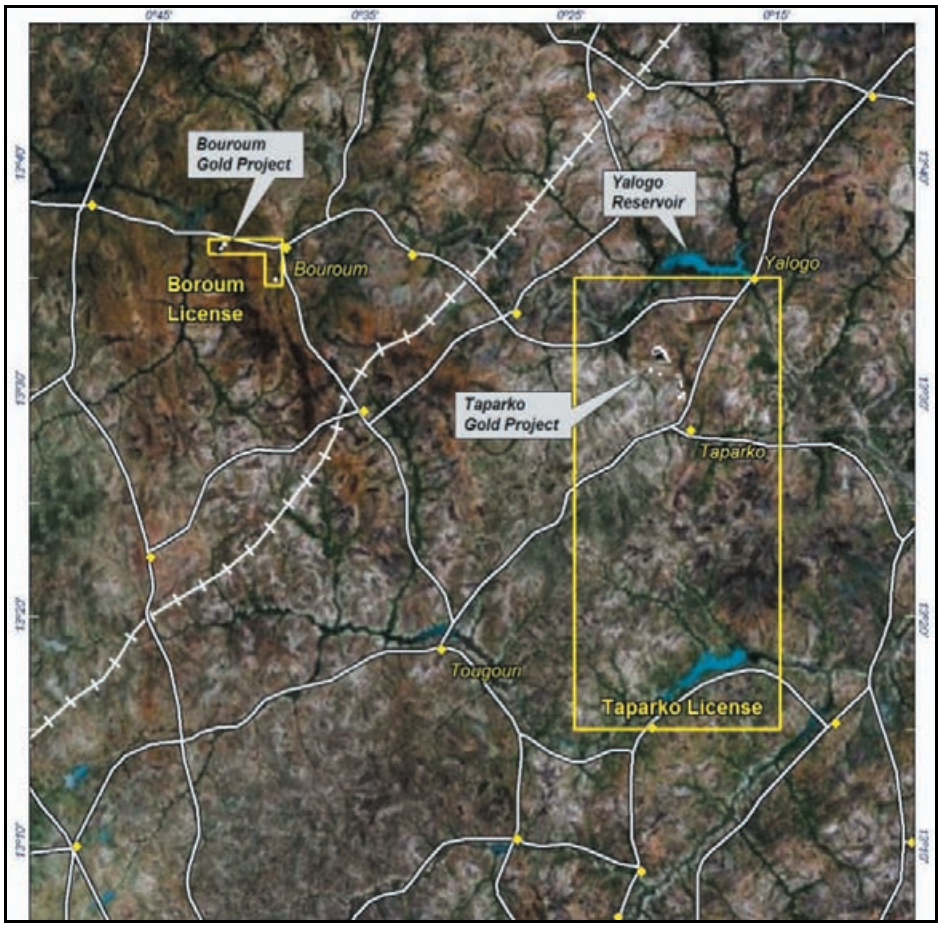

Figure 1.1: Detailed Location of Taparko-Bouroum

The Taparko mine commenced production in late 2007 and currently extracts gold ore from the 3/5 open pit by conventional drill & blast with truck haulage to a comminution-gravity-CIL processing circuit. Ore has also been produced from the GT pit at Taparko and from the Bouroum project to the west.

1.2.2 Location

The Taparko-Bouroum gold project is located in the Namantenga Province, Burkina Faso in West Africa, approximately 200km northeast of Ouagadougou, the Capital City of Burkina Faso (Figure 1.2).

Figure 1.2: Location of Taparko in Northeastern Burkina Faso

1.2.3 Access

The Taparko-Bouroum Project area comprises two separate sites. The Taparko mine is located in a sparsely populated area readily accessible by road from Ouagadougou. The road to Taparko, a distance of approximately 200km, is paved, giving a driving time of approximately 2 hours.

The Bouroum site is located approximately 49km northwest of the main Taparko site where all the mining and milling infrastructures are located. It is accessible from Taparko via a gravel road.

The airport at Ouagadougou has flight connections to the major cities in Europe. There is a railway from the port of Abijan, Cote d'Ivoire to Kaya, but the political instability in Cote d'Ivoire means that most of the freight destined for Burkina Faso arrives at Tema, Ghana. Freight for the project is trucked from Tema to Taparko (1,288km).

> ***WAI Comment:*** *the Taparko-Bouroum area is well served by paved roads and is relatively close to Ougadougou, providing a significant advantage to the project.*

1.2.4 Topography and Climate

The Taparko and Bouroum sites' topography is relatively flat with some basalt hills on the east side of Taparko. Surface cover over the majority of the sites is a hard laterite capping with remainder comprising sandy soil.

The climate is characterised by a wet season extending from June to September with the heaviest rains in August, and mean annual rainfall between 400 and 600mm. Typical daytime temperatures range from 25°C in December to 45°C in May, dropping about 10°C at night. No surface accumulations of water remain throughout the year except for man-made storage reservoirs.

Wind speeds are relatively moderate, but at the end of the dry season, before the arrival of the rains, there are very strong, dry, hot winds carrying large amounts of dust and particulate matter.

1.2.5 Infrastructure

Local infrastructure around Taparko is minimal with the exception of the Yalogo water reservoir and a state owned telecommunications tower providing access to worldwide telephony and internet services. There is no infrastructure at Bouroum.

The project water requirements, recycling as much water as possible, can be met from the reservoir without impacting other uses.

The national power grid at Ouagadougou is unable to supply the power requirements for the mine. Therefore, diesel powered generation on site is employed.

Security measures for dealing with artisanal miners are in effect.

1.2.6 Mineral Rights and Permitting

1.2.6.1 General

For exploration purposes 'Research Permits' are granted upon the submission of an application, designated budget and schedule of work for the first year. This permit is issued for 3 years and can be renewed twice for consecutive periods of 3 further years. Activity must commence within 6 months and the permit applies to a maximum surface area of 250km^2. Upon the second renewal, the area must reduce in size by one fourth and ultimately only contain the area of interest by the final application. A Research Permit can be upgraded to a Production Permit upon application.

Since 1996, High River Gold Mines Limited (HRG) has undertaken considerable exploration in the Tarparko and Bouroum areas. It is assumed that the terms of agreements with other parties have been superseded by the current Exploitation Permits; however, this may require verification

1.2.6.2 Taparko-Bouroum

Three Research Permits are in place for exploration targets at Tarparko. These expire in 2012 and one can potentially be renewed for a further 3 years.

An Exploitation Permit for gold is in place for Tarparko and covers an area of 666.5km^2. It was granted in August 2004 and is valid for 20 years. Under the provision of the Code, this can be renewed for 5 further years. The UTM coordinates of the Exploitation Permit are given in Table 1.1 below.

Table 1.1: Taparko Exploitation Permit Coordinates		
Point	**Latitude (East) (X)**	**Longitude (North) (Y)**
A	0797 604 250	1503 324 12
B	0779 556 313	1503 126 625
C	0779 942 625	1466 229 750
D	0788 978 813	1466 324 750
E	0798 015 500	1466 422 625

Five Research Permits are in place for exploration targets at Bouroum. These expire between 2010 and 2011; however all can be renewed for a further 3 years subject to approval.

An Exploitation Permit is also in place for Bouroum. This licence applies to an area of 11.7km^2. It was granted on 22nd June 2005 and is also valid for 20 years, with an option to renew for 5 further consecutive years. The UTM coordinates of the Exploitation Permit are given in Table 1.2 below.

Table 1.2: Bouroum Exploitation Permit Coordinates		
Point	**Latitude (East) (X)**	**Longitude (North) (Y)**
A	747 500 0	1506 000 0
B	754 000 0	1506 000 0
C	754 000 0	1502 200 0
D	752 500 0	1502 200 0
E	752 500 0	1504 800 0
F	747 500 0	1504 800 0

Taparko-Bouroum group permits are illustrated in Figure 1.3 below and further detailed in Table 1.1 and Table 1.2 above.

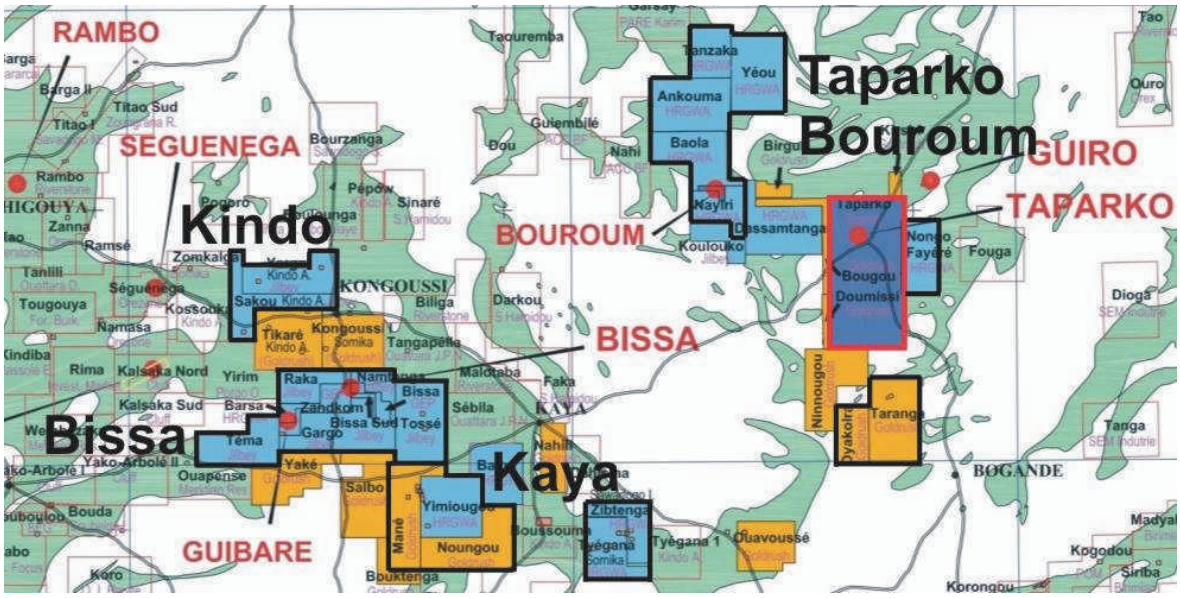

Figure 1.3: Taparko-Bouroum Group Permits (Source: HRG presentation)

WAI Comment: *an inspection of the licence documentation has shown that all are in good order and suitable for the future needs of the Company.*

1.3 Geology and Mineralisation

1.3.1 Regional Geology

The regional geology of the area has been discussed under Bissa and will not be repeated here, other than to say that the Taparko and Bouroum gold deposits are hosted on opposite limbs of the Y-shaped Bouroum-Yalogo greenstone belt 15km wide and trending NNW. Several prominent faults have been identified.

1.3.2 Mine Geology & Mineralisation

1.3.2.1 Introduction

The Taparko and Bouroum gold deposits comprise sulphide-poor quartz veins hosted by shear zones of various attitudes. At Taparko, gold occurs in the quartz veins and in quartz vein selvages, and is also sometimes found in the shear zone itself where gold grades similar to the quartz vein mineralisation occur. Graphite is spatially associated with the gold mineralisation. Much of the gold mineralisation at Taparko and Bouroum available for mining is developed in the weathered zone; the saprolite profile at Taparko is between 20-30m thick and 10-20m at Bouroum.

1.3.2.2 Taparko

Gold at Taparko occurs predominantly associated with the Taparko shear zone, a northwesterly trending splay off the regional Markoye Fault, located along a thin band of metavolcanic and metasedimentary rocks enclosed by granodiorite. This structure, traced over a strike length >10km, dips at 40° to 50° to the northeast (Figure 1.4).

Gold-bearing, sulphide poor quartz veins and veinlets occur throughout most of the known length of the Taparko shear zone, but economically important mineralisation is restricted to a number of discrete zones which include the GT zone in the south, the contiguous 2N/2K zone and the 3/5 Zone further north.

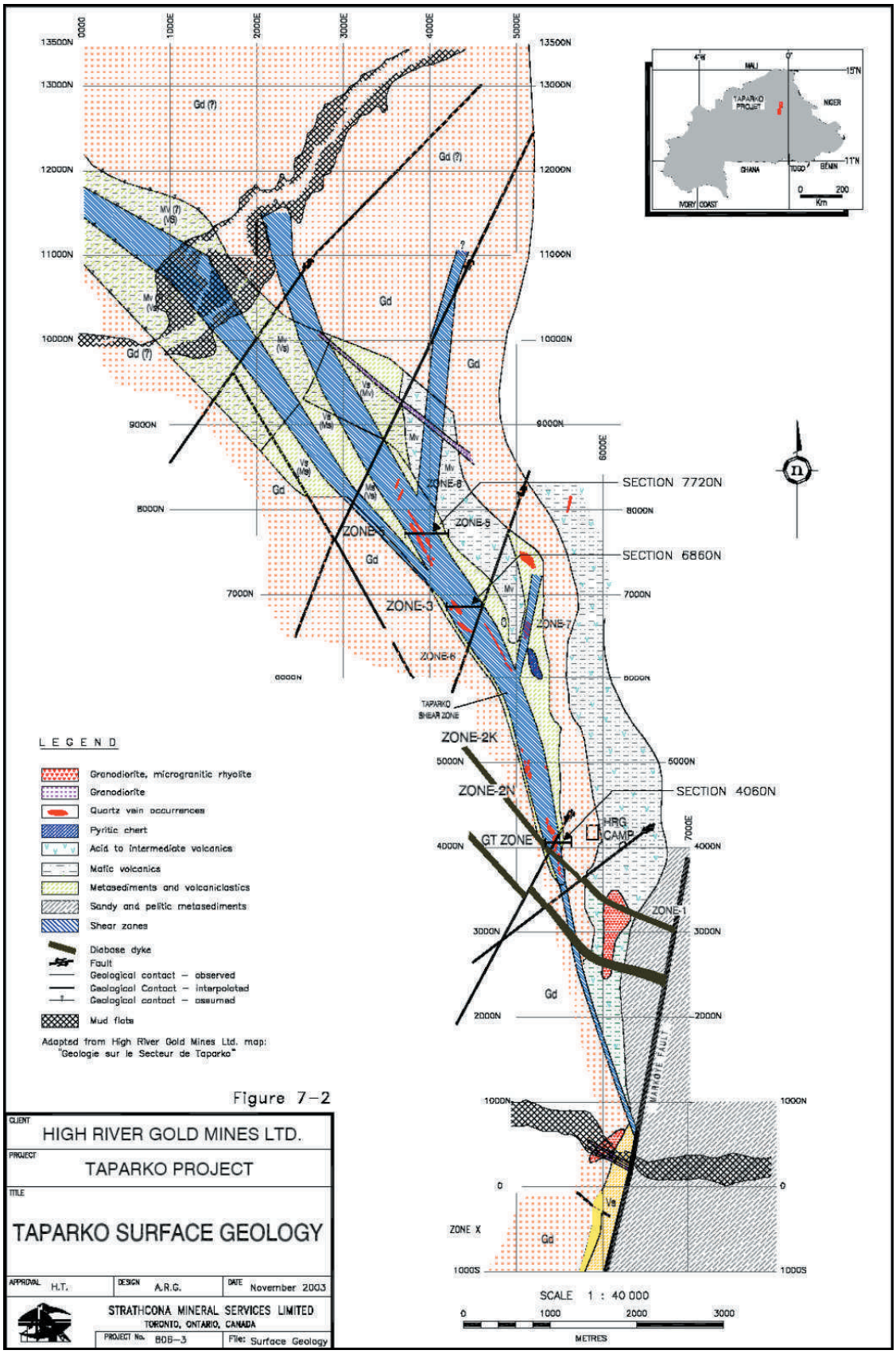

Figure 1.4: Detailed Geology of the Taparko Area

The structural complexity of the ore zones is high, and not fully resolved offering the potential for the discovery of additional mineralised sub-parallel or folded lenses within and adjacent to the existing known mineralisation.

The *GT Zone*, the most southerly and highest grade auriferous zone was the source of the initial production from the mine, and has a strike extent of 400m The gold mineralisation is concentrated in the upper of two quartz vein systems (Figure 1.5) over true widths between 5 and 15m. The lower quartz vein system is virtually barren.

Zone 2 extends over a distance of 500m, subdivided into 2N, (southern) and 2K (northern), separated by a short very low grade interval. Zone 2 is characterised by relatively local and restricted accumulations of white quartz with good gold grades in a generally low-grade environment.

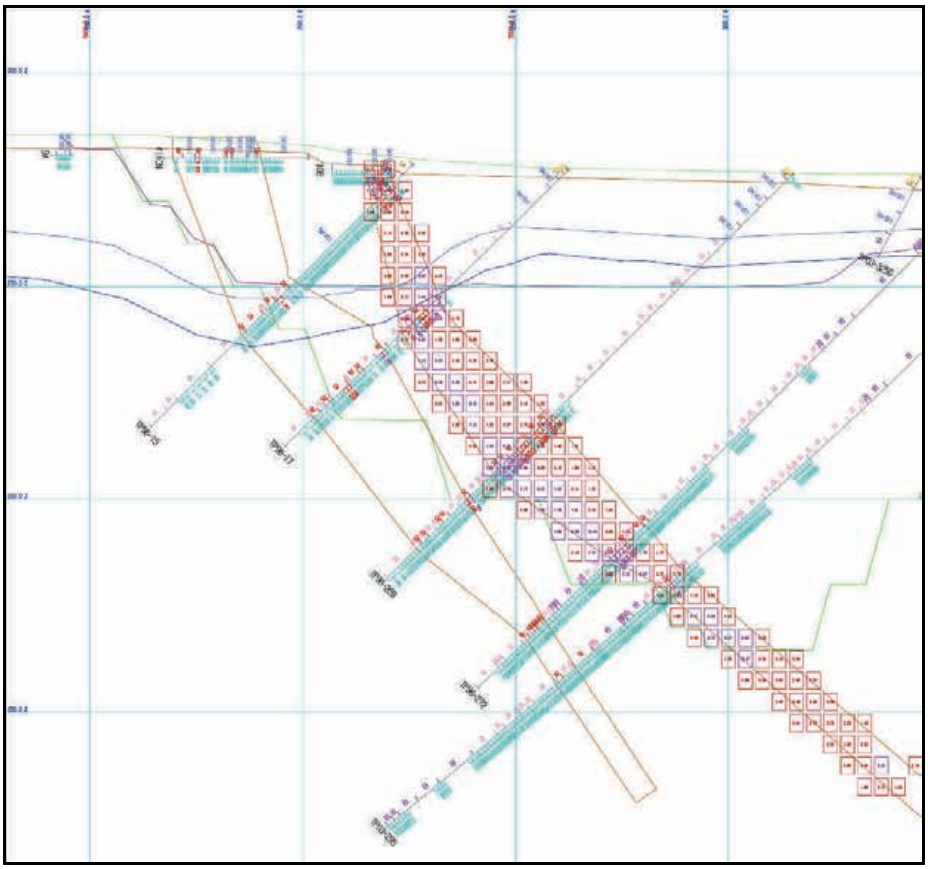

Figure 1.5: Section 4140N through GT Zone

Zone 3/5 is the largest of the individual ore zones with an overall quartz content of 60% and extends over a distance of 1,100m. The gold grade distribution has excellent grade continuity above cut-off and is not substantially different between the quartz veins and the shear zone material itself. The width of the zone above cut-off varies from 10 to 20m, dipping to the east.

1.3.2.3 Bouroum

The geology of the area is characterised by clastic metasedimentary rocks intercalated with minor mafic tholeiitic flows and sills and overlain by a thick series of subaqueous flows and tholeiitic sills with intercalated, epiclastic and pyroclastic rocks. Metapelites, ferruginous quartzite and finally andesitic to dacitic volcanic rocks capped the older stratigraphy.

The Bouroum East and West Faults define a “deformation corridor” of brittle-ductile deformation in which second order shear zones are locally developed and contain gold-bearing quartz veins.

Figure 1.6 shows the geology and structure of the Bouroum area.

The *Bissinga Zone*, occurring along a south-trending shear zone dipping to the west at 65° to 70°, consists of the *North* and *South* Prospects some 500m apart. The North Prospect comprises a relatively short lenticular shoot of quartz-carbonate veining (80 x 20m to a depth of 60m) hosting pyrite and gold mineralisation at a grade of around 5g/t Au dipping to the west at 55°.

There are extensive artisanal workings on the South Prospect, but drilling has generally failed to return economic gold grades at depth.

The zone was worked in 2008 up to May 2009. It is believed some 20,000t of ore remains in the pit @ 5g/t, whilst a further 10,000t at the same grade is present on a small stockpile.

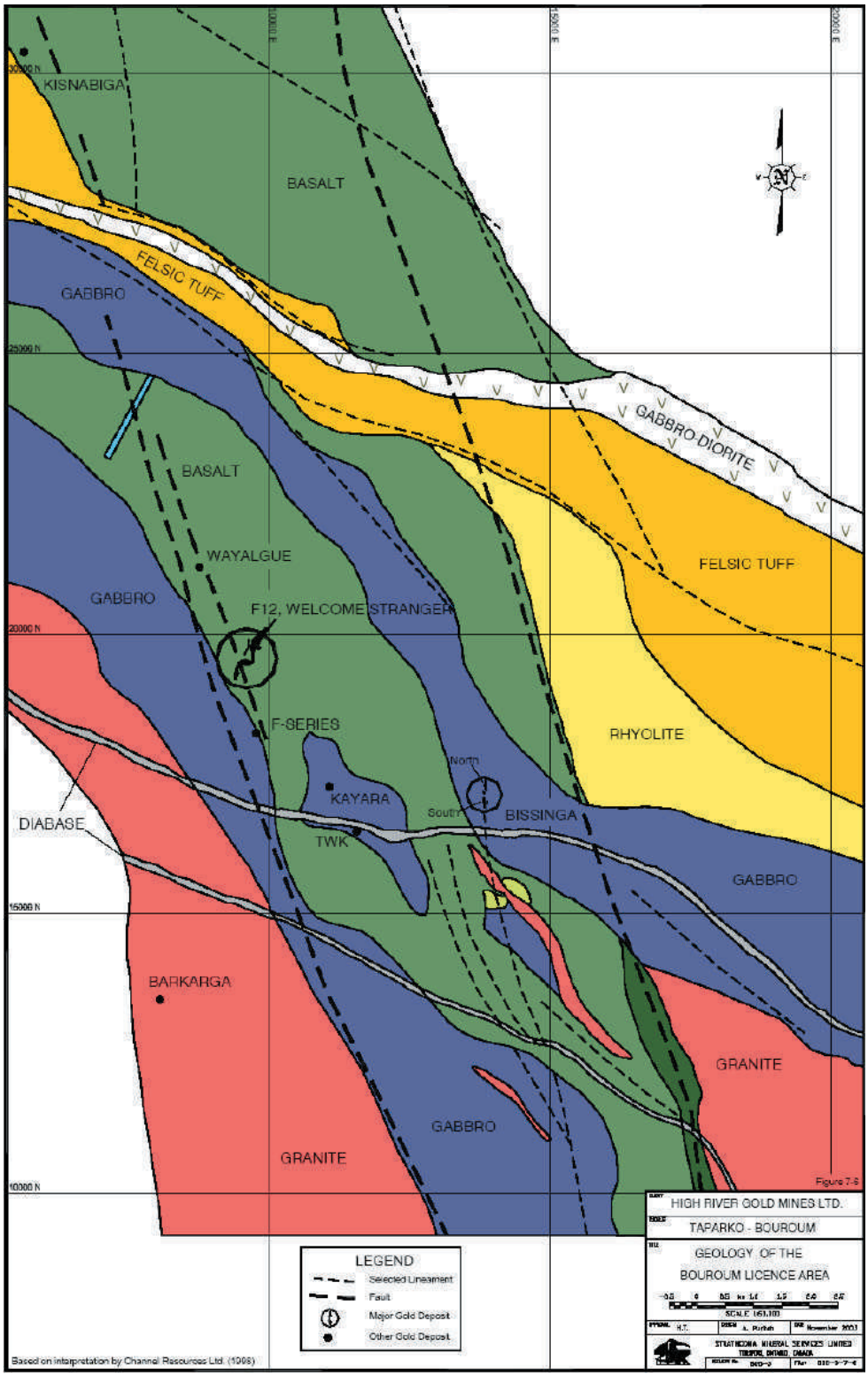

Figure 1.6: Bouroum Geology

WAI Comment: *the Bissinga pit has a small tonnage of ore remaining whilst there is also a small stockpile nearby. However, whether there is potential for further discoveries along strike is unclear at this time as is the logistics of either re-opening the pit (which is now partially flooded) and/or trucking the remaining stockpile material to Taparko.*

The *F-12 Zone* (Figure 1.7) is by far the most important of the three auriferous zones on the Bouroum property and consists of a southern "tail" dipping steeply west, curving to form an east-west-trending oriented central section that is characterised by two massive, white "buck reef" quartz vein splays with little to no sulphide, and reaches widths of about 70m on the surface.

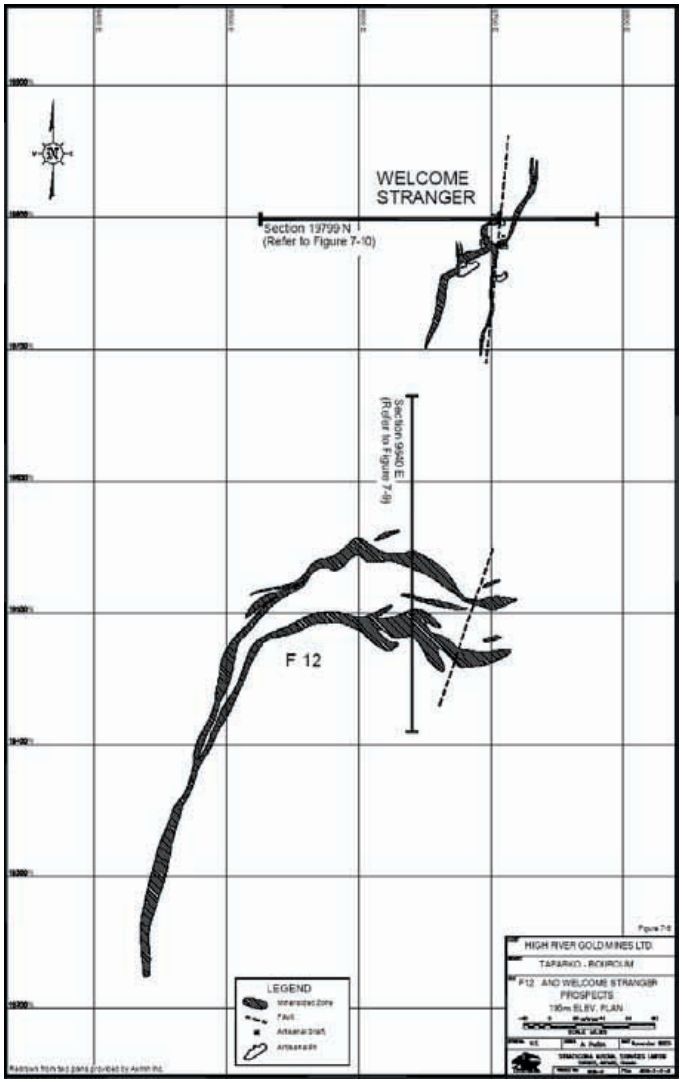

Figure 1.7: F-12 and Welcome Stranger Prospects
(NB. Numbering of Figures refers to the original HRG report)

Both quartz veins are associated with zones of intensely silica and carbonate-altered basalt, often containing moderate pyrite (>2%) and gold mineralisation and separated by a zone of folded siliceous basalt containing minor pyrite and low-grade gold mineralisation that is better developed in the footwall rocks of the "footwall" splay where brecciation is also evident.

To the east, the deposit thins substantially before being abruptly truncated by a north-northeast fault. The strike length of the F-12 Zone is approximately 500m. Figure 1.8 shows a geologic cross section through the central part of the deposit.

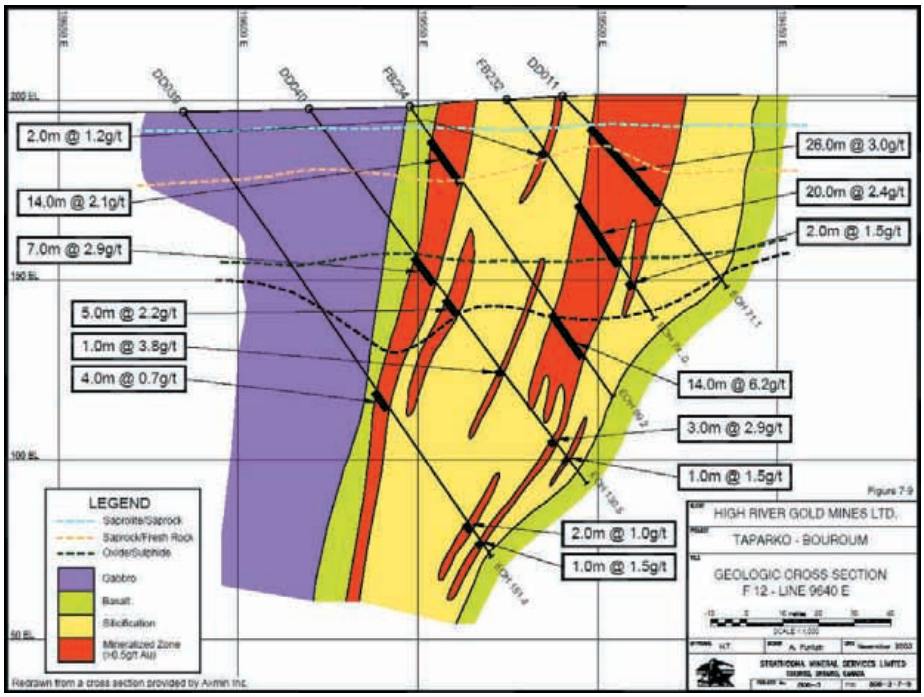

Figure 1.8: Section through Central Part of F-12

The *Welcome Stranger Zone* (Figure 1.9) is situated some 150m to the north of the F-12 Zone close to the contact between layered clastic metasedimentary rocks (hangingwall) and mafic volcanic rocks (footwall) and interpreted as a "sigmoidal tension gash". The core of this zone is a white quartz vein extending over a strike length of 180m (unfolded) and is up to 10m wide on the surface.

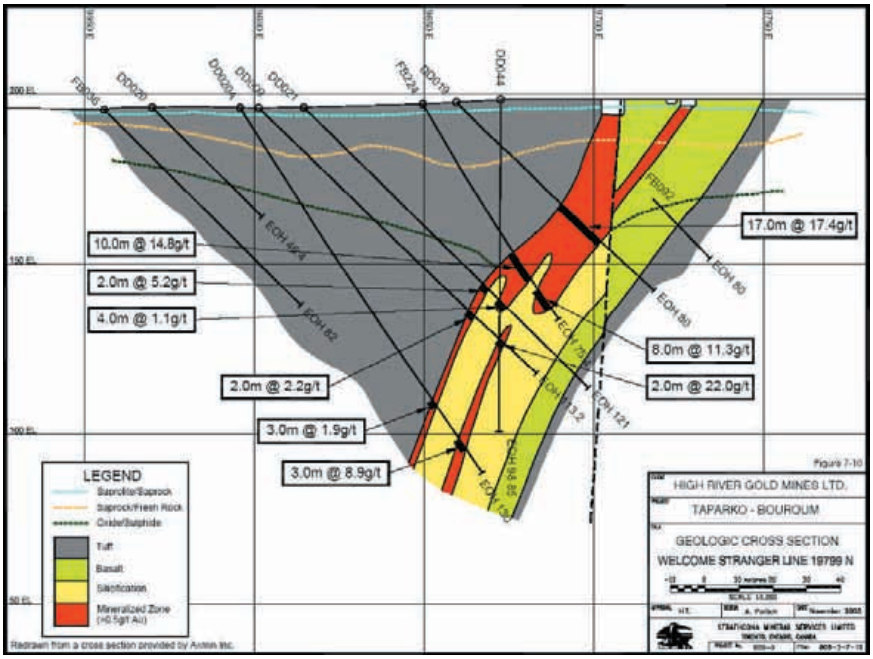

Figure 1.9: Section through Welcome Stranger Zone

A zone of shearing sympathetic to the regional foliation with a surface width of 35m transects the central part of the sigmoidal vein structure and hosts a secondary, generally narrow quartz vein set developed over a strike length of about 70m.

Alteration and gold mineralisation are restricted to the quartz veins and their immediate wall rocks. However, at the intersection of the two vein structures, the alteration and gold mineralisation is much stronger, creating an ore shoot with increased gold grade that plunges moderately to the north where >17g/t Au have been recorded.

> ***WAI Comment:*** *the F-12 and Welcome Stranger zones represent important exploration targets and may provide satellite feed for the Taparko operation, although if more tonnage can be demonstrated, a 'standalone' operation may be possible.*

1.3.3 Zemce

The Zemce prospect which lies some 4km west of Taparko comprises two zones of bull white quartz veins, one approximately 100m long, the other 80m with widths varying from 2-10m, striking approximately east-west and dipping at a shallow angle (≈30°) to the north-northeast.
Previous work done in 1998 and 2008 tested the mineralisation down to 60m depth, and using a 1g/t Au cut-off grade, HRG has determined an unclassified preliminary resource of some 175,000t @ 2.67g/t Au. Grades up to 8g/t Au have been recorded.

> ***WAI Comment:*** *the small Zemce prospect, which appears limited in extent, may provide satellite feed to the Taparko plant, but is unlikely to be able to sustain a standalone operation.*

1.3.4 Kinapouin North

The prospect, which lies some 23km north of Bouroum in the Ankouma licence, comprises a suite of mafic volcanics which have been cut by a north-northwest trending main shear zone some 800m long, as well as other sub-parallel smaller shears

The main zone is well delineated by gold geochemistry, the sub-parallel units less so. The mineralisation also appears to be well defined by Resistivity which shows an anomalous zone larger than the known mineralised outcrop. Other trenches show variable amounts of mineralisation with some good individual assays, a similar trend to that seen in the drillholes.

Inclined RC drilling has been done on a 40m hole spacing and to 40m vertical depth with a total of 4,600m.

> ***WAI Comment:*** *Kinapouin North represents an exciting exploration prospect that requires further drilling to better understand the structure, particularly with regard to the presence of sub-parallel bodies and/or strike extensions. The work done to-date has indicated one main zone with individual gold assays >10g/t, although it is likely that the overall grade of the zone is around 2g/t Au.*

1.3.5 Other Properties

HRG holds the rights to several other licences in the Taparko-Bouroum area (Table 1.1), although WAI has not visited these and is unable at this time to present further comment.

1.4 Exploration

1.4.1 Taparko

1.4.1.1 Exploration Programmes

Since 1995 exploration work has consisted of extensive surface trenching (142 @ 8,141m), diamond drilling (374 @ 41,891m) and, to a lesser extent, reverse circulation ("RC") drilling (101@5,794); outside the mineral resource area the respective figures are 40/2,491m, 38/2,997m and 88/6,146m.

Core recovery in the mineralised zones was between 73-93% even in the saprolite where triple-tube technology was used, aided by the addition of drilling muds and polymers.

As gold is found not only within the quartz veins at Taparko, but roughly in equal concentration in the surrounding sheared rocks as well, the poorer recoveries in some of the drilling are not expected to result in a biased grade from this drilling. No additional drilling was performed on the auriferous zones after 2003.

1.4.1.2 Drilling

All trench locations and drill hole collars have been surveyed on completion of the different field campaigns and were referenced to a local grid orientated north-south, with 20m spaced cross-section lines orientated east-west. Subsequently all borehole collar and trench local grid coordinates were transformed to UTM coordinates using the WGS-84 and Clarke 1880 datum.

Down hole surveys ensure that the locations of the mineralised intersections are accurate spatially.

1.4.1.3 Logging Procedures

Core description includes information about core recovery, rock quality determination, oxidation level, core hardness, clay content, lithology, alteration, geological structures and mineralisation. SRK audited about 10% of the original drill logs to confirm the accuracy and completeness of the core logging and the accuracy of the borehole database.

During the 2003 campaign, geotechnical logging used SRK recommendations and involved the detailed description of the overburden and saprolite horizons, and the detailed measurements of angles of all fractures on oriented core. Additional measurements included solid core recovery and RQDs.

Reverse circulation chips, recovered from the fines with a sieve, were logged from a 1kg sub-sample of the original field sample. The quantities of coarse and fine fractions were estimated as well as the percentages of the various rock types for each interval.

1.4.1.4 Sampling Method

Considering the large competency differences between saprolite and quartz veins, there are gaps in the sample coverage in the trenches, and the sample size was not always uniform. Trench sample assay results are slightly lower than the first tier of drill hole assay data. To limit the depth influence of the trench assay data, a near-surface infill drilling programme was completed in 2003.

Although there were variations in the amount of core (quarter/half core and sample length) taken for assay prior to 2003, the geological contacts were observed in all field campaigns.

Sampling of the reverse circulation drilling was completed over regular 1m intervals and approximately 20kg of cuttings were recovered for each interval. From each original sample, a 2kg sub-sample was produced from repeated passes. The reverse circulation rejects were stored at the camp for future reference.

SRK was of the opinion that the sampling methods used by HRG at Taparko meet industry best practices.

1.4.1.5 Specific Gravity

Specific gravity was measured on a large number of core specimens (pre 2003) representing all rock types in the Taparko gold deposits (Table 1.3).

Table 1.3: Summary of Taparko Specific Gravity Data (pre-2003)						
	Fresh Rock		Saprock		Saprolite	
	Number	Mean	Number	Mean	Number	Mean
Granodiorite	60	2.84	10	2.27	15	2.13
Volcano-sedimentary Rock	589	2.63	248	2.32	273	2.01
Dolerite	28	2.87				
Laterite					6	2.11
Gold Mineralisation	101	2.58		2.38		2.22

The specific gravity data are noisy, as expressed by their relatively high standard deviation values, and local tonnage estimates will therefore be subject to some uncertainties. However, the overall figures look reasonable and provide a good basis for global tonnage calculations. With little in the way of inherent rock porosity, the specific gravity data may be directly translated into bulk density estimates.

The density of the gold mineralisation within the saprock and saprolite zones presents a special problem because of its changing quartz content. The quartz veins are not subject to mass reduction during weathering, while the sheared rocks making up to other one-half or so of the mineralisation are. For resource estimates, this question was handled by estimating the average bulk density for each lithological interval based on the visual estimation of the amount of quartz and then filling the balance with either saprock or saprolite. Derived tonnage factors used for this process were 2.60 for quartz (less than the theoretical value of 2.65 to account for the observed porosity), and 2.00 and 2.30 for saprolite and saprock. The resultant average figures for the quartz-dominated and halo zones of the mineralised zone at Taparko are shown in bolded italics and are in good agreement with the specific gravity determinations done by KCA on whole core.

1.4.1.6 Sample Preparation & Analysis

A detailed description of the sample handling was presented in earlier technical reports and is not repeated here (e.g. SRK, 2003 and 2005 reports). In the opinion of SRK the assay samples collected by HRG at Taparko were handled properly and there is no evidence of voluntary of inadvertent contamination has occurred.

1.4.2 Bouroum

1.4.2.1 Exploration Programmes

AXMIN optioned the property in 2000 and the field work in 2002 and 2003 included detailed geologic mapping and geochemical surveys in addition to the drilling. The latter is summarised by area in Table 1.4.

Table 1.4: Bouroum Exploration Data				
	Diamond Drilling		RC Drilling	
	Holes	Length (m)	Holes	Length (m)
2000			6	429
2001	0		0	
2002	13	1,083	16	862
2003	37	3,030	0	
Total	50	4,113	22	1,291
Bissinga North	7	487	5	165
Bissinga South	0		0	
F 12	32	2,671	10	651
Welcome Stranger	11	954	7	475
Other Areas	0		0	
Total	50	4,113	22	1,291

Including the holes drilled in 1995 and 1996, the database underlying the resource estimate comprises> 27,000m in 241 holes, of which more than 80% was reverse circulation drilling. The RC drill holes drilled in 1995/96 constitute more than three-quarters of the total database, and there is some question as to possible contamination in some of these holes.

Core recovery in the auriferous zones in all years was good with few exceptions, even in the saprolite where triple-tube technology was used, aided by the addition of drilling muds and polymers.

1.4.2.2 Drilling

The collars of the 1995 and 1996 boreholes were originally surveyed by Channel or Viceroy. In 2002, detailed new local grids were established at the F-12, Welcome Stranger and Bissinga prospects.

Down-the-hole survey data are only available for the holes drilled in 2002 and 2003 by AXMIN. The majority of borehole surveys were within 5° of the planned azimuth and 2° of the planned dip.

1.4.2.3 Logging Procedures

Little is known about the reverse circulation drilling logging procedures used by Channel and Viceroy in 1995 and 1996, other than the chip samples were logged and collected in plastic chip boxes. AXMIN's boreholes were logged and sampled by the same field geologists. The logging procedures included geotechnical and geological descriptions captured in Excel spreadsheets.

Logging data include information about core recovery, weathering, rock competency, rock quality determination, fracture distribution and orientation, lithology, structural data, alteration and mineralisation. Core was photographed with a digital camera before sampling.

Reverse circulation chips collected in 2000 and 2002 were also logged to record information about alteration, lithology and mineralogy.

1.4.2.4 Sampling Method

Although the sampling procedures and methods used 1995 and 1996 were adequate, reverse circulation drilling programmes are not well documented and SRK UK concluded that *"… the results of the checks presented above, in conjunction with the limited quality control evidence, give comfort that the Channel drilling, sampling and assaying is sufficiently reliable to support the estimates of resources as classified and reported here."*

In 2002 the sample interval was an even 2m, without regard for geological boundaries; however in 2003, in contrast, the sample interval was reduced to 1m, and geological boundaries were generally honoured.

For the reverse circulation samples collected in 2002, 2m samples were collected in large plastic bags from below the cyclone. A three-way splitter was used to reduce the size of the sample to obtain 2 and 3kg. Within each batch of drilling samples, a duplicate of every 10th sample was collected from the remaining quartered core (not repeated in 2003) and Laboratory Standards and blank added.

SRK concluded that the sampling methodology used by AXMIN generally meets industry best practices.

1.4.2.5 Specific Gravity

The result of specific gravity measurements are summarised in Table 1.5.

Table 1.5: Summary of Bouroum Specific Gravity Data

	Fresh Rock		Saprock		Saprolite	
	Number	**Mean**	**Number**	**Mean**	**Number**	**Mean**
Gabbro	6	2.85	89	2.69	138	2.08
Basalt	25	2.76	5	2.79		2.1
Tuff, Altered Basalt	127	2.66	91	2.59	36	2.05
Felsite			109	2.76		
Mineralisation	1	2.73	8	2.66		2.13

As at Taparko, the auriferous zone consists of varying proportions of quartz, not subject to change during weathering, and schistose rocks. The bulk density of the mineralisation within the saprolite zone was determined by interpolating the relatively few available data. The result at 2.13t/m^3 would appear to be slightly low, given the percentage of quartz present.

It is probable that the slightly high saprolite figures, a consequence of not being fully dried (5-6% moisture), mainly affects the waste tonnage.

1.4.2.6 Sample Preparation & Analysis

There is no description available with respect to the security and chain of custody measures taken during the 1995 and 1996 drilling campaigns. In 2000 and 2002 AXMIN used industry best practices to ensure the security and integrity of assay samples collected from reverse circulation drilling.

A detailed description of the sample handling was presented in earlier technical report and is not repeated here (e.g. SRK, 2003 and 2005 reports).

SRK were of the opinion that the assay samples collected by HRG at Bouroum were handled properly and there is no evidence of voluntary of inadvertent contamination has occurred.

> ***WAI Comment:*** *the exploration works at Taparko and Bouroum have generally been done to a good standard.*

1.5 Mineral Resources

1.5.1 Introduction

The most recent Mineral Resource estimates which appear below relates to the work undertaken by SRK and reported in their NI 43-101 report dated March 2008. WAI has not audited the SRK model, but has reviewed the data and method of estimation.

1.5.2 Database Management

1.5.2.1 Taparko

The database used for resource estimation at Taparko includes the collar survey, down-hole survey, assay, geological and geotechnical data for each drill hole and trench, and accurate surface topography. The database is up to date as of the end of the 2003 drilling program. No additional drilling targeted the Taparko gold zones since 2003.

In the opinion of SRK, the exploration database for the Taparko project is reliable for resource estimation.

1.5.2.2 Bouroum

The database used for the resource estimation at Bouroum included collar survey, assay and geological data for the earlier data set was used in conjunction with the data for the more recent AXMIN data. Accurate surface topography was used for all subsequent drill programmes. No additional drilling tested the Bouroum gold zones since 2003.

In 2003, SRK completed certain validation tests to identify any inconsistencies in the borehole database which were corrected.

There is general agreement that at least some of the pre-AXMIN reverse circulation boreholes show evidence of down-hole contamination and all “questionable” intersections identified by SRK (2002) are below the

interpreted auriferous mineralisation and the water table. In all instances, that information was removed from the database considered for resource estimation.

There is some visual evidence that contamination (over estimation) may have occurred and it is therefore useful to compare the results of twin holes, most of them drilled in 2003 for the express purpose of verifying the reverse circulation data.

1.5.3 Verification & Analytical Quality Control

1.5.3.1 Introduction

The analysis of analytical quality control data available for the Taparko and Bouroum project has been discussed in detail elsewhere (SRK, 2002, 2003) and concluded that the earlier analytical quality control data are deficient, but those produced by HRG and AXMIN, generally meeting existing industry best practices, are reliable for the purpose of resource estimation.

1.5.3.2 Taparko

Assaying data for the Taparko project was acquired from the Analabs and Bondar Clegg laboratories in Ouagadougou from 1996 to 1999 and from the Abilab, Bamako laboratory in 2003.

Internal quality control measures (blanks, standards and pulp replicates) were taken by all laboratories used for assaying Taparko samples. However, only the internal quality control data produced during the 2003 programme are available for analysis and show no apparent drift, all being within 5% of the certified values.

In addition to the laboratory internal control measures, blanks (<0.01g/t Au) were inserted at rates of 1 in 40 (1996-1999) and at a rate of 1 in 20 (2003).

There is a certain degree of low-level contamination in all years, affecting from 1-6% of the blanks but, given the low incidence the assay database is not significantly compromised.

External field control samples were inserted in 1998/99 and again in 2003, but none were used in the 1996 and 1997 programmes.

During the 1996 to 1999 drilling, 5% of the coarse core and reverse circulation rejects were re-assayed and in 2003, 110 coarse rejects from 31 reverse circulation holes were re-submitted for re-assaying. Assay results for the control samples used by HRG on the Taparko project show that the laboratory precision is excellent.

The 2003 data shows a small but persistent high bias in the repeat assays, not reflected in the standards, occurring for every grade range and therefore cannot be explained by the erratic behaviour of a few samples with coarse gold.

In 1998, 1,349 crushed core reject samples from boreholes drilled in 1996 and 1997 and in 2003, 183 pulp samples (value exceeding 0.5g/t gold) were submitted to Canadian laboratories for check assaying the results being somewhat higher than the original assays.

The assay database for the Taparko deposits is considered to be reliable.

1.5.3.3 Bouroum

The exploration data from the Bouroum project was acquired over ten years by three different companies. Project operators used three separate primary laboratories. Analabs Ghana and Ouagadougou laboratories were used from 1994 to 1996. The Performance Laboratory in Ghana was used in 2000, and 2002 and 2003 samples were assayed by the Transworld Laboratory in Ghana.

It appears that no external analytical quality control measures for the older and larger part of the Bouroum database were taken and, despite the more recent submission of a limited number of historical samples, the documentation is incomplete, preventing definitive conclusions on the reliability of the Channel and Viceroy assaying data.

Between 2000 and 2003, AXMIN implemented analytical quality control measures meeting industry best practices.

The analytical quality control measures taken in 1995 and 1996 are deficient, but the partial evidence available indicates that assay results are probably reliable. In contrast, the analytical quality control measures implemented by AXMIN between 2000 and 2003 generally met industry best practices and provide sufficient assurance that the assay results are both precise and accurate. SRK considered the assay data for the Bouroum project sufficiently reliable for the purpose of resource estimation.

1.5.4 Taparko Mineral Resource Estimation

1.5.4.1 Introduction

Wardell Armstrong International (WAI) was commissioned by Nord Gold (Client) to prepare a Mineral Resource estimate in accordance with the guidelines of the JORC Code (2004) for the Taparko Au deposit, Burkina Faso.

1.5.4.2 Topography

Topography was provided as wireframes (Figure 1.10) consisting of an original, pre-mining topographic survey and recent surveys dated 1st July 2010 of the GT Zone and dates 1st November 2010 for the 3/5 Zone.

1.5.4.3 Sample Database

A total of 111,728.30m of drilling and trenching is contained within the Taparko database. Split by type this equates to 43,907m of diamond drilling, 30,819.70m of trenching, 23,061.50m of RAB drilling and 11,940.00m of RC drilling. There is a further 1,999.40m of drilling listed as RC and Diamond drilling. The statistics for the data are shown in Table 1.6.

Table 1.6: Summary of Taparko Exploration Campaigns

Type	Diamond	RAB	RC	RC + Diamond	Trenches
Number	408	798	189	17	560
Min Length (m)	25	4	12	75	0.9
Max Length (m)	300	55	120	221.4	323
Total Length (m)	43,907.70	23,061.50	11,940.00	1,999.40	30,819.70
Mean Length (m)	107.62	28.90	63.17	117.61	55.04

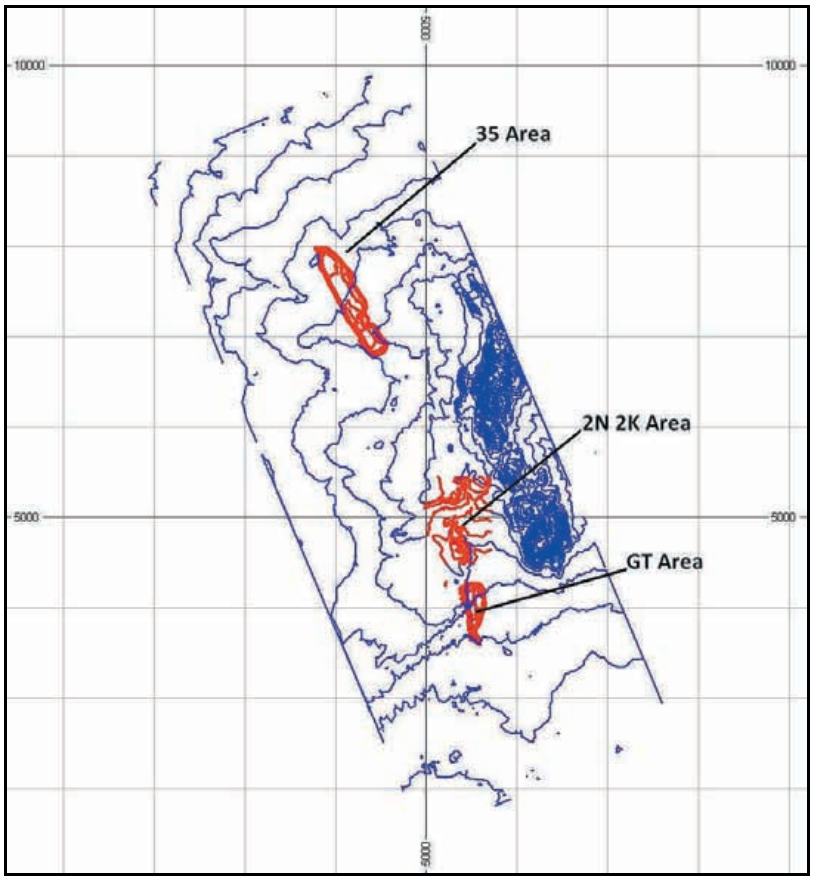

Figure 1.10: Plan View of Topographic Surveys of Taparko Area. Original contours in Blue and Individual Areas in Red

1.5.4.4 Mineralised Zone Interpretation

Mineralised zone wireframes (Figure 1.11) were constructed for three zones; Zone 3/5, Zone 2N2K and Zone GT based on a cut-off grade of 0.5g/t Au. Zones 2N2K and GT strike roughly north-south and dip towards the east. Zone 3/5 strikes north-north-west to south-south east dipping roughly towards the northeast.

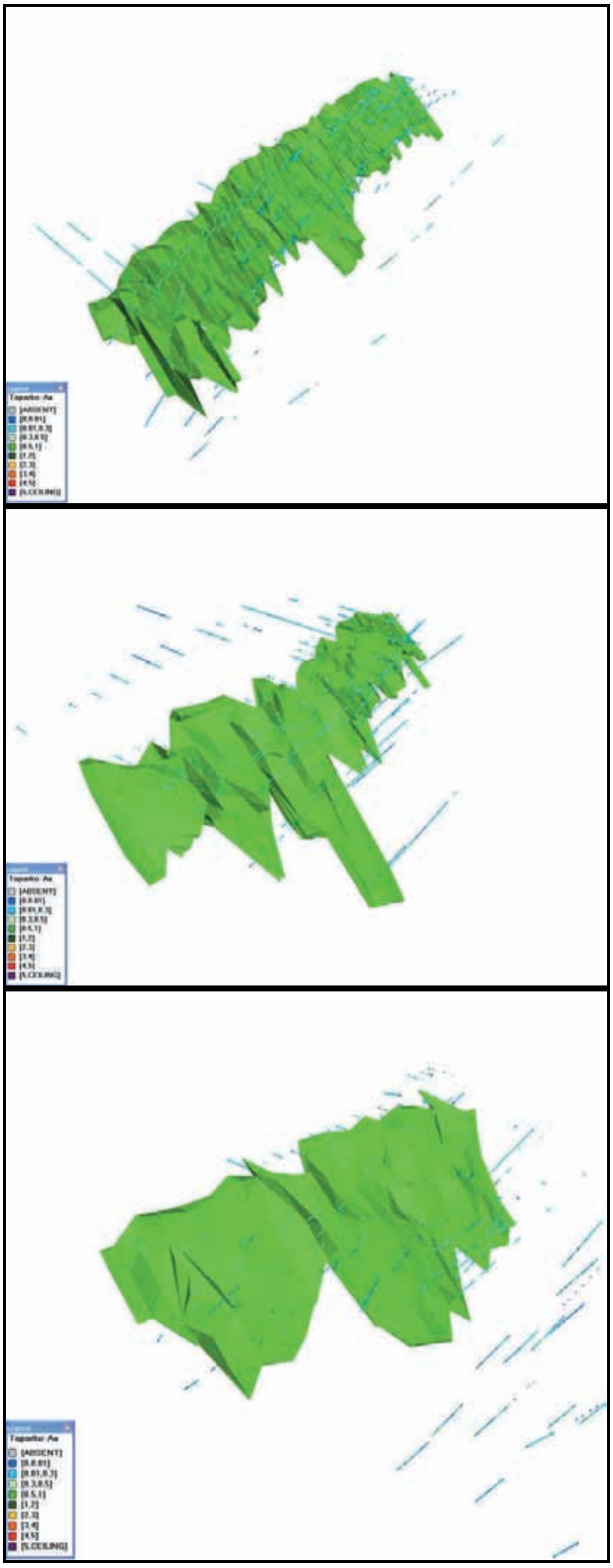

Figure 1.11: Isometric View looking North West of Mineralised Zone Wireframes based on a cut-off grade of 0.5g/t Au in Zone 3/5 (top), Zone 2N2K (middle) and Zone GT (bottom)

1.5.4.5 Geostatistics

The sample data indicates approximately log-normal populations of Au grades within each of the mineralised zones. A geostatistical study of 2m composites indicated variogram ranges of approximately 50m x 40m x 10m for Zone 3/5 (along strike/down dip/across strike), 31m x 30m x 11m for Zone 2N2K and 39m x 42m x 16m for Zone GT.

Figure 1.12 shows variogram plots for Zone 3/5.

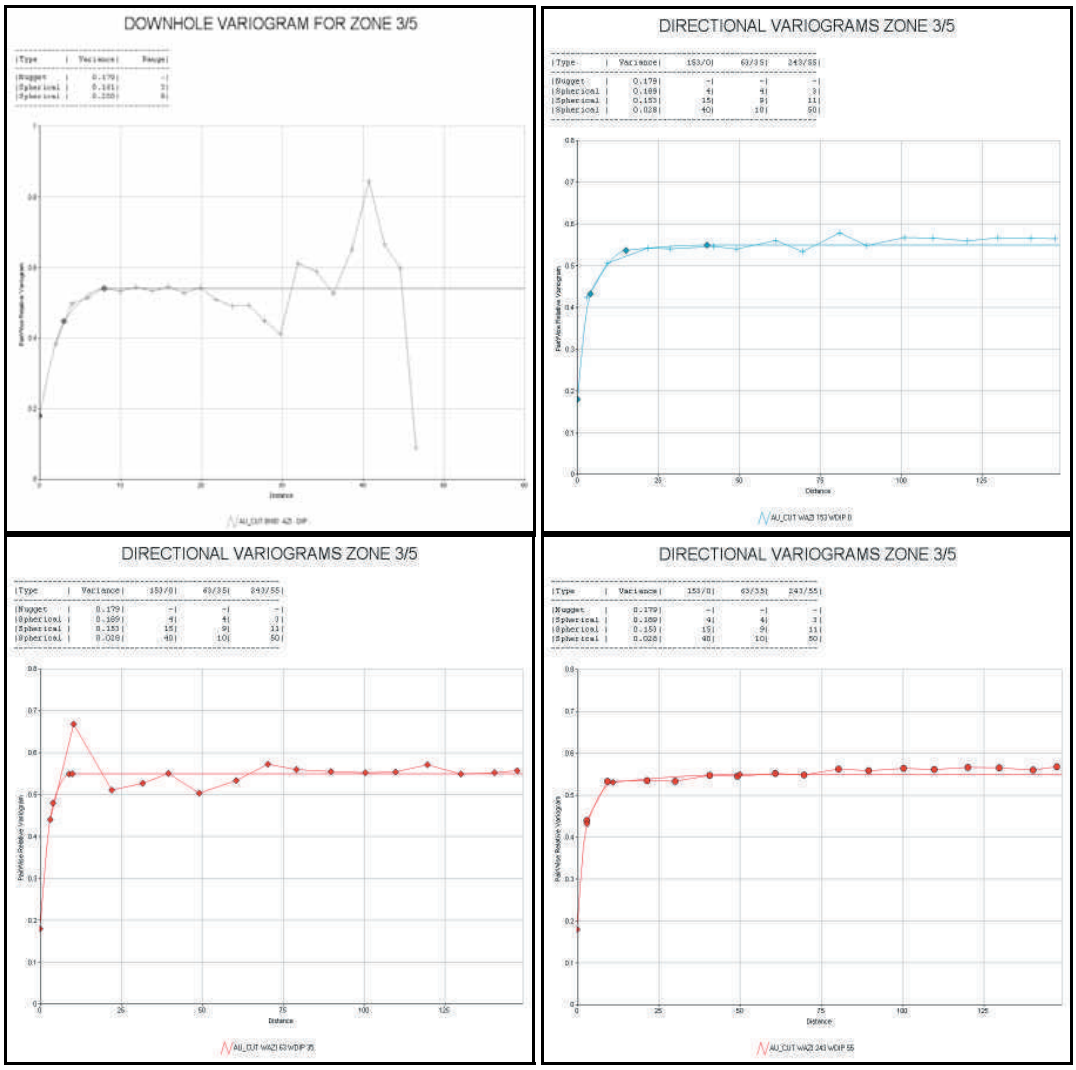

Figure 1.12: Variogram Models for Zone 3/5

1.5.4.6 Block Model

A volumetric block model was set up with a 10m x 10m x 5m block size. Density values were assigned from an Inverse Power of Distance estimation using density figures contained within the drillhole database.

1.5.4.7 Grade Estimation

Gold grades were estimated within the mineralised zones using ordinary kriging, summary parameters are included in Table 1.7. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes.

Table 1.7: Summary of Kriging Plan			
	Zone 3/5	Zone 2N2K	Zone GT
Search 1(along strike x down dip x cross strike)	33m X 26m X 7m	20m X 20m X 7m	28m X 26m X 11m
Search 2 (along strike x down dip x cross strike)	50m X 40m X 10m	31m X 30m X 11m	39m X 42m X 16m
Search 3 (along strike x down dip x cross strike)	100m X 80m X 20m	62m X 60m X 22m	78m X 84m X 32m
Discretisation (x/y/z)	2/2/1		
Min no. composites (search 1/2/3)	6/6/1		
Max no. composites (search 1/2/3)	24/24/24		
Minimum Octants to be filled	4/4/1		
Minimum Composites per Octant	1/1/1		
Maximum Octants per Octant	3/3/3		
Max no. composites per hole	3/3/3		
NB – 1) Each zone has been interpolated separately using only composites contained within that zone 2) Directional anisotropy has been used during interpolation to orient the search ellipses and reflect local variation in strike and dip			

1.5.4.8 Model Validation

A model validation process included the examination of block model versus composites (analysed by SWATH plots - Figure 1.13), and the building up of a model grade profile, to compare average grades on vertical slices, as derived from the composites directly, as well as from interpolated model grades.

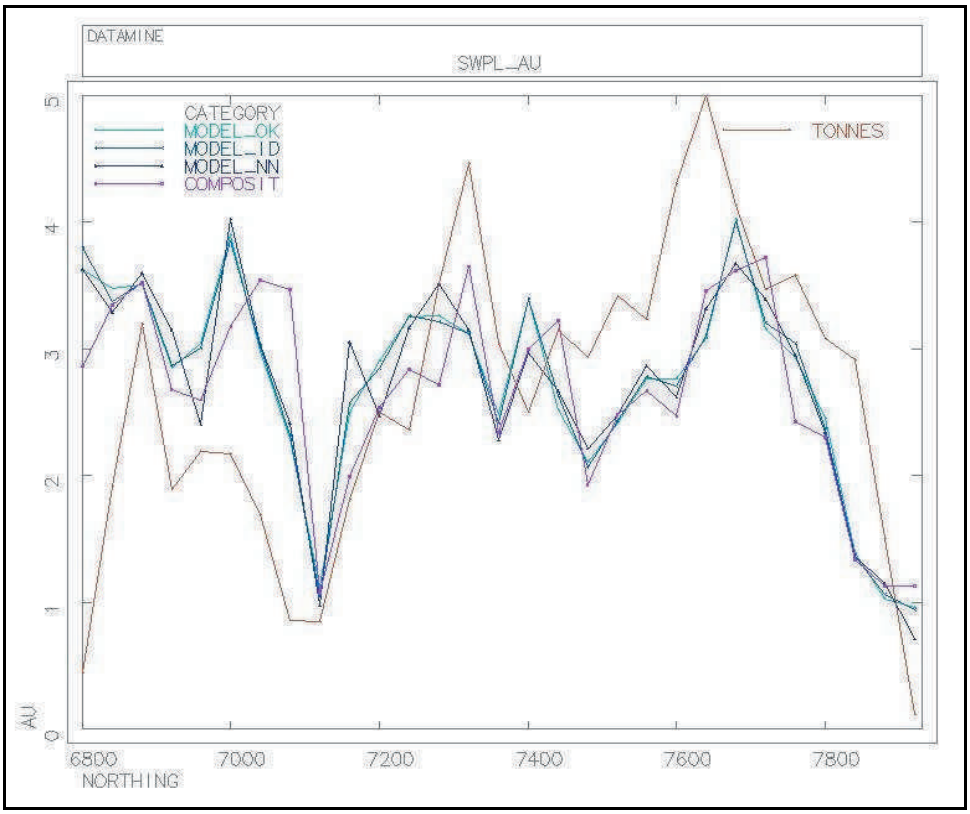

Figure 1.13: Example SWATH Plot; Zone 3/5 by Northing

1.5.4.9 Resource Classification

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Indicated* resources they were 20m x 20m (along-strike x down-dip). All of the modelled resources within the mineralised zone wireframes and within 50m of a composite sample have been classified as *Inferred*.

1.5.4.10 Resource Evaluation

The final block models were cut against the topographic/pit surveys and used as the basis for resource evaluation. The effective date of the resource estimation is 1st November 2010. Summary results of the evaluation of the in-situ resources for each Zone and a summary for all three Zones are shown in Table 1.8 to Table 1.11 below, by rock type, for three different cut-off grade levels: 0.5, 1.0, 1.5 and 2.0g/t Au.

Table 1.8 Mineral Resource Estimate – in-situ Resources OK– Zone 3/5 – 1st November 2010 (in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.5	1.0	1.5	2.0
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		oz	0	0	0	0
Indicated	**Tonnage (kt)**		3,998	3,850	3,419	2,725
	Au (g/t)		2.95	3.03	3.25	3.63
	Metal	**kg**	11,785	11,661	11,109	9,888
		oz	378,896	374,896	357,164	317,893
Measured + Indicated	**Tonnage (kt)**		3,998	3,850	3,419	2,725
	Au (g/t)		2.95	3.03	3.25	3.63
	Metal	**kg**	11,785	11,661	11,109	9,888
		oz	378,896	374,896	357,164	317,893
Inferred	**Tonnage (kt)**		691	586	471	362
	Au (g/t)		2.34	2.62	2.96	3.31
	Metal	**kg**	1,618	1,535	1,391	1,200
		t oz	52,026	49,359	44,720	38,590

Notes:

1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves.
3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 1.9 Mineral Resource Estimate – in-situ Resources OK– Zone 2N2K - 1st November 2010 (in accordance with the guidelines of the JORC Code (2004)						
Cut Off Grade			**0.5**	**1.0**	**1.5**	**2.0**
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		oz	0	0	0	0
Indicated	**Tonnage (kt)**		1,515	1,342	900	504
	Au (g/t)		1.93	2.07	2.47	3.04
	Metal	**kg**	2,927	2,784	2,223	1,534
		oz	94,103	89,510	71,457	49,305
Measured + Indicated	**Tonnage (kt)**		1,515	1,342	900	504
	Au (g/t)		1.93	2.07	2.47	3.04
	Metal	**kg**	2,927	2,784	2,223	1,534
		oz	94,103	89,510	71,457	49,305
Inferred	**Tonnage (kt)**		531	483	409	257
	Au (g/t)		1.97	2.09	2.24	2.52
	Metal	**kg**	1,048	1,011	915	649
		t oz	33,708	32,501	29,413	20,857

Notes:

1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves.
3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 1.10 Mineral Resource Estimate – in-situ Resources OK– Zone GT - 1st November 2010
(in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.5	1.0	1.5	2.0
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		oz	0	0	0	0
Indicated	**Tonnage (kt)**		640	640	636	608
	Au (g/t)		4.55	4.55	4.57	4.70
	Metal	**kg**	2,913	2,913	2,909	2,858
		oz	93,664	93,660	93,517	91,877
Measured + Indicated	**Tonnage (kt)**		640	640	636	608
	Au (g/t)		4.55	4.55	4.57	4.70
	Metal	**kg**	2,913	2,913	2,909	2,858
		oz	93,664	93,660	93,517	91,877
Inferred	**Tonnage (kt)**		67	67	67	67
	Au (g/t)		4.46	4.46	4.46	4.47
	Metal	**kg**	300	300	300	300
		t oz	9,653	9,653	9,653	9,635

Notes:

1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves.
3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 1.11: Mineral Resource Estimate – in-situ Resources OK– All Zones - 1st November 2010 (in accordance with the guidelines of the JORC Code (2004)						
Cut Off Grade			**0.5**	**1.0**	**1.5**	**2.0**
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		oz	0	0	0	0
Indicated	**Tonnage (kt)**		6,153	5,832	4,956	3,836
	Au (g/t)		2.86	2.98	3.28	3.72
	Metal	**kg**	17,625	17,358	16,240	14,279
		oz	566,663	558,065	522,138	459,076
Measured + Indicated	**Tonnage (kt)**		6,153	5,832	4,956	3,836
	Au (g/t)		2.86	2.98	3.28	3.72
	Metal	**kg**	17,625	17,358	16,240	14,279
		oz	566,663	558,065	522,138	459,076
Inferred	**Tonnage (kt)**		1,290	1,136	947	687
	Au (g/t)		2.30	2.50	2.75	3.13
	Metal	**kg**	2,967	2,846	2,606	2,149
		t oz	95,387	91,513	83,786	69,082

Notes:

1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study.
2. Mineral Resources are reported inclusive of any reserves.
3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

1.5.5 F12 & Welcome Stranger Resources

1.5.5.1 Introduction

Wardell Armstrong International (WAI) was commissioned by Nord Gold (Client) to prepare a Mineral Resource estimate in accordance with the guidelines of the JORC Code (2004) for the Au exploration prospects named F12 and Welcome Stranger to the northeast of the Taparko Au deposit, Burkina Faso.

1.5.5.2 Topography

Topography used was a DTM provided by the client representing the original topographic surface.

1.5.5.3 Sample Database

A total of 29,302.43m of drilling is contained within the database (Table 1.12). This is made up of 3922m of diamond drilling and 25,381m of RC drilling. Drillhole sections in the main areas of interest are 20-40m apart.

Table 1.12: Summary of F12 and Welcome Stranger Area Exploration Campaigns by Area						
Area	**F12**		**Welcome Stranger**		**Other**	
Type	**Diamond**	**RC**	**Diamond**	**RC**	**Diamond**	**RC**
Number	32	91	12	53	-	57
Total Length (m)	2863.77	11,399.16	1057.9	6689.6	-	7292
Mean Length (m)	89.49	125.27	162.75	126.22	-	127.93

1.5.5.4 Mineralised Zone Interpretation

Mineralised zones are generally steeply dipping towards the northwest. The F12 prospect strikes east-west in the north but swings round to a tail in the south that strikes north-south. The Welcome Stranger prospect strikes roughly north-south. Mineralised zone wireframes were constructed to a cut-off grade of 0.6g/t Au Figure 1.14 and Figure 1.15).

Figure 1.14: Isometric View looking East of Mineralised Zone Wireframes based on a cut-off grade of 0.6g/t Au in F12

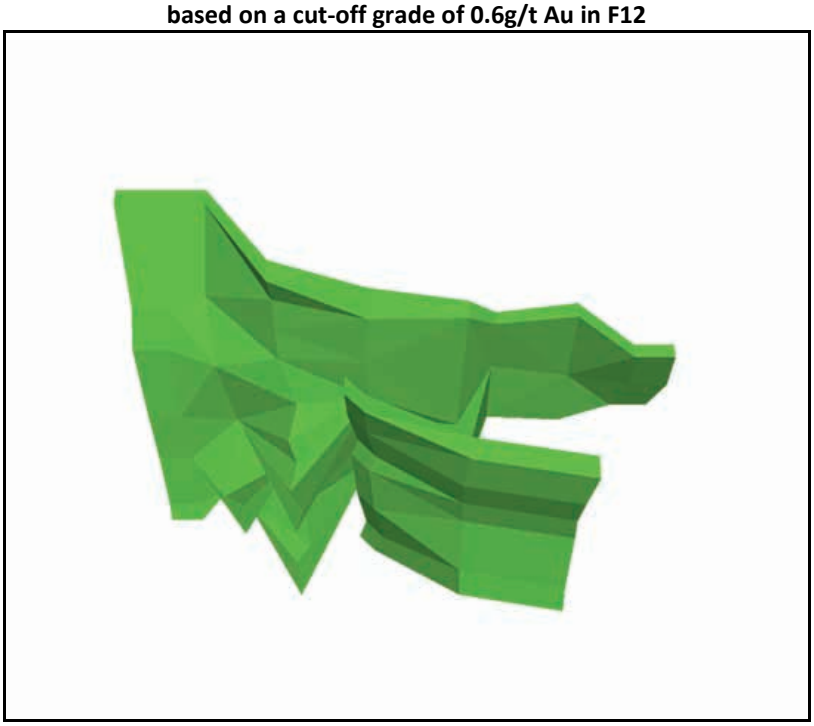

Figure 1.15: Isometric View looking East of Mineralised Zone Wireframes based on a cut-off grade of 0.6g/t Au Welcome Stranger

1.5.5.5 Geostatistics

Sample data indicates approximately log-normal populations of gold grades for both the F12 and Welcome Stranger mineralised zones. A geostatistical study of 2m composites by mineralised zone group indicated variogram ranges of approximately 20m x 11m x 12m (along strike/across strike/down dip) for the F12 area and 24m x 11m x 13m for Welcome Stranger.

1.5.5.6 Block Model

A volumetric block model was set up with 10m x 10m x 5m block sizes. Density values were assigned on the basis of lithology with mean density grades from the drillhole database being assigned to blocks depending on their position relative to the base of a DTM representing the base of the weathered Saprolite. Density values used for F12 were 2.09t/m^3 above the base of the Saprolite and 2.70t/m^3 below. Density values used for Welcome Stranger were 2.03t/m^3 above the base of the Saprolite and 2.60t/m^3 below the base of the Saprolite.

1.5.5.7 Grade Estimation

Gold grades were estimated within the mineralized zones using ordinary kriging, parameters are shown in Table 1.13. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes.

Table 1.13: Summary of Kriging Plan

	F12	**Welcome Stranger**
Search 1(along strike x down dip x cross strike)	13m X 7m X 8m	16m X 7m X 9m
Search 2 (along strike x down dip x cross strike)	20m X 11m X 12m	24m X 11m X 13m
Search 3 (along strike x down dip x cross strike)	60m X 33m X 36m	72m X 33m X 39m
Discretisation (x/y/z)	2/2/1	
Min no. composites (search 1/2/3)	6/6/1	
Max no. composites (search 1/2/3)	24/24/24	
Minimum Octants to be filled	4/4/1	
Minimum Composites per Octant	1/1/1	
Maximum Octants per Octant	3/3/3	
Max no. composites per hole	3/3/3	

NB –
1) Each zone has been interpolated separately using only composites contained within that zone
2) Directional anisotropy has been used during interpolation to orient the search ellipses and reflect local variation in strike and dip

1.5.5.8 Model Validation

A model validation process included the examination of block model versus composites, and the building up of a model grade profile, to compare average grades on vertical slices, as derived from the composites directly, as well as from interpolated model grades.

1.5.5.9 Resource Classification

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Indicated* resources at F12 were 20m x 20m (along-strike x down-dip), *Inferred* resources were allocated to blocks within the mineralised zone wireframes within 50m of a composite sample. All of the modelled resources at Welcome Stranger were classified as *Inferred* due to high very short scale variability between paired holes.

1.5.5.10 Resource Evaluation

The final block models were used as a basis for resource evaluation. Summary results of the evaluations of in-situ resources are shown in Table 1.14 and Table 1.15 below for various cut-off grade levels.

Table 1.14: F12 Resource Estimate (WAI 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.5	1.0	1.5	2.0
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		t oz	0	0	0	0
Indicated	**Tonnage (kt)**		2,364	2,217	1,836	1,326
	Au (g/t)		2.52	2.63	2.91	3.36
	Metal	**kg**	5,948	5,829	5,345	4,449
		t oz	191,240	187,416	171,845	143,031
Measured + Indicated	**Tonnage (kt)**		2,364	2,217	1,836	1,326
	Au (g/t)		2.52	2.63	2.91	3.36
	Metal	**kg**	5,948	5,829	5,345	4,449
		t oz	191,240	187,416	171,845	143,031
Inferred	**Tonnage (kt)**		646	604	550	442
	Au (g/t)		2.74	2.88	3.04	3.34
	Metal	**kg**	1,772	1,738	1,669	1,477
		t oz	56,956	55,889	53,665	47,490

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

WAI Comment: *the resource estimates prepared by WAI in 2010 show a modest resource remaining at Taparko, as well as other defined resources for F12 and Welcome Stranger. In addition to the quantifed resources, all the areas offer the opportunities to discover additional resources which may be suitable for future mining.*

Table 1.15: Welcome Stranger Resource Estimate (WAI 01 November 2010) (in accordance with the guidelines of the JORC Code (2004)						
Cut Off Grade			**0.5**	**1.0**	**1.5**	**2.0**
Measured	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		t oz	0	0	0	0
Indicated	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		t oz	0	0	0	0
Measured + Indicated	**Tonnage (kt)**		0	0	0	0
	Au (g/t)		0	0	0	0
	Metal	**kg**	0	0	0	0
		t oz	0	0	0	0
Inferred	**Tonnage (kt)**		210	199	181	162
	Au (g/t)		5.03	5.26	5.67	6.12
	Metal	**kg**	1,054	1,045	1,023	989
		t oz	33,875	33,601	32,900	31,799

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

1.5.6 Other Taparko-Bouroum Resources

In addition to F12 and Welcome Stranger, WAI has also been able to prepare preliminary resource models for the Yeou prospect and Ankouma, the details of which are provided below.

1.5.6.1 Yeou

Sample data comprises of diamond drillholes (14,501m) and trenches (1,680m). Drillhole sections are spaced 40m apart.

The mineralised zone is generally vertically dipping with an average strike approximately west-east according to the local grid. The mineralised zone has been constructed based on a 0.4g/t Au cut-off and is shown in Figure 1.16.

The sample data indicates approximately log-normal populations of gold grades within the different lithologies. A geostatistical study of 1.0m composites by lithology was carried out. An omni-directional variogram was constructed which gave a range of 70m.

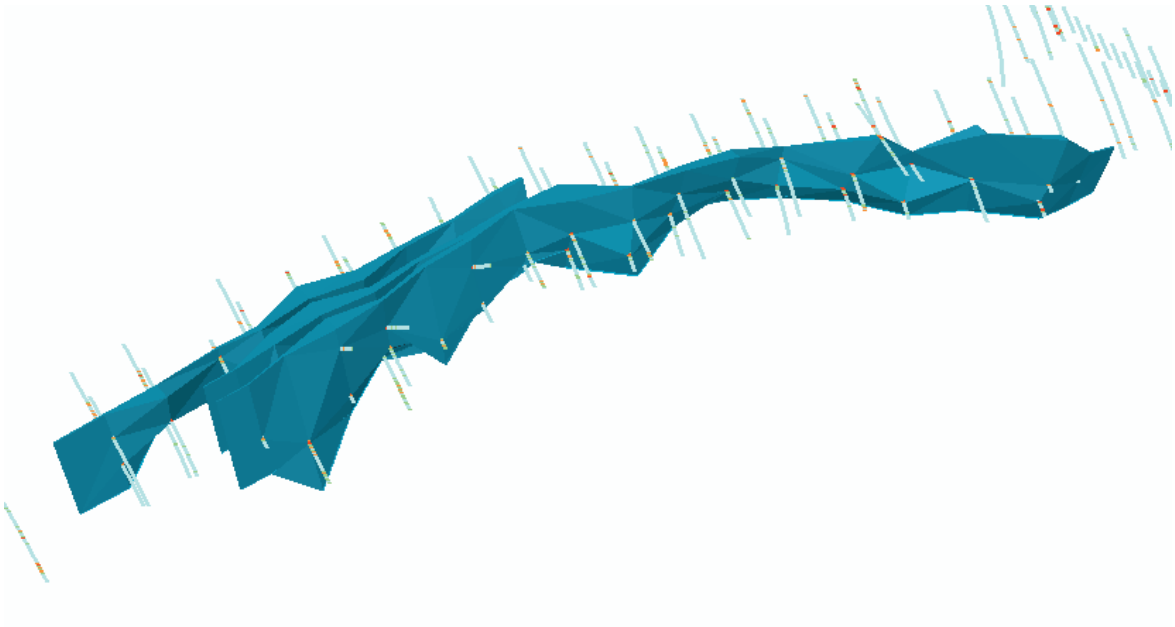

Figure 1.16: Yeou Isometric View looking Southwest of Mineralised Zone Wireframe Based on a Cut-off Grade of 0.4g/t Au with Drillhole Traces

A volumetric block model was set up with a 10m x 5m x 10m block size. Density values were derived from values at other projects by weathering type, although this has caused a slight inconsistency in that the transition SG Value is slightly higher that the fresh rock, due to the fact that transitional material has limited data and is not seen at every deposit. These differences have negligible impact on resource estimates. Density values used were 2.18t/m^3 for Laterite, 2.03t/m^3 for Saprolite, 2.31t/m^3 for Saprock, 2.75t/m^3 for Transition zone and 2.73t/m^3 for Fresh rock.

Gold grades were estimated within the mineralised zones using Inverse Distance Weighting as the main estimator. Alternative grades were also interpolated using nearest neighbour estimations for validation purposes.

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Inferred* resources were 40m x 50m (along-strike x down-dip).

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in the table below, for four different cut-off grade levels: 0.4g/t, 1.0g/t, 1.5g/t and 2.0g/t Au. An evaluation summary can be seen in Table 1.16 below.

Table 1.16: Yeou Mineral Resource Estimate (WAI, 01 November 2010)

COG	JORC Classification	Volume (m^3)	Tonnes (t)	Density (t/m^3)	Au (g/t)	Contained Metal	
						(kg)	(troy oz)
0.4	***Inferred***	426,790	1,066,052	2.50	2.39	2,550	81,980
1.0	***Inferred***	333,567	821,087	2.46	2.87	2,357	75,765
1.5	***Inferred***	211,808	523,880	2.47	3.76	1,968	63,286
2.0	***Inferred***	144,568	359,517	2.48	4.62	1,663	54,459

1.5.6.2 Ankouma

Sample data are made up of RC drillholes (4,305m) and trenches (492m). Drillholes occur in three main groups and are on sections generally spaced between 40m apart.

The mineralisation is patchy and lacks continuity, so no wireframes were constructed. Wireframe surfaces separating weathering zones were constructed and used to domain the deposit.

The sample data indicates approximately log-normal populations of gold grades within the different lithologies. A geostatistical study of 1m composites by lithology was carried out for each lithology. No variography was carried out on the deposit due to the small number of samples.

A volumetric block model was set up with a 40m x 40m x 10m block size. Density values were assigned based on values from nearby deposits, although this has caused a slight inconsistency in that the transition SG Value is slightly higher that the fresh rock, due to the fact that transitional material has limited data and is not seen at every deposit. These differences have negligible impact on resource estimates.. Density values used were 2.03t/m^3 for Saprolite, 2.31t/m^3 for Saprock, 2.75t/m^3 for Transition zone and 2.73t/m^3 for Fresh rock.

Gold grades were estimated directly into the block model using search parameters defined by sample spacing by utilising the Inverse Distance Weighting technique.

Criteria for defining resource categories were derived from the sample spacing. Key drillhole spacings for the allocation of *Inferred* resources were 40m x 40m (along-strike x down-dip).

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in the table below, for four different cut-off grade levels: 0.5g/t, 1.0g/t, 1.5g/t and 2.0g/t Au. An evaluation summary can be seen in Table 1.17.

Table 1.17: Ankouma Mineral Resource Estimate – Total Resources (WAI, 01 November 2010)

COG	JORC Classification	Volume (m^3)	Tonnes (t)	Density (t/m^3)	Au (g/t)	Contained Metal	
						(kg)	(troy oz)
0.5	***Inferred***	708,507	1,815,679	2.56	1.26	2,296	73,825
1.0	***Inferred***	352,915	896,641	2.54	1.78	1,599	51,417
1.5	***Inferred***	161,162	396,308	2.46	2.37	941	30,254
2.0	***Inferred***	63,619	159,579	2.51	3.27	522	16,792

1.6 Mining

1.6.1 Introduction

Mining commenced in 2005 with the first gold pour in July 2007. The Taparko mine has been developed with three open pits the 3/5 Pit, the 2N/2K Pit and the GT Pit (Figure 1.17 below).

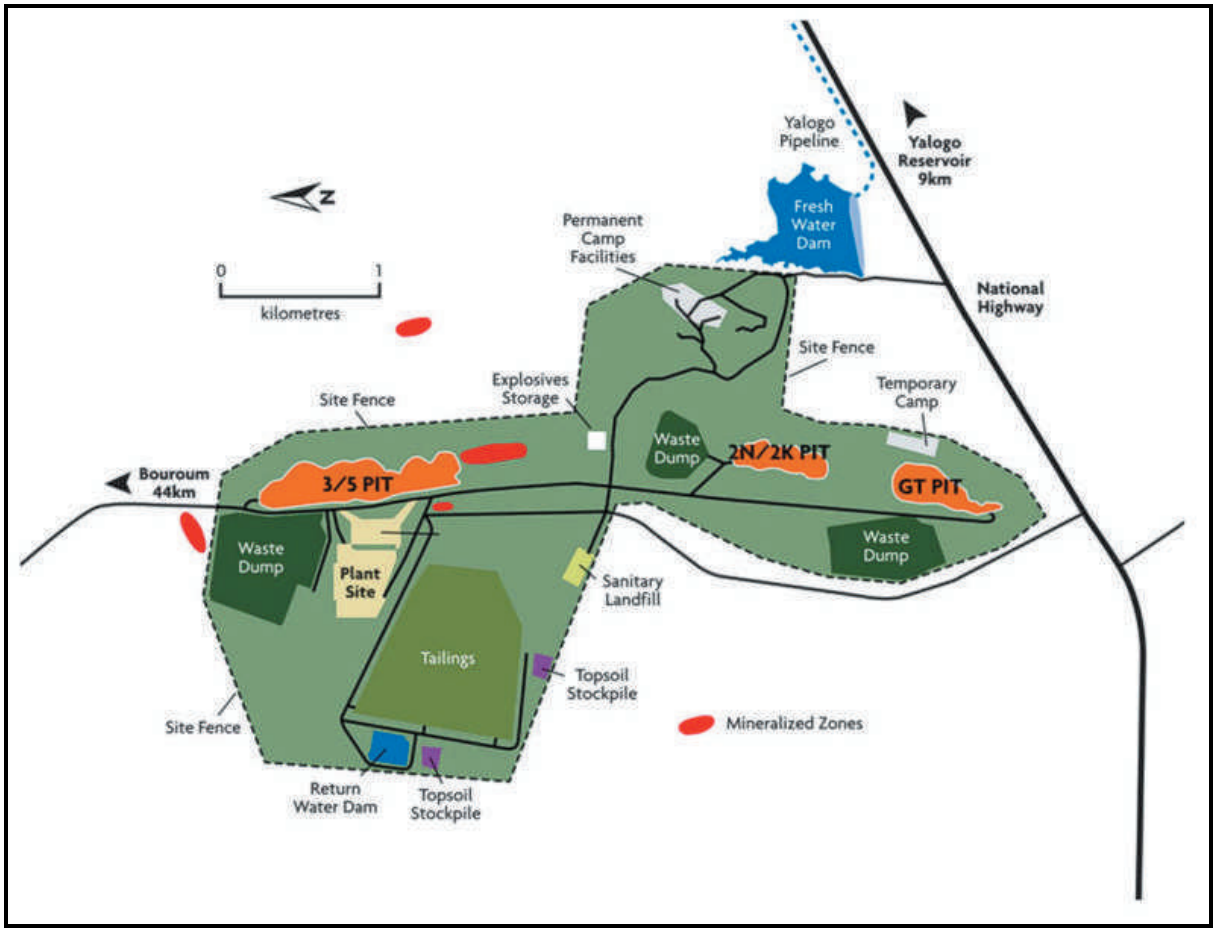

Figure 1.17: Taparko Site Layout

Currently the 3/5 pit is in operation producing approximately 3,700tpd of ore, whilst the GT pit has provided production and a small quantity of waste was excavated from pit 2N/2K to be used for site construction purposes.

Bouroum mine is located 49km northwest of Taparko and consists of three deposits the Bissinga Pit, F12 and the Welcome Stranger (WS) deposit. The reserves at Bouroum are not large enough to justify its own processing plant and ore mined from this site was hauled to Taparko.

Mining is based on 5m benches for ore and 10m for waste both excavated on 2.5m flitches.

Recently, the blast planning has been rearranged to ensure that 200kt of ore has been blasted ahead of production to compensate for an increase in lead time in obtaining blast hole assays from Ouagadougou.

1.6.2 Pit Optimisation

1.6.2.1 Introduction

As a continuation of *Mineral Resource* modelling of Taparko deposit, WAI has undertaken a pit optimisation using the *Mineral Resource* Block Model prepared by WAI and updated in November 2010. The model was depleted to contain only those *Mineral Resources*, which have not been extracted as of 01.11.2010. WAI used NPV Scheduler® software for the optimisation, applying conceptual financial and technical parameters, provided by the Client.

The NPV Scheduler® programme comprises three components, the ultimate pit shell generator, a push back generator and the optimising scheduler. The ultimate pit generator is the first stage of the optimisation

process and utilises a Lerchs-Grossman algorithm to generate an economic open pit shell from the *Mineral Resource* block model based on the initial input parameters.

The objective of this study was to obtain an optimised pit shell containing economically viable *Mineral Resources*, which therefore will provide an estimate of *Ore Reserves*. The estimate of *Ore Reserves* will form a basis for the mining schedule.

Prior to importing into NPV Scheduler®, the *Mineral Resource* block model was expanded by adding waste cells. Zero grade values for gold were assigned to each waste cell.

1.6.2.2 Pit Optimisation Parameters

The metal price used for the pit optimisation was US$900/oz Au. The major Key Performance Indicators (KPI) such as mining and processing costs, and other parameters, considered during the optimisation, have been supplied by the Client as actual results of year 2008-2010 production. These figures are given in Table 1.18 below.

Table 1.18: Taparko Key Performance Indicators for 2008 to 9m 2010

	Unit	2008	2009	9m 2010
Rock mined	Kt	noinfo	6,845	8,194
Ore mined	Kt	266	813	963
Ore milled	Kt	369	814	912
Average Au grade	g/t	3.0	4.0	3.3
Ore stripped	Kt	noinfo	6,030	7,819
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	kg	954	3,039	2,826
Gold recovered (2008 - dore, 2009, 9m 2010 - refined gold and silver)**	koz	30.7	97.7	90.9
Recovery rate	%	91.4	94.9	91.4
Full cash cost	US$/oz		499	386
Normalised TCC	US$/oz		484	379
Ore mining costs	US$/t		1.85	1.34
Waste mining costs	US$/t		1.85	1.34
Ore processing costs	US$/t		22.71	14.72
General and administration costs	US$M		3.4	2.1
CAPEX	US$M		5.6	3.3
Depreciation	US$M		19.7	10.1

Note:
*** including Exploration and Evaluation**
**** including 250 GEO and 207 GEO of silver production in 2009 and 1H 2010; 321 and 358 GEO of silver production for 9 and 10 months 2010**

WAI has reviewed the results of year 2008 to 9m 2010 and technical data, obtained from the Client both during site visit and by request, together with the Client's production forecasts for 2010 and 2011, and found the following technical and economical parameters to be the best suitable for the optimisation purposes (Table 1.19).

Table 1.19: WAI Pit Optimisation Parameters		
Parameter	**Units**	**Value**
Metal Price (Au)	US$/oz	900
Metal Price (Au)	US$/g	28.94
Production Rate	ktpa	1,700
Discount Rate	%	11.2
Dilution	%	5
Mining Recovery Factor	%	97
Mining Cost* (Ore and Waste)	US$/t	1.33
Processing Cost (per t of processed ore)	US$/t	15.3
Gold Recovery	%	95
Final Pitwall Angle	Degrees	45
Note: additional cost of US$4.6/t was included into mining cost for F12 deposit as the ore from the deposit has to be transported from the F12 mine site to the main processing plant at Taparko.		

One of the most crucial geotechnical parameters is the overall pit slope angle. The shallower the overall slope angle, the more waste cells that are included in the pit design. This has a great effect on the stripping ratio and hence economic viability. An overall pit slope angle of 45° was used for the optimisation (as supplied by the Client and observed by WAI at the site).

1.6.2.3 Pit Optimisation Results

The results of the WAI Base case optimisation for Taparko as calculated by NPV Scheduler® are presented in Table 1.20 below. The F12 deposit has been considered in the optimisation separately; the results of this optimisation are given in Table 1.21 below. The Base case optimised pit shell for Taparko 3D image is shown in Figure 1.18.

Only the *Measured and Indicated Mineral Resources* were utilised in the optimisation as only these categories of *Mineral Resources* can become *Ore Reserves*.

Table 1.20: Taparko Deposit Open Pit Optimisation Results (Combined 35, 35 and 2N2K Pits) (WAI 2010, COG=0.55g/t)

Case	Gold Price (US$/oz)	Plant Recovery (%)	Annual Discount (%)	Ore (kt)	Au (g/t)	Au (kg)	Waste* (kt)	Stripping Ratio Estimation (t/t)
Base Case	900	95	11.2	6,123	2.76	16,877	27,566	4.50

Note: 5% dilution and 97% mining recovery applied
*Waste is given inclusive of *Inferred* material

Table 1.21: F12 Deposit Open Pit Optimisation Results (WAI 2010, COG=0.55g/t)

Case	Gold Price (US$/oz)	Plant Recovery (%)	Annual Discount (%)	Ore (kt)	Au (g/t)	Au (kg)	Waste* (kt)	Stripping Ratio Estimation (t/t)
Base Case	900	95	11.2	999	2.64	2,639	2,832	2.8

Note: 5% dilution and 97% mining recovery applied
*Waste is given inclusive of *Inferred* material

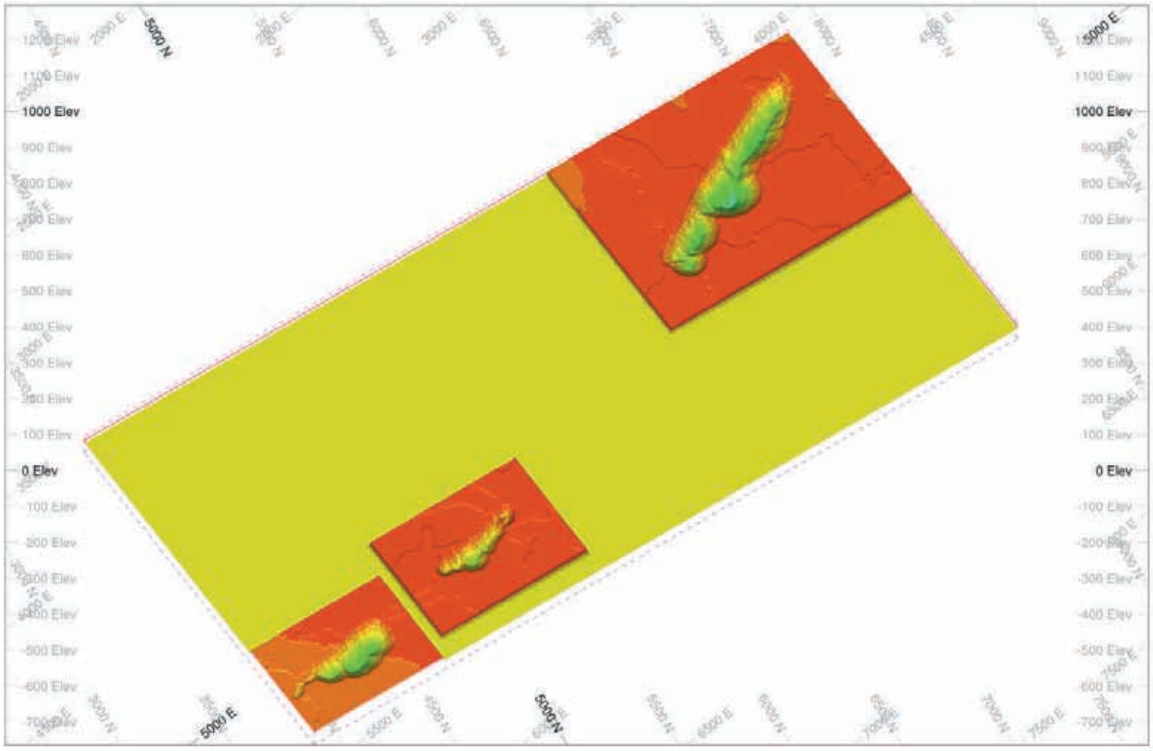

Figure 1.18: 3D View of WAI Optimised Pits

1.6.3 WAI Ore Reserve Estimation

Based on the above open pit optimisation runs, WAI has estimated the Taparko open pit *Ore Reserves*. Detailed results of this estimation are given in Table 1.22 below.

Table 1.22: Taparko Open Pit Ore Reserves as of 01.11.2010 (WAI) (in accordance with the guidelines of the JORC Code (2004)

Open Pit (Area)			GT	2N2K	35	Total
Cut Off Grade (g/t)			0.55	0.55	0.55	-
Proven	Tonnage(kt)		-	-	-	-
	Au(g/t)		-	-	-	-
	Metal	kg	-	-	-	-
		oz	-	-	-	-
Probable	Tonnage(kt)		643	1,517	3,962	6,122
	Au(g/t)		4.33	1.85	2.84	2.75
	Metal	kg	2,785	2,809	11,260	16,854
		oz	89,554	90,327	362,043	541,924
Proven + Probable	Tonnage(kt)		643	1,517	3,962	6,122
	Au(g/t)		4.33	1.85	2.84	2.75
	Metal	kg	2,785	2,809	11,260	16,854
		oz	89,554	90,327	362,043	541,924

Note: 5% dilution and 97% mining recovery applied

Table 1.23: Taparko Reserve Pit Summary (WAI, 2010)

Ore (Mt)	Waste (Mt)	Strip Ratio	Total Rock (Mt)
6.12	27.49	4.49	33.62

Note: 5% dilution and 97% mining recovery applied
Waste is given inclusive of *Inferred* material, which is also treated as waste

Boroum F12 open pit *Ore Reserves* are given in Table 1.24 below.

Table 1.24: Boroum F12 Open Pit Ore Reserves as of 01.11.2010 (WAI) (in Accordance with the Guidelines of the JORC Code (2004)

Open Pit (Area)			F12
Cut Off Grade (g/t)			0.55
Proven	Tonnage(kt)		-
	Au(g/t)		-
	Metal	kg	-
		oz	-
Probable	Tonnage(kt)		999
	Au(g/t)		2.64
	Metal	kg	2,639
		oz	84,855
Proven + Probable	Tonnage(kt)		999
	Au(g/t)		2.64
	Metal	kg	2,639
		oz	84,855
Note: 5% dilution and 97% mining recovery applied			

Table 1.25: Boroum F12 Reserve Pit Summary (WAI, 2010)

Ore (Mt)	Waste (Mt)	Strip Ratio	Total Rock (Mt)
0.99	2.83	2.8	3.83
Note: 5% dilution and 97% mining recovery applied Waste is given inclusive of *Inferred* material, which is also treated as waste			

1.6.4 Life of Mine Schedule (LOM)

After optimised pitshells were generated for each of the optimisation runs, WAI has designed a mining schedule for the Base case.

The Ore Reserve statement was prepared by WAI as of 01.11.2010, and the LOM schedule considers last two months of 2010 tonnage within 2011 production. As the Taparko mine already is in production and the majority of stripping works has been performed, the LOM schedule targets to maintain consistent total volume of ore (at a grade, equal to the average grade for the deposit) and waste extracted, providing the required planned annual ore tonnage of 1.75Mt as the result.

Ore from Boroum F12 deposit is scheduled to be processed during the last year of the project.

Table 1.26 below describes mining schedule for the Base case open pit shell designed by WAI.
An Ore Reserve open pit plan, long-section and cross-section for each of the pits (pit 35, GT and 2N2K) are given in Figure 1.19-Figure 1.27 below.

Table 1.26: Taparko and Boroum F12 Deposits Combined LOM Mining Schedule (WAI 2010)

Taparko		Nov-Dec 2010*	2011	2012	2013	2014+F12	Total
Rock	kt	2,076	9,455	9,523	9,402	7,053	37,508
Waste	kt	1,794	7,723	7,790	7,669	5,410	30,386
Ore	kt	282	1,732	1,732	1,733	1,642	7,122
Au	g/t	3.34	3.08	2.56	2.92	2.28	2.74
Au	kg	943	5,335	4,430	5,063	3,745	19,516
Strip		6.35	4.46	4.50	4.42	3.30	4.27

Note:
*** Based on the Client forecast**
5% dilution and 97% mining recovery applied
Waste is given inclusive of Inferred material, which is also treated as waste
Additional ore tonnages from Boroum F12 open pit are scheduled for 2014

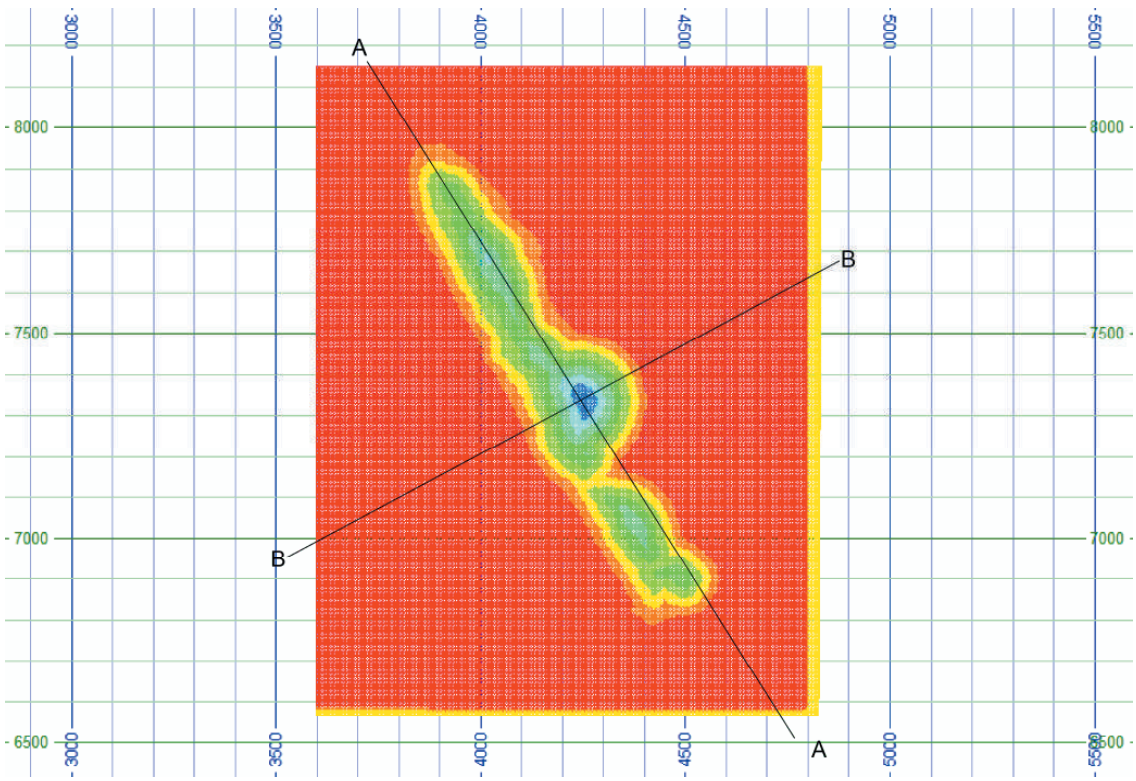

Figure 1.19: Plan View of WAI Reserve Pit (Pit 35), Colour Coded by Elevation

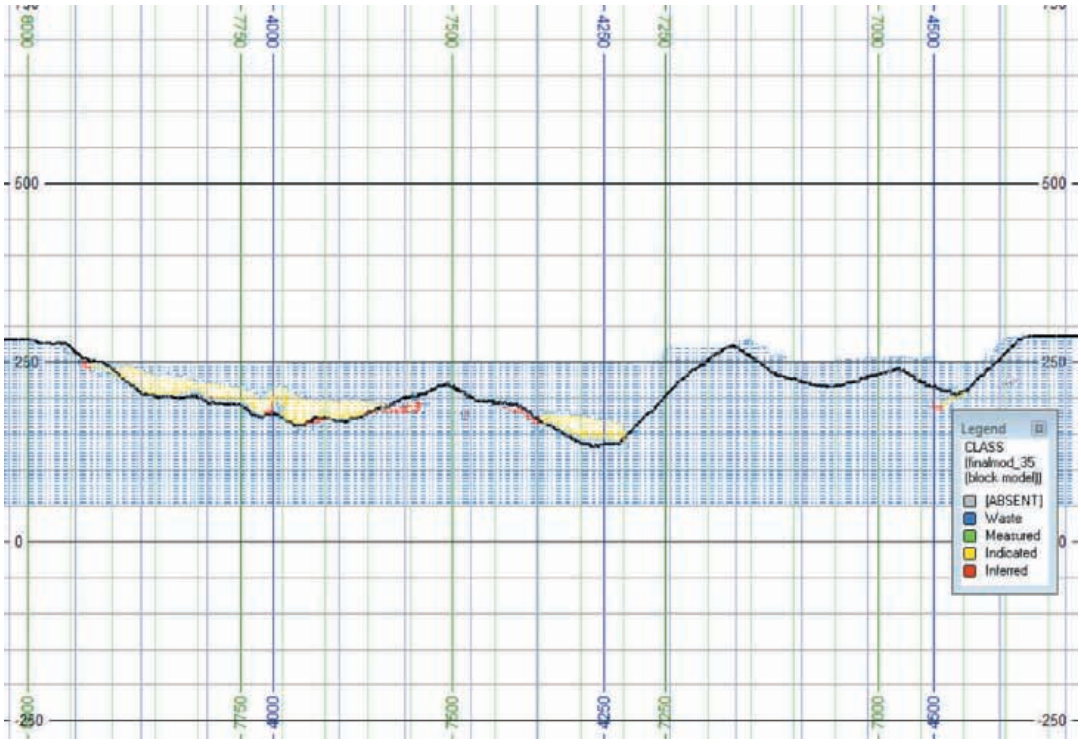

Figure 1.20: Long Section (Pit 35, Section A-A) of Geological Model
(Black – Contours of WAI Reserve Pit)

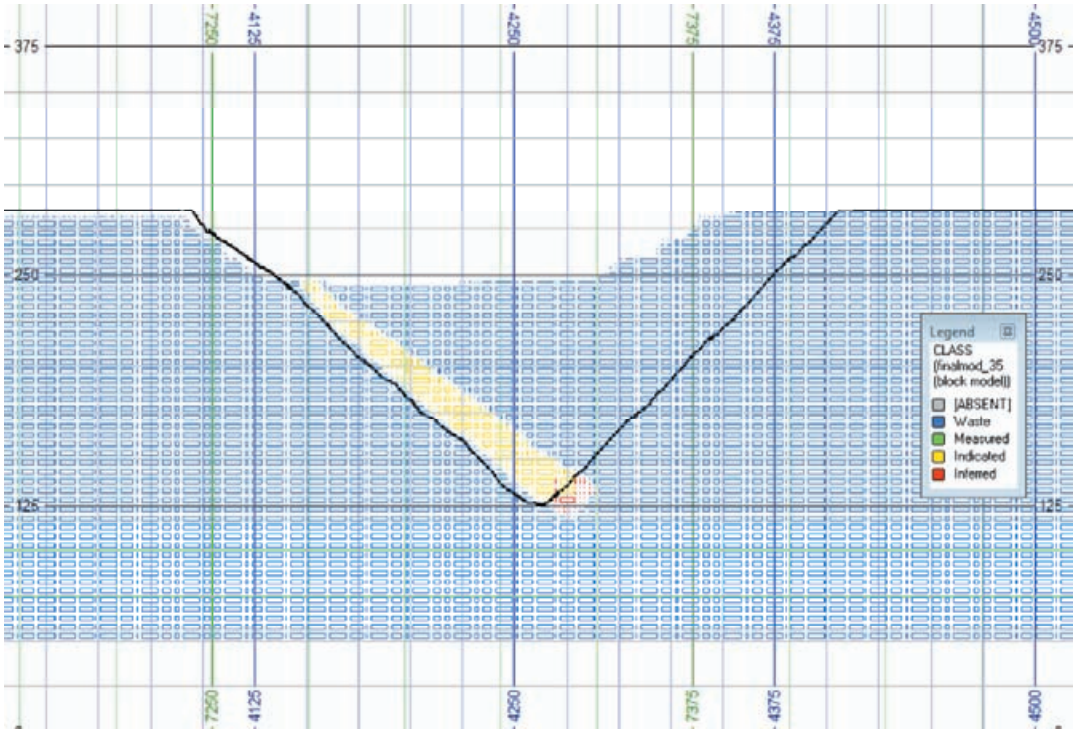

Figure 1.21: Cross-Section (Pit 35, Section B-B) of Geological Model
(Black – Contours of WAI Reserve Pit)

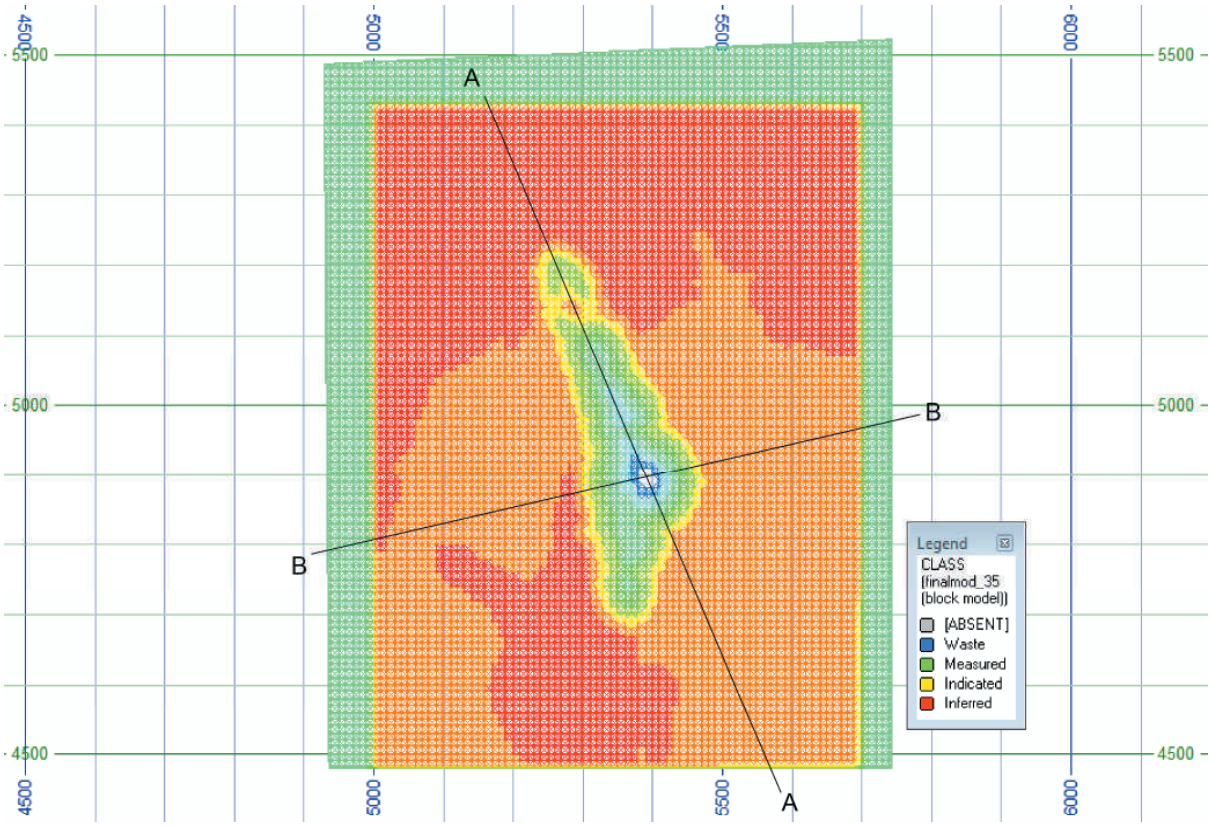

Figure 1.22: Plan View of WAI Reserve Pit (Pit 2N2K), Colour Coded by Elevation

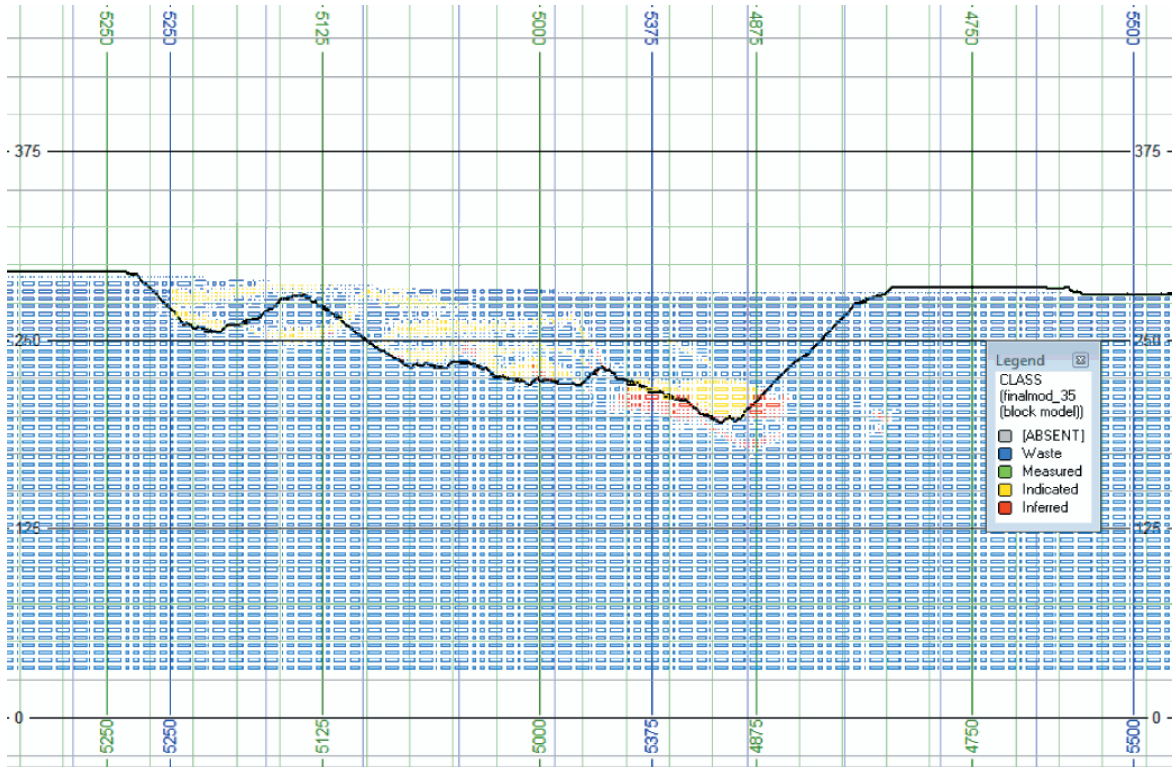

Figure 1.23: Long Section (Pit 2N2K, Section A-A) of Geological Model
(Black – Contours of WAI Reserve Pit)

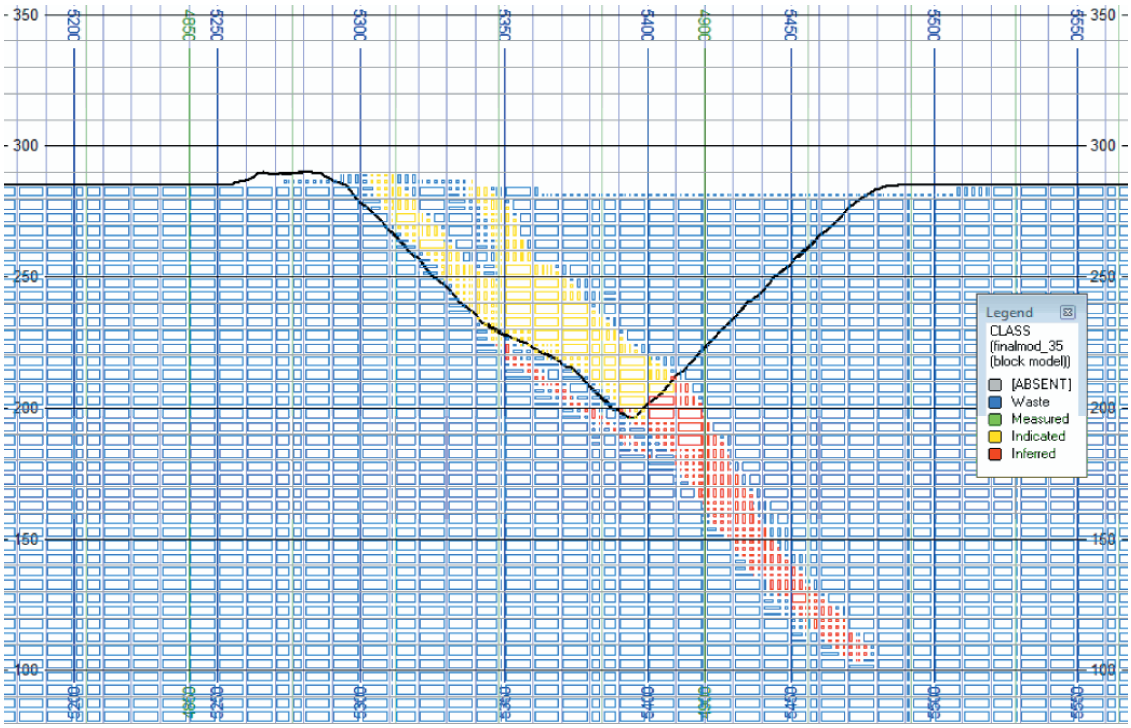

Figure 1.24: Cross-Section (Pit 2N2K, Section B-B) of Geological Model (Black – Contours of WAI Reserve Pit)

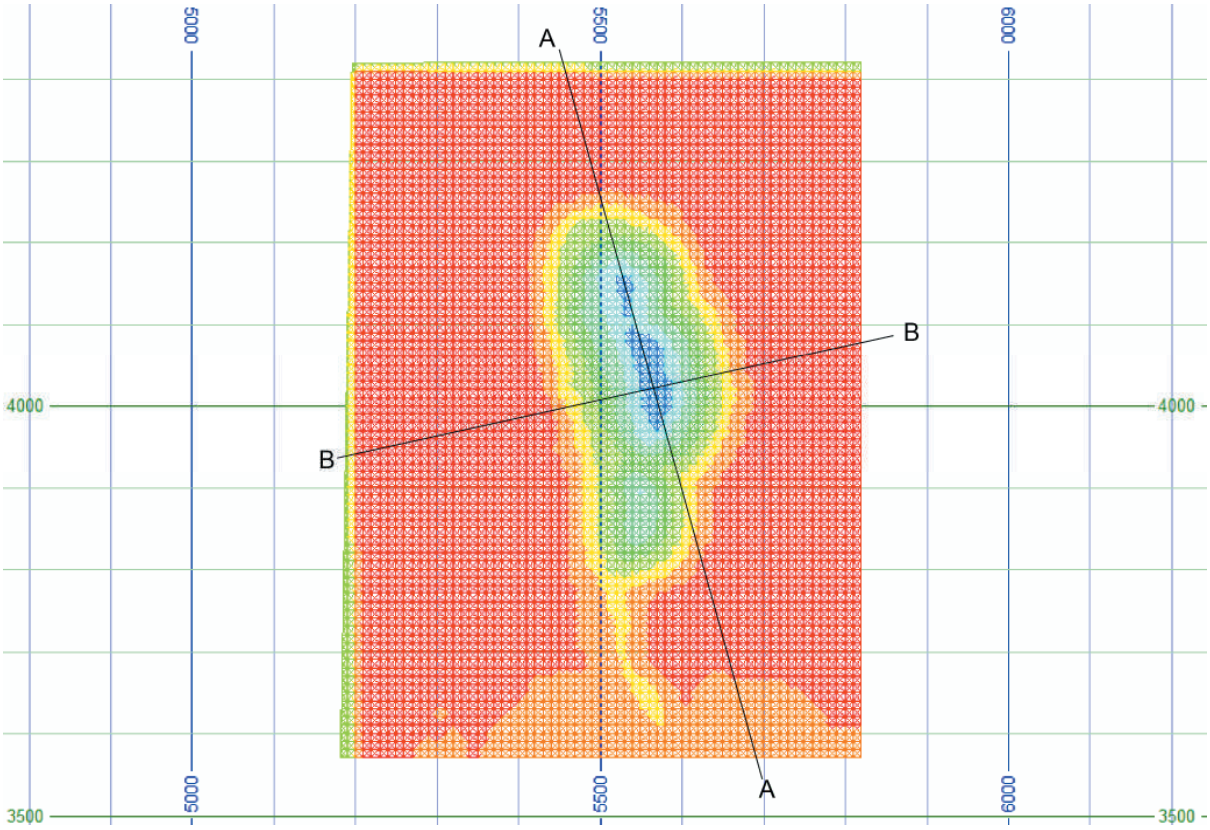

Figure 1.25: Plan View of WAI Reserve Pit (Pit GT), Colour Coded by Elevation

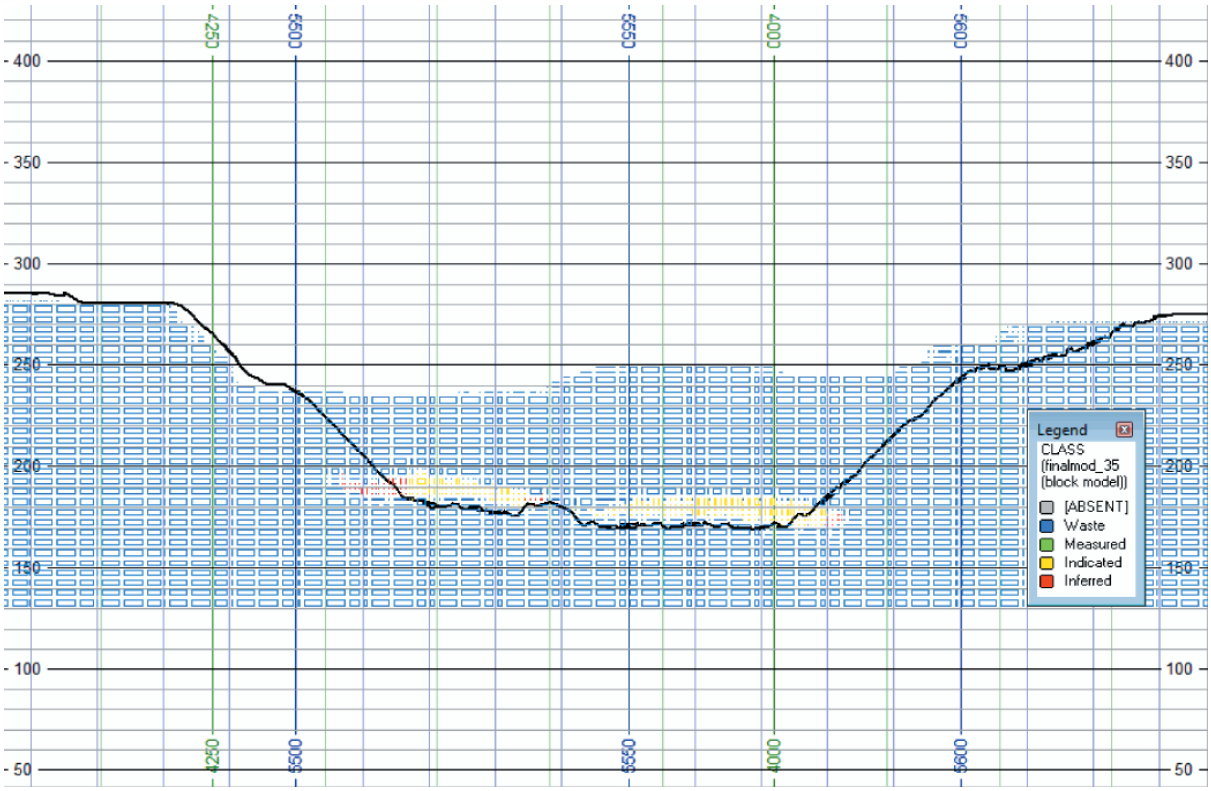

Figure 1.26: Long Section (Pit GT, Section A-A) of Geological Model (Black – Contours of WAI Reserve Pit)

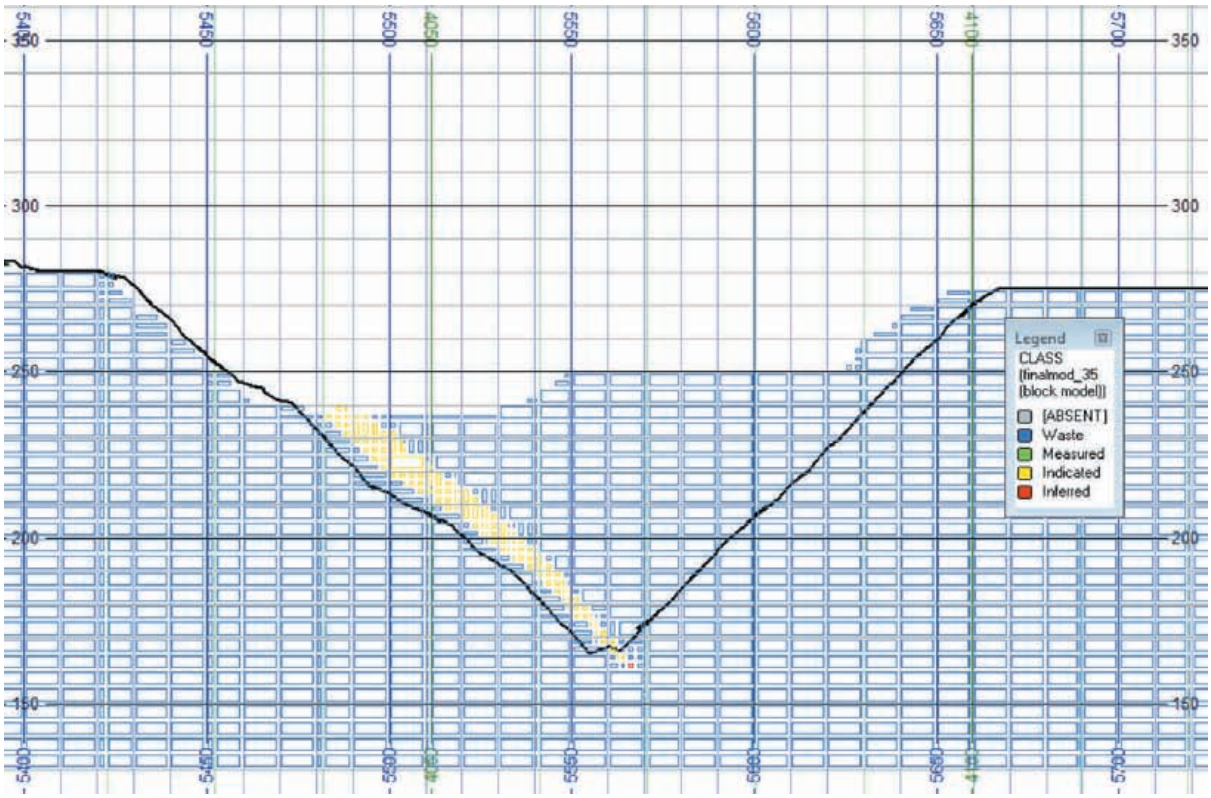

Figure 1.27: Cross-Section (Pit GT, Section B-B) of Geological Model (Black – Contours of WAI Reserve Pit)

1.6.5 Mining Parameters

1.6.5.1 3/5 Pit

At the time of the site visit, the only production was from the 3/5 Pit with access *via.* two haul roads located in the northern and southern extremities of the pit which have been developed as part of the long term design and a temporary ramp located in the centre of the western wall of the pit. The mobile equipment is currently using the temporary ramp to access the pit as the floor is not deep enough to require the established haul road. The 3/5 Pit is to be redesigned with the north and south haul road ramps spiralling inside the perimeter of the eastern wall on the hangingwall side of the orebody.

1.6.5.2 GT Pit

The production from the GT Pit has focussed on mainly ore and the waste extraction has been allowed to fall behind. It is anticipated that when production is resumed the waste on the hangingwall will be removed so that the ore can be exposed at depth.

The current pit design of the GT Pit has the haul road ramp entering the pit from the south and following the footwall for the full length of the pit; the new haul road is to enter in the pit from the north and follow the hangingwall side of the pit so that the ramp spirals inside the eastern wall.

1.6.5.3 2N/2K Pit

This pit is yet to be developed except for a small quantity of waste which was excavated from the area to be used for site construction purposes.

1.6.5.4 Drilling and Blasting

Tarparko uses diesel hydraulic rigs to drill 102mm and 114mm diameter holes to a depth of 5.5m in ore and 10.5m in waste using 0.5m of subdrill. The blasting patterns are 3.5m x 3.5m in ore and 4.0m x 4.0m in waste. In addition a modern emulsion explosive truck is used and other infrastructure includes a dedicated explosives plant including high explosives and initiating explosives magazines surrounded by bunkers and emulsion storage tanker, all contained within a secure compound.

> ***WAI Comment:*** *WAI recommends that Nord Gold review the explosives used at Tarparko and consider the use of ANFO as the main blasting agent, as the majority of the blastholes would be dry. Two alternative explosives products have a relative energy 30% greater than that of ANFO and gassed emulsion (currently used). Consequently there would be the potential for a 30% increase in the blast pattern and a cost saving on drilling.*

1.6.5.5 Ore Mining

The exact location of the ore is confirmed by taking a representative sample from the drill chippings around the collar of the blasthole and the dust collector from the drill rig. The samples are currently being sent to Ouagadougou for assaying and generally there is a five day turnaround time for the results. The average grade of the ore is 2.7g/t Au from the 3/5 Pit and 3.7g/t Au from the GT Pit.

The low grade ore is loaded and hauled to a dedicated stockpile located on the north side of the workshops. The intention is to treat this material at the end of the mine life.

The ore mined from Bouroum is hauled to Taparko on a gravel road for processing.

1.6.5.6 Waste Mining

The waste material that comes from the hangingwall side of the orebody is hauled to the waste dump, located on the northern side of the low grade stockpile.

1.6.5.7 Pit Dewatering

Dewatering of the mine is usually conducted on a required basis because of the dry climate for the majority of the year. The annual precipitation usually falls within a short period of time. The mine is set up to use 60hp Flygt pumps to remove water from pit sumps into ponds or tanks where the water is allowed to settle before being used for dust suppression.

1.6.6 Mining Fleet

The main ground engaging tools are CAT 385 backhoe excavators and CAT 988 front end loaders with 54 tonnes CAT 773 haul trucks. Other surface equipment includes CAT D9 dozers, motor graders, water trucks, service vehicles and light vehicles. A complete maintenance shop is located in the vicinity of the processing plant area.

1.6.7 Mine Personnel

The mining department consists of 157 personnel in total including mining supervisors, drillers, samplers, shotfiring crew, magazine supervisors and all the mobile plant operators.
The mine is worked using 3 eight hour shifts.

1.6.8 Infrastructure

1.6.8.1 Taparko Workforce

The total workforce at the site is 494 including both rostered on and off personnel (Table 1.27).

Table 1.27: Taparko Workforce

Department	No. of Personnel
General manager	1
Financial	42
Human Resources	28
Mining/Geology	229
Processing Plant	135
Technical Services	56
Training Department	3
Total	494

1.6.8.2 Offices

The mine offices are located adjacent to the processing plant and provide office space for the senior management, financial, human resources, mining, geology, surveying, I.T. and engineering.

1.6.8.3 Camps

The permanent camp has the capacity to house 200 personnel. The management of, and catering at the camp is provided by contractors.

The temporary camp, which is located adjacent to the GT Pit, is only used as back up to the permanent camp and is mainly occupied by the exploration contractors.

1.6.8.4 Process Plant

Other than the main the processing equipment, the process plant has office facilities for the plant management, supervisors, workers as well as a control room and laboratory.

1.6.8.5 Maintenance Workshop

The workshop is divided into two sections, one for light vehicles and buses and the other is for the heavy vehicles, i.e. dozers, loaders and trucks. The heavy vehicle side is equipped to do most repairs including engine replacement etc. but not machine and engine rebuilds.

There is also a welding shop where bucket repairs and rebuild takes place. Due to the abrasive nature of the rock, buckets are regularly rebuilt as 30mm plate has been known to wear through in a month.

1.6.8.6 Warehouse and Stores

The warehouse and stores area are located adjacent to the workshop and occupied by the purchasing and stores departments where the management, issuing and distribution of materials and parts around the mine site take place.

Between the warehouse and the low grade stockpile, there is an area which is used for storing unwanted metal and spent oil drums which are sold for US$125/t and US$5 each, respectively.

1.6.8.7 Fuel Farm

The fuel farm consists of several tanks for the storage of different fuel types as well as containers for the disposal of used engine oil and contaminants. The farm also includes heat exchangers which capture the heat from the generator sets and uses it to keep the fuel oil being pumped to the generators at the correct temperature.

The fuel farm has the capability of dealing with spills by having the appropriate bunding around the complex. It also has the ability to cope with excessive seasonal rainwater water by using a sump within the bunding.

1.6.8.8 Power Generation and Distribution

Electricity is produced by two 2.8MW generator sets running 24 hours per day. The generators use LFO for starting up and when the two machines have reached a desired temperature they are changed over to HFO. The main reason for this is cost as Taparko are paying US$0.90/l for HFO and US$1.00/l for LFO.

The generators consume approximately 24m^3/day of HFO to generate the 4MW demand for the site; so there is a significant cost saving in using the cheaper fuel.

The power station also has three smaller 1,800kW gensets which are utilised to back up the larger machines or to provide additional power to the system.

The electricity is distributed *via* overhead power lines at 6.6kv and then through 415v 3 phase or 240v transformers located around the site.

1.6.8.9 Water

Fresh water to the mine comes from the Yalgo Reservoir which is located 14km from the mine site. Water is pumped to site mainly during the wet season and held in a fresh water dam for use only at extremely dry times.

There are also two water boreholes located around the site, from which the water is pumped to surface and used for dust suppression.

1.7 Processing

1.7.1 Introduction

The process plant at Taparko was constructed in 2005 and uses conventional carbon in leach (CIL) processing to produce gold dore. The plant treated oxide ore from Pit 3/5 but treatment of Primary ore commenced in April 2010.

The plant is designed to treat 1.0Mtpa and in mid 2009 began achieving this throughput after a long production ramp up due primarily to mechanical problems with the ball mill. The Client has advised WAI that an expansion to 210tph was achieved in December 2010.

1.7.2 Ore Characteristics

The Taparko and Bouroum ores do not exhibit refractory characteristics. Visible gold occurs in all lithologies, and grades vary significantly, owing to a strong nugget effect. Testwork (Lakefield Research, South Africa) was carried out predominantly on Taparko. Only variability testwork was performed on the Bouroum deposits because of extensive previous studies.

Testwork demonstrated the ores were free milling (i.e. non-refractory) with gravity recovery potential. The results of programmes of metallurgical testwork are summarised below:

- Gravity gold recovery tests showed a reasonable proportion of the contained gold (15-25%) is directly recoverable;
- Carbon preg-robbing tests show that some of the oxide (Saprock) and Sulphide samples contain some graphitic preg-robbing components. A slight improvement (1 to 2%) in recovery is experienced when carbon is included in the leach;
- Grind sensitivity tests show that leach extraction improves with finer grind sizes, down to 80% passing 75µm;
- Average cyanide addition to leach of 0.65kg/t (as 100% NaCN) is required;
- Lime addition to leach of approximately 1.5kg/t is required;
- Leach kinetics show gold dissolution is initially rapid. The saprolite, saprock and sulphide ores all demonstrate a diminishing return for installed residence capacity exceeding 24hrs;
- Oxygen demand is moderate;
- The slurry viscosities are low to moderate. Results are well within the normal range for milled gold ores of this type;
- Carbon adsorption equilibrium and kinetics tests indicate that there is nothing in the ores to adversely affect either the kinetics of gold adsorption onto carbon or the final gold loadings to any significant extent;
- Comminution characterisation tests showed the oxide (Saprolite and Saprock) ores to be of a medium hardness and relatively easy to mill, though certain components (i.e. sulphide and quartz material) are both tougher to mill and abrasive;
- Variability testwork has indicated that all of the satellite resource composites are amenable to the selected flowsheets. Some satellite resource material was not as amenable to gravity recovery as the main composites tested. All of the composites tested demonstrated good to excellent recoveries in the CIL testwork; and

- The sulphide ores give slightly lower leach recoveries at 92%, compared with 95-96% for the oxide ores types.

1.7.3 Process Plant Description

1.7.3.1 Stockpile and Crushing

Ore from the open pit is stockpiled on one of two coarse ore stockpiles depending on the perceived ore hardness. There are two separate crushing circuits within the plant for "hard" and "soft" ores.

Soft Ore Crushing

Ore is loaded into a hopper and is extracted using an apron feeder at a rate of 125tph. The ore is conveyed to a MMD tooth rolls crusher. The crushed product, at nominally -250mm, is conveyed directly to the ball mill.

Hard Ore Crushing

The harder ore is highly abrasive and causes significant wear in the crushing plant and the cause of high crushing costs. Ore, nominally at 100% passing 800mm, is loaded into a hopper at a rate of 125tph from where it is extracted using an apron feeder. The design rate of the hard rock crushing plant for the treatment of sulphide ores is 220tph.

The final crushed product, at 100% passing 15mm, is conveyed to a covered fine ore bin.

1.7.3.2 Grinding

Grinding of the ore takes place in a single 16.5' x 23.5' rubber lined overflow ball mill. The ball size used is 80-90mm. The mill discharge is cycloned using a cluster of 350mm cyclones with the underflow gravitating back to the mill and the overflow, at 70% passing 74µm passing to cyanidation. Initial problems with the ball mill have now been overcome and at the time of the WAI site visit the mill was exceeding the design capacity of 125tph, and was operating at 180tph.

1.7.3.3 Gravity Gold Recovery

The laboratory testwork programmes demonstrated that the Taparko ore types are amenable to gravity gold recovery and a Knelson concentrator was included in the final plant design. However, the gravity circuit is not operating as Taparko metallurgical staff found that its operation did not result in higher overall plant recoveries. The use of the gravity plant should be reviewed when the plant begins treating ore at 1.5Mtpa as removing coarse gold will result in shorter leach times.

1.7.3.4 Leaching

Leaching takes place in six 830m^3 tanks with a design residence time capacity of 24 hours. Leaching takes place at 44% solids and the cyanide concentration is 0.4g/l in the first tank, falling to 0.3g/l in the final tank. Carbon is added to the second tank at a rate of 10g/l and is advanced against the pulp flow using a series of inter tanks screens and transfer pumps.

The leach tanks are not air sparged and pulp viscosity is not reported to be high.
The leach tailings pass to an 18m diameter thickener where water is recovered and returned to the grinding circuit. The thickener underflows are pumped to the tailings dam.

1.7.3.5 Desorption and Electrowinning

The loaded carbon, assaying approximately 3kg/t Au passes to desorption. 4t of loaded carbon are stripped on a daily basis. The loaded carbon is subjected to an acid wash stage ahead of the desorption process which

lasts 17 hours. The eluate passes to electrolysis where gold is recovered onto steel wool in a single, eight cathode, unit. The gold is smelted to dore using standard smelting techniques.

1.7.3.6 Process Control

The feed rate to the plant is controlled automatically. The concentration of cyanide and carbon in the leach circuit is also monitored automatically, as is the pulp pH. The solids content of the pulp streams are controlled manually with the exception of the thickener underflow which is controlled automatically.

1.7.4 Plant Sampling

Plant feed samples, after crushing from each crushing plant, and ball mill feed are both taken every hour to produce an 8 hour composite sample. The samples are split and analysed for moisture, size analysis and gold content.

The cyclone overflow (automatic sampler) and CIL tailings (manually) are sampled, again to produce 8 hour composite samples. The cyclone overflow is also subjected to a particle size analysis. The tailings samples are filtered and the residual gold in solution determined.

Daily metallurgical balances are prepared using the cyclone overflow sample as the plant feed sample.

1.7.5 Historic Production

The plant began processing ore in 2007 although production in that year was limited. The production data for 2008 and 2009 are summarised in Figure 1.28 and Figure 1.29.

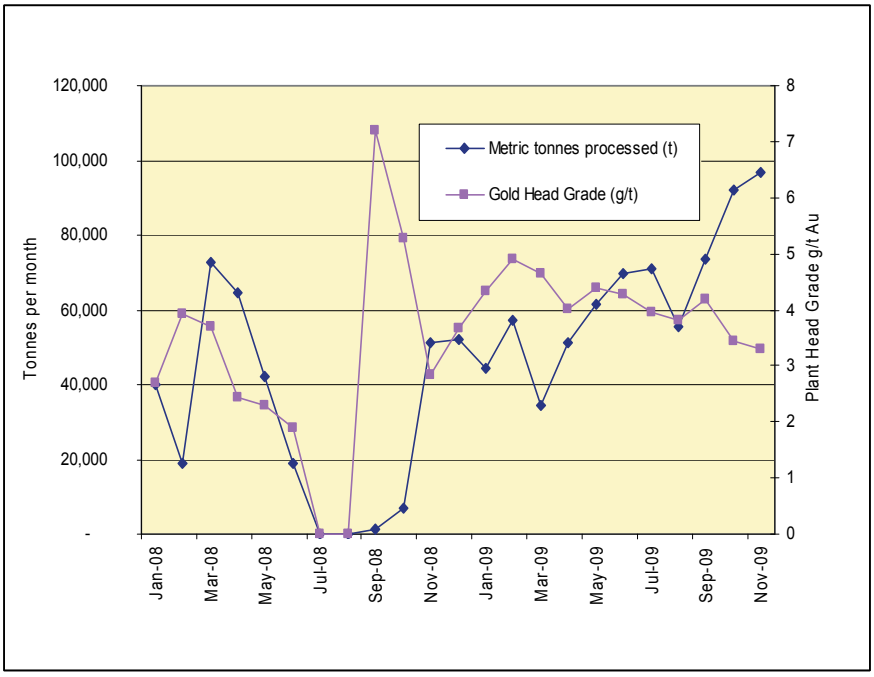

Figure 1.28: Taparko Plant, Monthly tonnage treated and Head Grade Au g/t

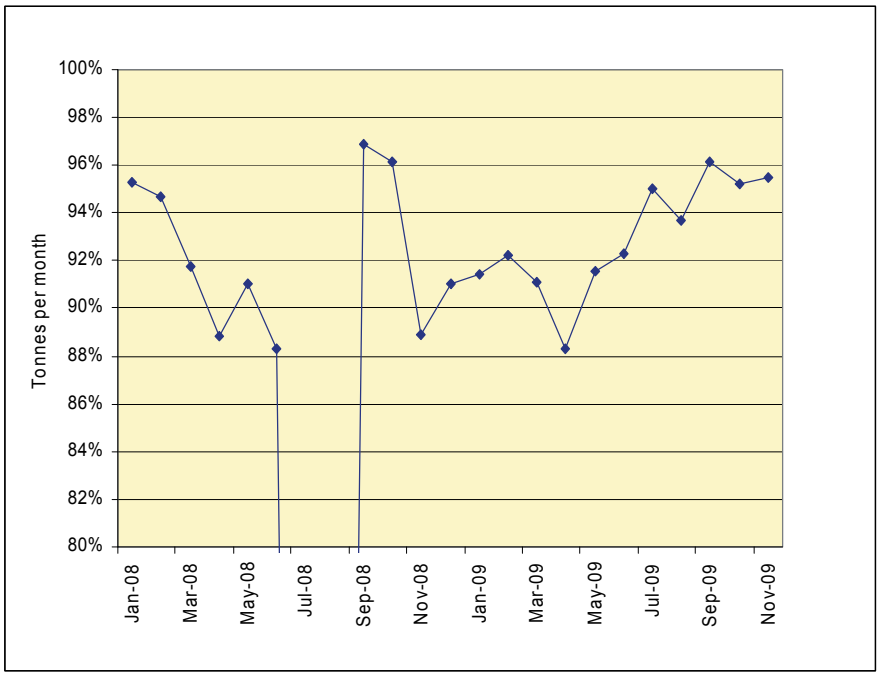

Figure 1.29: Taparko Plant Gold Recovery %

Throughput slowly increased throughout the period, reaching a maximum of 96,662t in November 2009. The plant head grade averaged 4.02g/t Au in 2009 (TYD November) compared with 3.0g/t Au in 2008. There has been a slightly decreasing trend in plant head grade in 2009, falling to 3.29g/t Au in November 2009. During 2010, plant head grade averaged around 3.47g/t Au.

The plant gold recoveries have remained generally high throughout the period, despite the interruptions to production, and rose to 96.1% in September 2009. For 2010, recoveries averaged around 88.6%, a drop from previous years. The Client advises WAI that this is a result of the ramp up in production without the requisite improvement in operational efficiency.

The annual production summaries are given in Table 1.28.

Table 1.28: Taparko Mill Annual Production Summary

Year	Tonnes processed	Feed Grade g/t Au	Au Recovery %
2009	815,000	4.0	94.9
2008	369,000	3.0	91.4
2007	92,000	3.1	93.6

Somita have also provided operating and financial data for 2007 to June 2010 as shown in Table 1.29 below.

Table 1.29: Production Data 2007-2009

	2009	2008	2007
Tonnes Mined	814,000	266,000	763,000
Tonnes Milled	815,000	369,000	92,000
Gold Grade (g/t)	4.0	3.0	3.1
Recovery (%)	94.9	91.4	93.6
Gold Production (oz) – 100%[(1)]	97.7	30,667	10,245
High River Share of Production – 90%	89,582	27,600	9,221
Direct Mining Cost (US$/oz)	423	754	400
Cash Operating Cost (US$/oz)	441	806	905

1.7.6 Labour

A total of 123 are employed in the processing operations. There are four shift crews each with a supervisor and a foreman and a total of 31 operators for each shift split between crushing, grinding, cyanidation, elution, the control room and the gold room. There are 10 personnel employed in mobile equipment operations, 10 assistant operators, and a further 22 in General operations and clean-up duties.

A mechanical foreman and an assistant maintenance chief report to the maintenance manager. There are a total of 39 employed in the maintenance department, including eight mechanics, four electricians, nine welders, and two instrument technicians.

The laboratory manager has a staff of three but the laboratory was not operational during the WAI site visit.

The Plant is operated using three different shift rostas involving the continuous working of 7, 10 or 14 day periods followed by a range of leave patterns.

1.7.7 Consumables

The plant operating consumables are summarised in Table 1.30.

Table 1.30: Taparko Plant Operating Consumables

Item	kg/t
Sodium cyanide	0.69
Sodium hydroxide	0.15
Lime	3.11
Flocculent	0.05
Balls	1.86
Carbon	0.028
Acid	0.024
Borax	0.002
Silica	0.001
Crusher liners	One set/month
Ball mill liners	Two sets/years

The highly abrasive nature of the ores is reflected in the high ball consumption of 1.86kg/t. Levels of lime addition are also moderately high at 3.11kg/t. The cyanide addition rate of 0.69kg/t is reasonable for the treatment of an oxide ore and the usage rates of the other consumables are also typical.

1.7.8 Process Capital Costs

The process capital costs are summarised in Table 1.31.

The total capital expenditure for the plant is US$7.70M with the majority of the planned capital expenditure related to the expansion to 1.5Mtpa. This involves the installation of two further leach tanks. There is also an allowance for larger tailings pumps motors and pipelines to the second phase tailings dam.

Table 1.31: Taparko Plant Capital Cost Estimates 2010			
Type	**Item**	**Reason**	**Total US$,000**
Expansion	Second ball mill with accessories:	To increase the grinding capacity from 140 to 210 tph of dry ore	5,237
Expansion	Lime system	To increase the grinding capacity from 140 to 210 tph	424
Expansion	leach tanks	To increase the grinding capacity from 140 to 210 tph	573
Expansion	Linear screen,.	To increase the grinding capacity from 140 to 210 tph	590
Expansion	Tailings pump motor + pipeline to tailings facilities phase 2,	To increase the grinding capacity from 140 to 210 tph	354
Expansion	High Voltage Cable and Transformer	Power supply for second ball mill	295
Expansion	Water Pump	Replace a KSB Pump by a Flygt Pump at Dam # 4	53
Cost cutting	Air blast cannon,	To increase tonnage throughput to ball mill	99
Cost cutting	Descaling water treatment system,	For elution system to secure operation	38
Cost cutting	Dust filtration system,	To recovery gold dust from fusion furnace of gold room	38
TOTAL			**7,701**

Due to improved plant performance in 1H 2010 the project to install the second ball mill was suspended. It is unlikely that the second ball mill will be installed in the future, because the current plant configuration allows 1.5 - 1.7Mtpa ore treatment.

1.7.9 Water Supply

Water for processing is supplied from the Yalgo dam. Water is collected in the rainy season and pumped to Dam No. 4 from where it is pumped to process water tanks at the plant site. Between 350,000 and 450,000m^3 of water are pumped from the Yalgo dam, typically between June and October. As such, the plant is heavily dependent on the annual seasonal rainfall for process water

After thickening, tailings are pumped to the tailings dams at 50% solids and decanted water is returned to the process plant. There are no flowmeters on the water pipes and therefore a water balance for the plant cannot be determined. Water consumption for the mine and mill at a treatment rate of 1.0Mtpa is approximately 100,000m^3 per month.

1.7.10 Conclusions

The Taparko and Bouroum ores do not exhibit refractory characteristics. A number of metallurgical studies were carried out as part of the feasibility study which demonstrated that the ores were free milling (i.e. high cyanidation leach recoveries) with gravity recovery potential.

The plant production ramp up to 1.0Mtpa has been very slow due primarily to mechanical problems with the ball mill. However, these problems have now been largely overcome and the plant is now treating ore at rate in excess of the 1.0Mtpa design level. In December 2010, plant throughput reached 210tph. The plant recoveries are also at, or above the design level, which confirms that the ores are highly amenable to cyanidation.

The treatment of sulphide ores in 2010 will result in slightly lower recoveries and the harder nature of this ore type will result in higher power costs and higher steel consumptions in crushing and grinding.

The historic process operating costs are very high due to the high cost of electrical power and the hard and abrasive nature of the ore and the low plant throughputs that were achieved for much of 2009.

1.8 Environmental & Social

1.8.1 Introduction

WAI has compared existing health, safety, environmental and social practices at Nord Gold operations to recognised international standards, codes and best management practices e.g IFC Performance Standards, World Bank Guidelines.

WAI met an environmental representative from the company and has been provided with relevant supplementary information during and subsequent to the visit.

WAI has prepared this current report based on observations from the site visit, comments made in previous reports, and new data provided.

> ***WAI Comment:*** *it is reported to WAI that all local requirements have been satisfied but further works will be required to fully fulfil international standards. WAI is pleased to note that Nord Gold have stated a commitment to continue to strive to improve its health, safety, environment and communities programs and performance.*

1.8.2 Environmental Permitting

The 2003 Mining Code requires that funds are allocated to the Bank of West Africa to cover environmental conservation and restoration costs, and this code also stipulates compliance with the Burkinabe Environmental Code. In order to obtain an exploitation licence, an applicant from a mining company must carry out a feasibility study to determine the environmental impacts that the proposed project may have, and to present attenuation measures for any of those potentially negative impacts.

The EIA needs to include public consultation, mitigation plans, and an Environmental Management and Monitoring Plan (EMMP). Exploitation licences are granted by the government to the applicant only after the attainment of favourable feedback from the local population is achieved. It is reported to WAI that Taparko was granted all the permits required based on the reports and assessments provided to governmental authorities prior to operations startup.

1.8.3 Environmental Protection and Studies

A full environmental feasibility study was completed on the project in October 2003 and the identification and evaluation of the environmental impacts are stated to have been performed in accordance with the standards of the African Development Bank and those of the World Bank.

1.8.4 Environmental Management and Monitoring

1.8.4.1 Environmental Management

There is an Environmental Manager at the Taparko operations, who was not available during the site visit. Therefore, it was not possible to fully assess environmental performance and compliance at the site; however, subsequent to the site visit, additional environmental data was provided satisfactorily.

Somita environmental policy is stated to be based on the following objectives:

- Sustainable development;
- Prevention of environmental risks;
- Sensitisation and dialogue with the local populations; and

- The installation of procedures and practices in order to minimise the impacts of mining operations on the environment.

It is stated that Somita intends to promote the sustainable development of the environmental resources surrounding the property and to leave sites with minimum environmental impact.

It is also reported that a follow-up plan for the continuing environmental management (PSGE) of the Taparko/Bouroum project has been developed, to manage the attenuation measures for negative project impacts. The PSGE is reported to be a document that guides all company actions with regard to the management of the environment, and its objective is to provide all relevant information to facilitate this.

1.8.4.2 Environmental Monitoring

The information in this section has been taken from the SRK report. The report states that within the framework of the environmental follow-up mentioned above, the PSGE envisages the sampling of water, grounds, and sediments at regular frequencies in order to monitor the quality of the surrounding water, ground, dust, air and to monitor potential acid mine drainage. In alignment with this, climatological data will be recorded daily. In particular, the temperature, the speed of the wind, precipitation and radiation will be closely monitored.

Water samples are taken from four of Somita's water wells and those from the village of Taparko are regularly analysed by external laboratories for pollutants. The analysis of the area's water will consist of the measurement of its microbial, physical and chemical contents. The results of this analysis are then measured against the standards established and enforced by the World Health Organisation (WHO).

SRK state that in 2007, the results of the water analysis for observed wells revealed that the water was generally in conformity with the standards set by the WHO with one exception during September 2007, where coliforms were identified and treated in five (5) of the wells.

Static tests were conducted at Taparko and Bouroum to determine the potential for acid generation at both sites. In the Taparko area, the sampling of sulphurous waste rock showed a low to nil potential for acid generation; however during the WAI site visit it was stated some low levels were reported in the sump-water at the base of GT pit.

1.8.5 Measures Taken to Prevent Environmental Risk

The following measures are reported in the SRK report. To avoid the contamination of the surrounding area and ground water through the accidental discharge of hydrocarbons or chemicals, or through the exposure to solid waste and mining effluents, Somita developed the necessary infrastructure to manage pollutants in accordance with applicable standards.

Measures were further taken to minimise the degradation of the surrounding natural habitat, vegetation and fauna. Fuel storage tanks are constructed on a concrete floor, the whole structure being surrounded by a concrete wall to contain any possible fuel discharge.

It was also reported to WAI that all domestic effluent is treated via two bio disc system. An inventory of fauna, and a reforestation plan are also in existence, which have been provided for review.

> ***WAI Comment:*** *A significant dust generation issue was identified at the site during the WAI visit despite the provision of water bowsers. Subsequent to the visit a series of control measures have been expanded, such that process sources of dust generation at vibrating screens, conveyor discharge and transfer points have all been enclosed with flexible screens, filters or cloth. In addition, trials are being undertaken to provide more effective means of dust control from mobile equipment and improvements are scheduled for reducing dust from the storage building, housing the live ore stockpile. These projects are due to be completed in October 2010.*

1.8.6 Training

Regular training sessions are held at site and recent safety incidents are reviewed. A wide variety of topics are covered by the training. Records are maintained documenting the training programme.

1.8.7 Environmental Compliance

There have been a total of 18 environmental incidents recorded at the site. One category A incident was from an overflow of fuel, however the spillage was quickly cleaned up. WAI has also reviewed the 2009 environmental incident records. Performance appears to be good, and the record indicated no non-compliances, fines or legal actions for the 2009 period. A complaints register for 2008 was also reviewed, and no complaints had been noted.

1.8.8 Tailings Management Facility

The tailings storage facility was based on the following criteria:

- Tailings to be deposited as slurry in an earthen containment;
- 1.0Mt of tailings to be placed per year for 1.5 years, thereafter 1.5Mt/year for the remaining 6.5 years;
- Zero discharge of tailings water to the environment;
- Containment to be lined with a HDPE membrane; and
- A planned 2m freeboard is an integral part of the design and management of storm water control.

The tailings containment area, 200m south of the plant area, has a total area of 90 ha including embankments, and the maximum final height of the outer embankment will be 20m.

It is reported that five levels of inspections are planned and being conducted; daily, weekly, monthly, quarterly, annually.

Groundwater monitoring boreholes were planned around the dam for the sampling of the ground water quality. The conceptual closure plan includes the protection of the outer slopes with laterite, the removal of all pumps and pipes, minor reshaping, and the placement of a gravel and soil layer over the entire basin. This plan will be reviewed periodically, and will be developed in detail two years before closure.

During the WAI site visit, the TMF appeared to be functioning, but the water balance needs constant addressing to ensure a level of supernatant water to prevent dust generation.

1.8.9 Handling and Storage

The maintenance area and yard was in good condition, and there is a company budget for a new welding shop, since the current facility poses a health and safety risk.

HFO is also transferred to a 5,500l day tank which supplies fuel to the power plant. A 20,000l waste oil storage tank is located near the maintenance facility. New lubricants are stored in drums.

Sodium cyanide for the processing circuit is stored in tanks and is not included in the mill circuit, but via 6 reactor tanks in a cascade.

The explosives storage site was not visited; however it appeared to be remotely sited, with appropriate security control.

1.8.10 Resource Use

Water is supplied from the Yalogo reservoir, situated at a distance of 14km, and stored in an on-site dam to meet potable and technical needs (reported capacity 1.3Mm^3). The dam is filled by mid October (via pumping), and the water balance is then assessed. At the time of the visit the water table was at 30m.

It is reported that approximately 70 to 80% of the fresh water needs of the processing plant are covered by the dam capacity with the remaining amount reclaimed from the tailings storage facility return water pond.

Electricity is supplied from diesel generated power with generators located at the site. At the Taparko site, the power plant comprises two power houses, an office, fuel depot and heavy fuel treatment plant.

> ***WAI Comment:*** *a resource use audit should be conducted to assess the amount of raw materials consumed, and identify options to reduce usage.*

1.8.11 Waste Management and Recycling

Scrap steel is taken to Ouagadougou on a monthly basis and sold at US$125/t. Used drums are also sold in Ouagadougou at US$5/drum. Used tyres are sent to Ghana for retreading. It is reported that a domestic landfill is located approximately 400m west of the main entrance and adjacent to the tailings storage area. It is reported to have enough storage for the projected 8 year mine life. Clean surface run-off from the surrounding area is prevented from entering the disposal area by diversion trenches. A drainage system collects leachate from the waste as well as contaminated storm water run-off from the cells. The leachate and run-off water report to a pond downstream of the waste disposal facility from where the excess water can be pumped onto the tailings disposal

1.8.12 Community Relations and Development

The nearest town to the development is Taparko town (population of approximately 8,000 people), situated south of the GT open pit.

Monthly meetings are held with local villages, and financial assistance from the company enables local crop cultivation. There is a good relationship between the company and local communities, and bilateral arrangements are in place. The results of local consultations are not being formally recorded.

> ***WAI Comment:*** *there appears to be a good relationship between the mine and the local community and WAI has been provided with a detailed community plan and PCDP which places strong emphasis on increased involvement of community and political leaders in the decision making process..*

1.8.13 Health and Safety Management and Compliance

Occupational Health and Safety is well managed at the site.

WAI has reviewed monthly and trimestral health and safety reports (which also comment on some environmental issues) and considers that these are comprehensive and well written. Similarly, the accident and incident reporting forms are well structured, and employee induction documents provide good health and safety information. WAI has also reviewed the company Health and Safety Policy, although this was not signed. Lost time Injury Frequency Rates have been at zero for more than a year. The protocol for safety meetings was also reviewed, and WAI has been provided with 2008 and 2009 health and safety statistics, which were good.

An Emergency Measures Plan has been developed, which identifies all potential major events.

> ***WAI Comment:*** *in general, health and safety appears to be well managed at the site, with appropriate training and management structure, and good performance.*

1.8.14 Mine Closure and Rehabilitation

It was reported that a Mine Closure Plan was prepared for the site in 2007 by SOCREGE. The 2003 Mining Code requires that funds are allocated to the Bank of West Africa to cover environmental conservation and restoration costs, and this code also stipulate compliance with the environmental code. Burkina law requires that the mine make a deposit equalling the total cost of the mine closure and rehabilitation divided by the expected life of the mine. The total cost has been estimated at US$4.4M. Nord Gold has stated that the requisite sum will be on deposit in the account in 2010. This is currently being actioned by the company.

Under the Mining and Environmental Codes, resources affected by project works should be rehabilitated after mine closure. It is expected that the rehabilitation plan will be systematically revised every two (2) years.

1.8.15 Bouroum Environmental and Social Issues

1.8.15.1 Introduction and Summary

The Bouroum area includes a number of individually licensed sites which are at various stages of geological exploration. WAI has undertaken visual inspection of the main exploration sites, interviewed Company personnel and requested relevant documents. At the time of the site visits, it was established that the Company conducts its exploration activities in accordance with national requirements and with due cognisance to general H&S issues and protection of the environment.

Community engagement and other socio-economic issues are deemed to be of paramount importance by the Company.

1.8.15.2 Observations

The exploration targets at Zemca and Bissinga have been formerly worked by artisanal miners; however, during the site visit no exploration activity was noted at these sites. The land at Zemca did not exhibit any evidence of major disturbance or negative effects and the impact of former mining activity at this site is deemed to be short-term and localised. However, a flooded former open pit is evident at the Bissinga site and the site is apparently afforded some low level security and supervision.

In addition, the 'F12' and Kinapouin North exploration sites show evidence of former exploration activity. It is assumed that, all sites with a valid exploration licence do not require remediating and securing, to ensure public welfare because they are still 'active'. WAI is informed that the Company is not violating any national legislative requirements or currently neglects its corporate responsibility pertaining to protection of environmental factors and the H&S of the local population.

> ***WAI Comment:*** *based on the findings of the site visits, it is evident that the Company has shown its commitment to conduct the project-related activities in such a way that minimises or mitigates any adverse impacts that can be expected on the environment or the indigenous peoples, their livelihoods, cultural and spiritual heritage.*
>
> *However, WAI considers that a number of steps should be undertaken by the Company if it intends to commercially develop natural resources located within such traditional or customary lands. A community engagement and development plan is now in place, formalising required procedures including compensation for loss/disturbance of land, and providing culturally appropriate development opportunities. This plan is gradually being applied to the different areas where operation or exploration activities are taking place. The Company has also documented its efforts to minimise the size of land proposed for the project development as well as mitigate or compensate for the expected impacts in a culturally appropriate manner, and this document has been provided to WAI.*

1.9 Life of Mine Model for the Taparko Project

1.9.1 Introduction

A life of mine model for the Taparko gold deposit has been prepared in order to demonstrate the potential economical outcome of the project and its robustness. This evaluation was based on the Ore Reserve figures described above, capital investment requirements estimates provided by the Client and audited by WAI with a view to similar projects, and other parameters. Input parameters were implemented into a life of mine model. The details of this evaluation are given below.

1.9.2 Financial Model Assumptions and Input Data

The assumptions made in the WAI life of mine model for the Taparko Gold project were based on:

- Au price of US$900/oz;
- Ore reserves as of 01.11.2010, estimated by WAI in accordance with the guidelines of the JORC (2004) code;
- Mining Schedule, prepared by WAI. The Mining Schedule targeting a 1.7Mtpa ore mining rate; two last months of 2010 ore tonnage being incorporated in 2011 production;
- Long-term operating costs forecasts based on year 2008-2010 production results and considering analogous deposits;
- Overall Au recovery indices obtained from actual annual results for 2008-2010;
- Annual discount factor of 11.2% (Base case);
- General and Administration costs estimated on the basis of Client's assumption and considering previous periods; and
- Overall tax at 20% of net income applied.

A summary of the Taparko model assumptions and input data is given in Table 1.32 below.

Table 1.32: Taparko-Boroum Life of Mine Assumptions and Input Data

Year	***TOTAL***	Nov-Dec2010	2011	2012	2013	2014
Gold Price,US $/Oz	***0***	900	900	900	900	900
Ore production (diluted), kt	***7,122***	282	1,732	1,732	1,733	1,642
Waste mined, kt	***30,386***	1,794	7,723	7,790	7,669	5,410
Ore Mining cost, US$/t	***1.33***	1.33	1.33	1.33	1.33	1.33
Waste Mining cost, US$/t	***1.33***	1.33	1.33	1.33	1.33	1.33
Mining OPEX, k US$	***49,885***	2,761	12,575	12,665	12,505	9,379
Au Grade, g/t	***2.74***	3.34	3.08	2.56	2.92	2.28
Gold mined, kg	***19,516***	943	5,335	4,430	5,063	3,745
Recovery, %	***95.0%***	95.0%	95.0%	95.0%	95.0%	95.0%
Gold recovered, kg	***18,540***	896	5,068	4,209	4,810	3,557
Gold recovered, Oz	***596,089***	28,814	162,951	135,321	154,633	114,370
Processing cost, US$/Oz	***180***	150	163	196	171	220
Proc and Mining Costs US$/Oz	***266***	246	240	289	252	302
Revenue, k US$	***536,480***	25,933	146,656	121,789	139,170	102,933
Operating Costs, k US$	***158,849***	7,083	39,077	39,167	39,024	34,498
G&A, Sales, k US$	***78,462***	2,906	17,436	17,436	17,436	17,436
Royalty, 3%, k US$	***16,094***	778	4,400	3,654	4,175	3,088
CAPEX, k US$	***12,209***	1,450	5,524	2,000	1,000	1,000

1.9.3 Conclusions

The WAI life of mine model results in a positive NPV at various discount rates and at various gold prices, as well as the relatively high internal rate of return at nominal input parameters. It shows that the reserves considered in the financial model are profitable for exploitation in the current economic environment.

The fact that the key financial indices remain reasonably high given the conservative cost input parameters and recovery used in the models, shows good economic potential for the project.

2 BISSA

2.1 Background

2.1.1 Introduction

Nord Gold has a 72.64% interest in the Bissa gold project (Bissa) through the acquisition of High River Gold (HRG) whose wholly owned subsidiary Jilbey Burkina Sarl owns Bissa. Formerly, Jibley Exploration was acquired by High River Gold West Africa Ltd., (HRGWA) then renamed Jilbey Burkina Sarl. There is a 10% minority interest in Zandkom and Bissa permits, which are part of the bigger Bissa project.

2.1.2 Location, Access

The Bissa gold deposit is located approximately 85km north of Ouagadougou, the Capital City of Burkina Faso and is accessible via Route Nationale 22, a sealed road, connecting Kongoussi to Ouagadougou. Travel time from Ouagadougou is about 1½ hours (Figure 2.1 and Figure 2.2).

Figure 2.1: Location of Bissa in Northeastern Burkina Faso

The airport at Ouagadougou has flight connections to the major cities in Europe. There is a railway from the port of Abijan, Cote d'Ivoire to Kaya, but the political instability in Cote d'Ivoire means that most of the freight destined for Burkina Faso arrives at Tema, Ghana. Freight for the project is trucked from Tema to Taparko (1,288km).

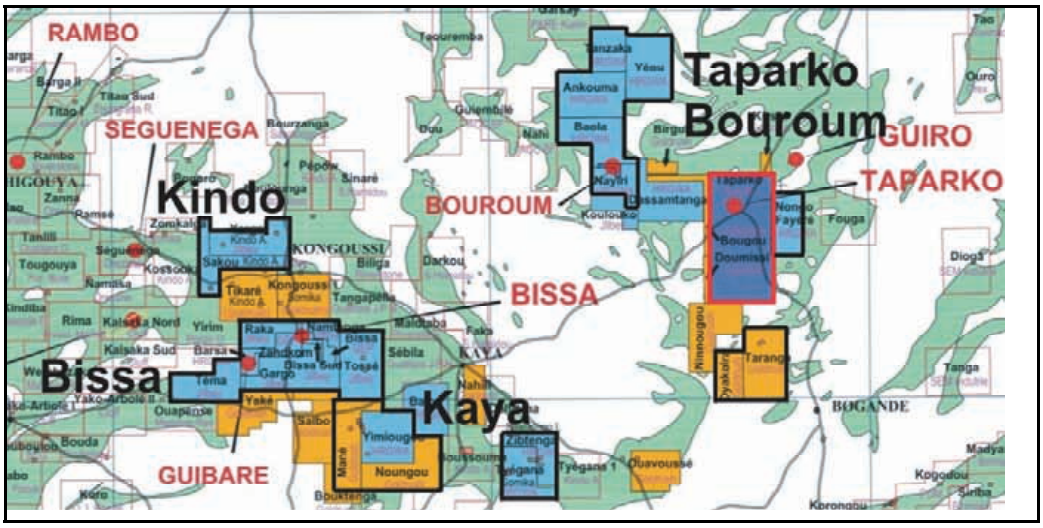

Figure 2.2: Detailed Location of Bissa Hills

2.1.3 Topography and Climate

The topography of the permit area is undulating, several low ridges with lateritic caps, where some gold deposits occur, rising approximately 100m above the flat semi-desert.

The climate is characterised by a wet season extending from June to September with the heaviest rains in August, and mean annual rainfall between 400 and 600mm. Typical daytime temperatures range from 25°C in December to 45°C in May, dropping about 10°C at night. No surface accumulations of water remain throughout the year except for man-made storage reservoirs.

2.1.4 Infrastructure

The main exploration camp at Tanlouka comprises a field camp with limited containerised accommodation, a core cutting and storage facility and vehicle compound whilst at Kongoussi, a field office with core storage facility has also been established.

A key issue for the project's development involves a 6-7km diversion, probably to the east, of Route Nationale 22 (RN22), the present line of which cuts across mineralised zones destined for mining. A route to the west, limited by topography and the possible sterilisation of the southwest extension of resources, is the less favourable alternative.

Access to the mining site will be from the east, using the diverted RN22 and a connection to the water reservoir, located approximately 18km to the east of the site is planned. The national power grid at Ouagadougou will be unable to supply power requirements for the mine, and it is anticipated that diesel powered generation on site will be used. Security measures for dealing with artisanal miners are in place.

2.1.5 Mineral Rights and Permitting

2.1.5.1 General

For exploration purposes 'Research Permits' are granted upon the submission of an application, designated budget and schedule of work for the first year. This permit is issued for 3 years and can be renewed twice for consecutive periods of 3 further years. Activity must commence within 6 months and the permit applies to a maximum surface area of 250km^2. Upon the second renewal, the area must reduce in size by one fourth and ultimately only contain the area of interest by the final application. A Research Permit can be upgraded to a Production Permit upon application.

High River Gold currently hold exploration rights to 4290km^2 in Burkina Faso. The current exploration permit status of HRG projects (as of 12 December 2009), are outlined in Table 2.1 and shown graphically in Figure 2.3.

2.1.5.2 Bissa

For the purposes of exploration activities at surface and underground, a Research Permit must be in place. No other permits are required for exploration activities. There are currently 8 valid Research Permits for Bissa targets, plus one which is pending approval. An additional Research Permit has lapsed. HRG own 100% of the permits except for Zandkom and Bissa where the Company owns a 90% interest with the possibility to increase its interest to 100% if Gepmines (who own the remaining 10%) were to divest their interest. The current permits expire between 2010 and 2012; however, 7 can be renewed for a further 3 years.

Table 2.1: Research Permit Status held by HRG Exploration, Burkina Sarl and Jilbey Burkina Sarl

License Name	Permit Group	Registered to	Date granted	1st renewal/ 2nd renewal	Surface area (kmm^2)	Prospect
Taranga	TAPARKO	High River Gold W.A	February 27th 2003	June 21st 2006 August 10th 2009	140.00	Several peaks
Dyakolra		High River Gold W.A	August 16th 2006	June 9th2009	105.00	7km long soil anomaly
Nongo-Fayéré		High River Gold W.A	February 17th 2003	June 21st 2006 August 10th 2009	150.70	Shear zone
Ankouma	BOUROUM	High River Gold W.A	February 25th 2004	July 10th 2007	247.00	Kinapouin-N, S, Boulge, Ourba
Yeou		High River Gold W.A	December 22nd 2003	October 29th 2007	247.00	Yeou 3 gold resource
Baola		High River Gold W.A	November 5th 2004	October 29th 2007	204.23	Several
Nayiri		High River Gold W.A	November 5th 2004	October 29th 2007	117.86	Several
Tanzaka		High River Gold W.A	September 12th 2005	September 9th 2008	126.36	Several
Gandi	OUAGADOUGOU	High River Gold W.A	September 8th 2004	October 29th 2007	116.60	Several
Mango		High River Gold W.A	September 12th 2005	September 3rd 2008	28.89	Good soil anomaly
Wayin		Goldrush Burkina Sarl	January 21st 2008		73.61	ZG-1- Au-Cu target
Labola	BANFORA	High River Gold W.A	September 8th 2004	October 29th 2007	250.00	
Danfora		Gep-Mines	November 11th 2008		45.00	Resource potential
Yimiougou	KAYA	High River Gold W.A	August 22nd 2005	September 9th 2008	225.00	Bogore, Nonglado
Balbo		High River Gold W.A	October 7th 2005	September 9th 2008	174.04	Zanvi
Tyegana		Kindo Adama	August 22nd 2005	July 15th 2009	165.42	Several
Zibtenga		Sawadogo Idrissa	June 5th 2006	June 9th 2009	126.00	Several
Mané		Goldrush Burkina Sarl	December 19th 2005	September 9th 2008	163.00	Soil Anomalies
Noungou		Jilbey Gold Expl. Ltd.	October 4th 2005	September 9th 2008	249.78	Noungou 1, Logouma, Noungou central
Raka	BISSA	Jilbey Gold Expl. Ltd.	February 12th 2004	October 29th 2007	107.35	Lale
Gargo		Jilbey Gold Expl. Ltd.	February 17th 2004	April 24th 2007	250.00	Gougre, Boko, resource
Namtenga		Jilbey Gold Expl. Ltd.	February 17th 2004	April 24th 2007	68.56	Bouly resource/Research
Tossé		Jilbey Gold Expl. Ltd.	March 2nd 2004	October 29th 2007	250.00	Roffo, Lessa
Tema		Jilbey Gold Expl. Ltd.	May 31st 2004	October 29th 2007	186.54	North of Lelsego
Bissa		Jilbey Burkina	May 21st	August 22nd	43.00	Liliga, Kogkundi,

		Sarl	2002	2005 July 3rd 2008		Naamentenga
Zandkom						*
Bissa-sud		Jilbey Burkina Sarl	July 3rd 2008		10.77	
Barsa		HRG Exploration Burkina	August 16th 2006	19th June 2009	26.00	Zandkom resource extension
Zandkom II		Jilbey Burkina Sarl	Pending	-	39.05	Zandkom resource estimation
Yargo	KINDO	Kindo Adama	August 11th 2003	November 13th 2006 June 9th 2009	181.10	Zinigma
Sakou		Kindo Adama	December 22nd 2003	January 25th 2008	173.00	

*In process of obtaining mining rights

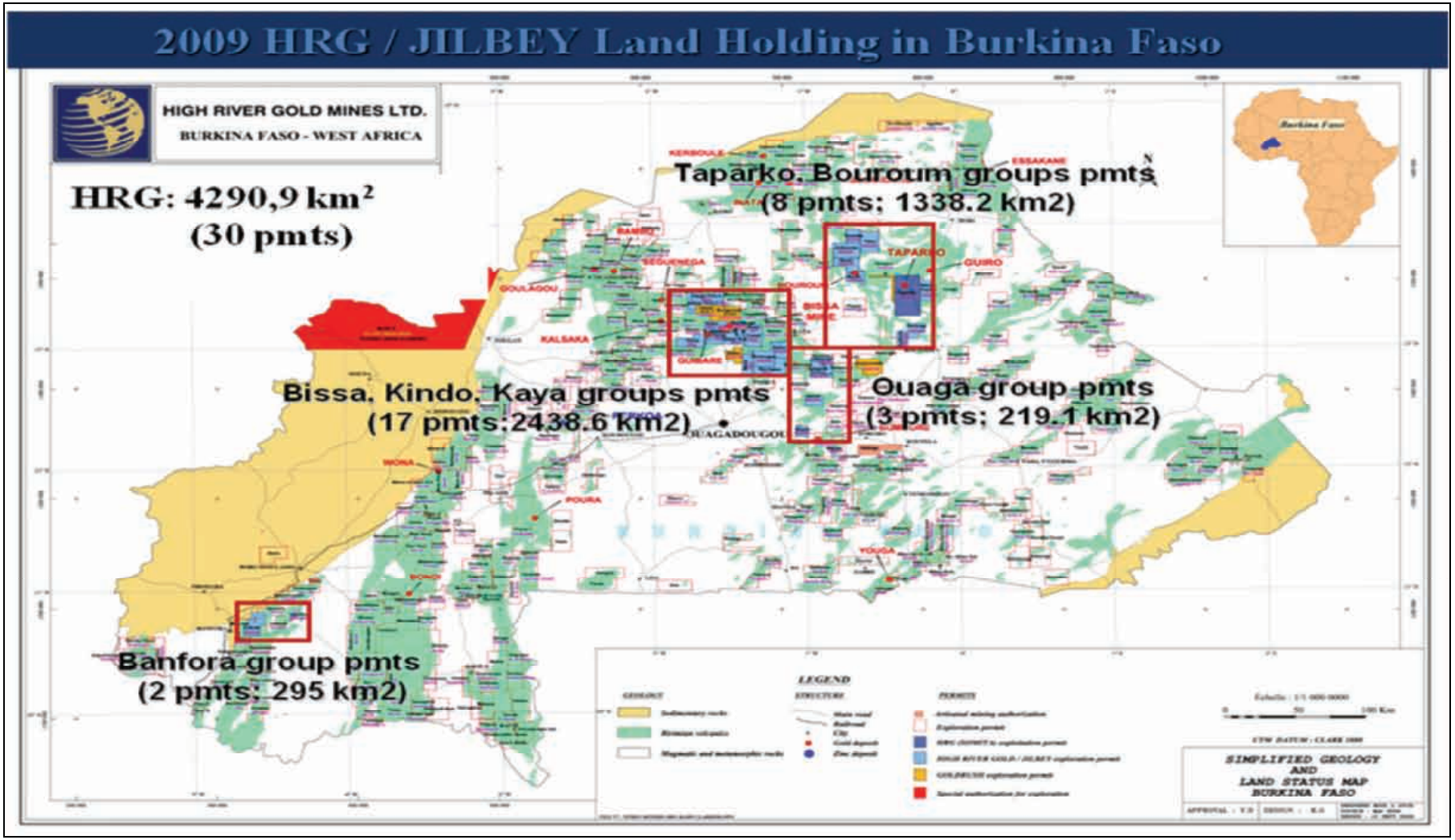

Figure 2.3: HRG Licence Position, December 2009

The Company has prepared a Feasibility Study (June 2010) for a CIL-based project to upgrade the recently expired Research Permit for Zandkom to an 'Industrial Operating Permit', or Exploitation Permit, in line with the requirements of the Mining Code.

The location of Bissa group permits is illustrated in Figure 2.4 below.

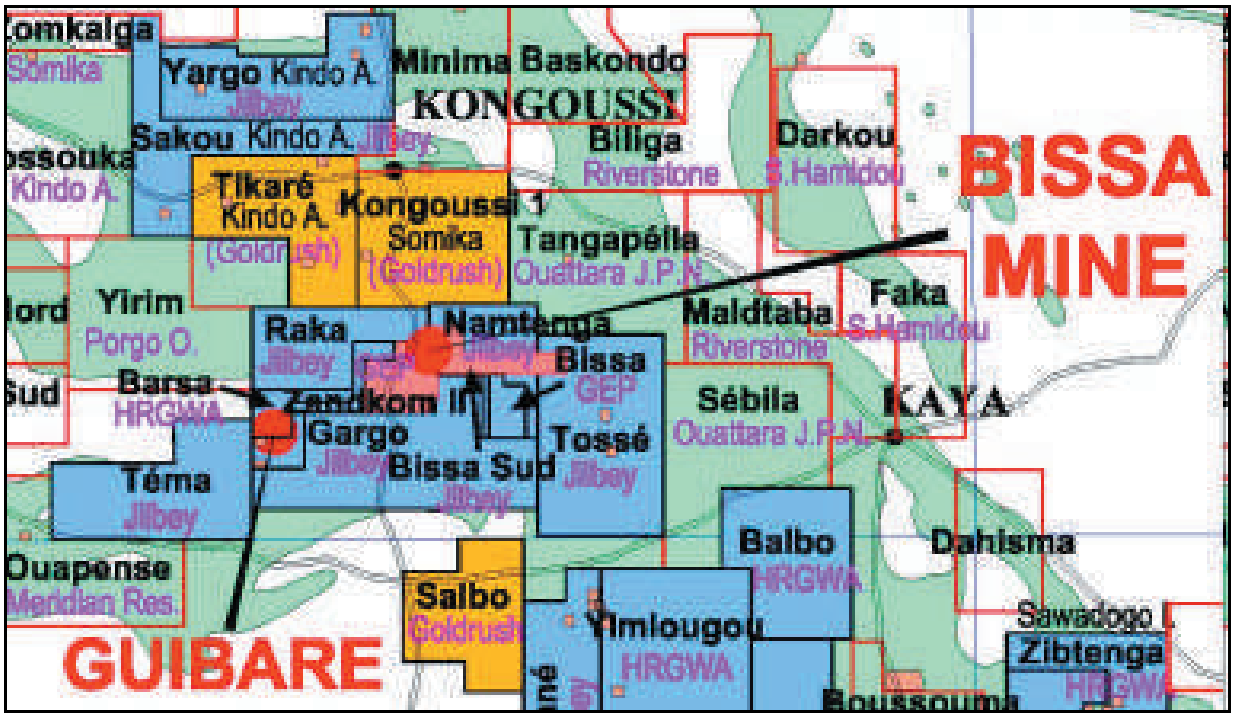

Figure 2.4: Bissa Group Permits (Source: HRG presentation)

> ***WAI Comment:*** *an inspection of the licence documentation has shown that all are in good order and suitable for the future needs of the Company.*

2.2 History

Exploration activities in the region began in 1961 on small gold occurrences located in the southeast portion of the project area.

The current Bissa and Zandkom permits are what remain of a much larger (2,500km^2) exploration project, the Sanmatenga Joint Venture; between 1994 and 2000, the Sanmatenga project was successively optioned to a number of companies and gold mineralisation was discovered at Bissa Hill during the 1997-98 seasons along the regional northeast-trending Sabce shear zone.

Extensive exploration during 2001 at Bissa Hill, delineated discontinuous gold mineralisation along a lithological contact between sedimentary and volcanic rock.

In 2004, Jilbey Burkina acquired an option on the Bissa and Zandkom permits, and conducted extensive verification of the historical work. Mineral resource modelling by SRK reported 1.34Mt at an average of 3.30g/t Au (147,200oz) in the *Measured* and *Indicated* category and 0.1Mt at an average of 2.89g/t Au (9,970oz) in the *Inferred* category.

Following the successful takeover of Jilbey Burkina in September 2005, High River resumed drilling on the Bissa property and over 31,000m of drilling were completed to support an initial resource evaluation of the new gold zones discovered to the southwest of Bissa Hill.

SRK prepared an initial mineral resource evaluation for twenty-eight new gold zones. The global mineral resources at a cut-off grade of 0.5g/t Au were estimated at 10.6Mt at an average of 1.51g/t Au (515,100oz) in the *Indicated* category and 16.3Mt at an average of 1.28g/t Au (669,400oz) in the *Inferred* category.

During 2007 and 2008, Jilbey Burkina completed forty-six trenches (5,547m) and 23,800m of infill and step out drilling to improve the confidence in the continuity of the gold mineralisation.

2.3 Geology and Mineralisation

2.3.1 Regional Geology

The Bissa Hills area lies in the early Proterozoic Birimian Greenstone Belt of the West African Craton (Figure 2.5). The area was deformed repeatedly between 2,400 to 1,200Ma, but has remained a relatively stable craton since. The Birimian rocks are bounded on the east and west by Infracambrian Pan-African mobile zones. Rocks have been metamorphosed to greenschist facies mineral assemblages.

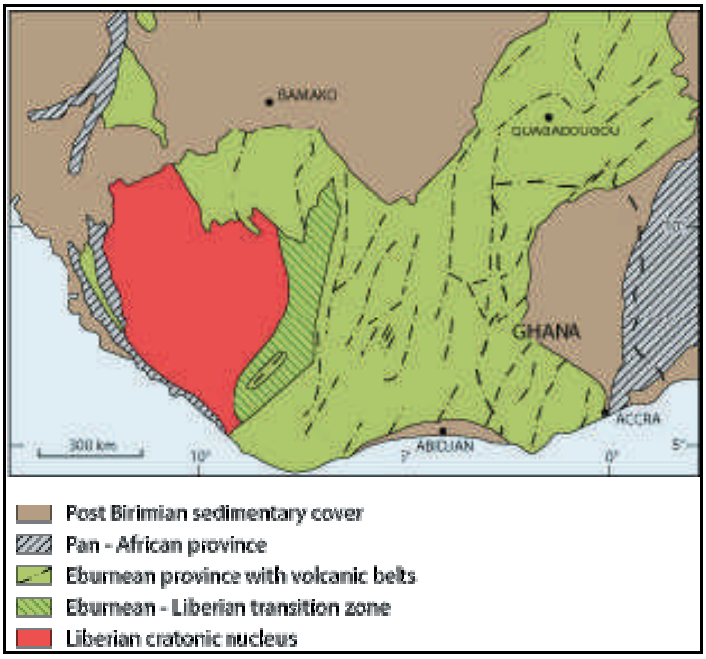

Figure 2.5: Regional Geology of West Africa

The Birimian rocks are subdivided into an early and a late volcano-sedimentary sequence, each followed by an orogenic episode of folding and metamorphism ("Eburnean 1" and "Eburnean 2" orogenies). Gold deposits formed during the Eburnean 1 cycle are of the "syngenetic" type whilst during the Eburnean 2 cycle ongoing tectonic movements led to the development of shear zones of regional importance that were important source for many of the major West African gold deposits. The Bissa Hills gold deposit is interpreted as having been formed during this second orogenic episode.

2.3.2 Mine Geology & Mineralisation

2.3.2.1 Introduction

The Bissa Gold Project occurs on the northeast portion of the Boromo greenstone belt (Figure 2.6). The dominant geological features in this area include the Kogkoundi Granodiorite, an elongated northeast-southwest felsic intrusion and the Sabce deformation zone with a large linear chain of gold-in-soil anomalies located along its northwest margin. The volcano-sedimentary sequence comprises mafic to intermediate volcanic and clastic sedimentary rocks, the contact between the two being characterised by a thin and discontinuous quartz-pebble conglomeratic sub-unit.

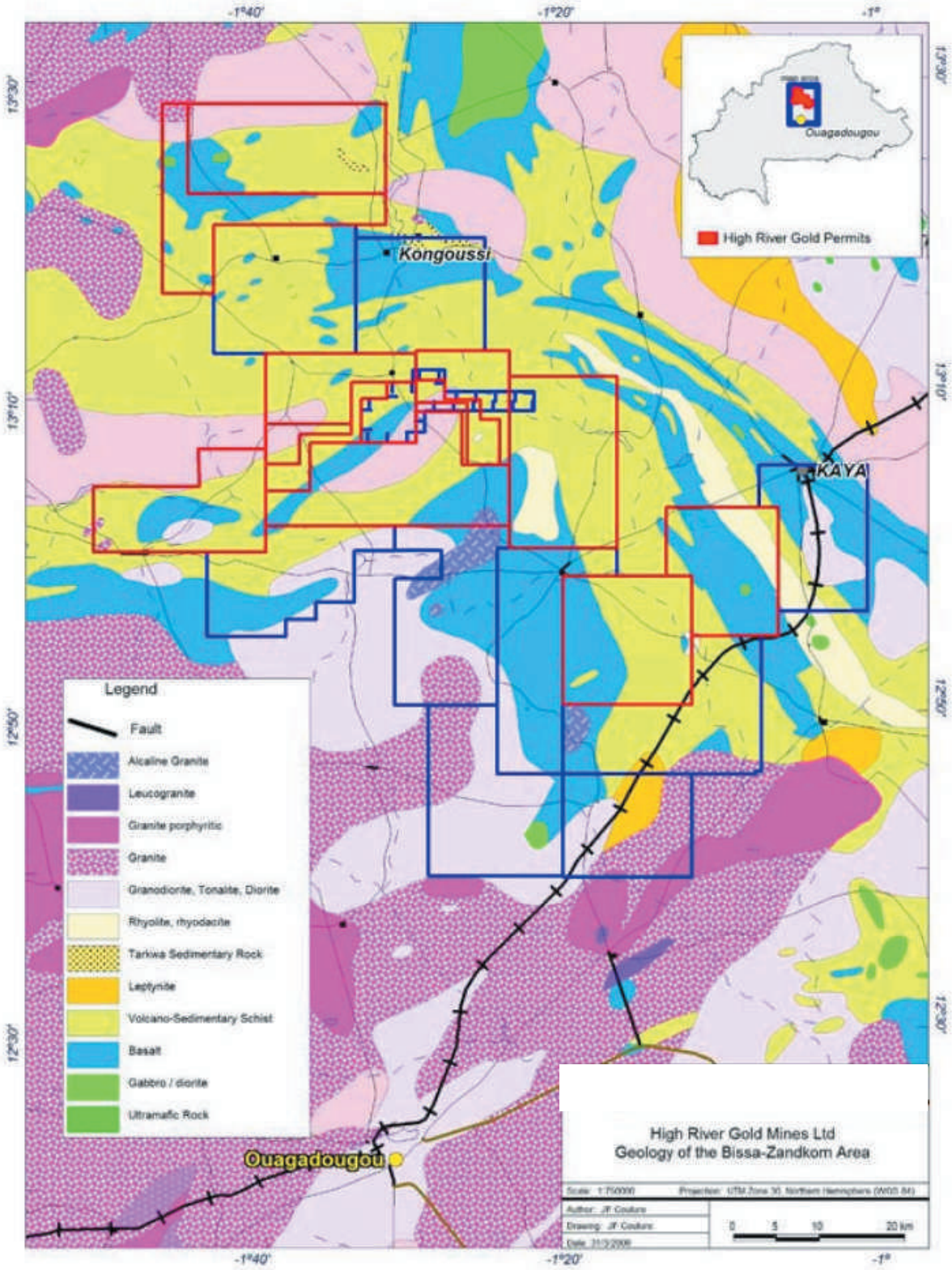

Figure 2.6: Detailed Geology of the Bissa Area (SRK 2006)

Detailed geology of the Bissa site is shown in Figure 2.7 below.

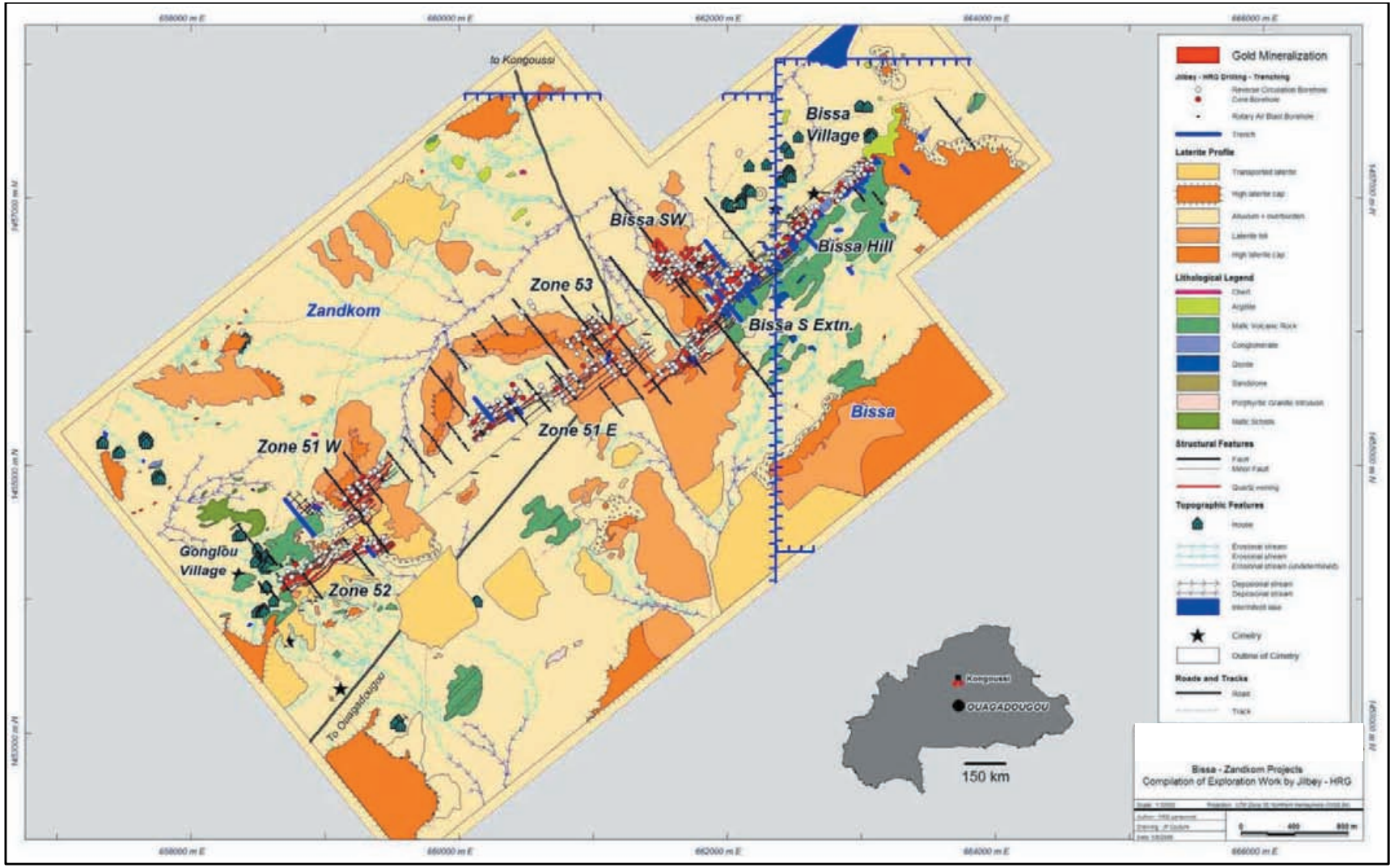

Figure 2.7: Geology & Exploration Works - Bissa Hills Project

2.3.2.2 Mineralised Zones

Exploration work on the Bissa and Zandkom permits has led to the delineation of a number of near surface gold deposits that have been traced by trenching and drilling over a strike length of approximately 5km. The gold mineralisation consists of disseminated sulphides, sulphide stringers, quartz veining and attendant hydrothermal alteration and quartz breccia bodies developed in highly strained sedimentary and volcanic rocks, loosely sub-parallel to the dominant foliation fabric of the Sabce shear zone (Figure 2.8).

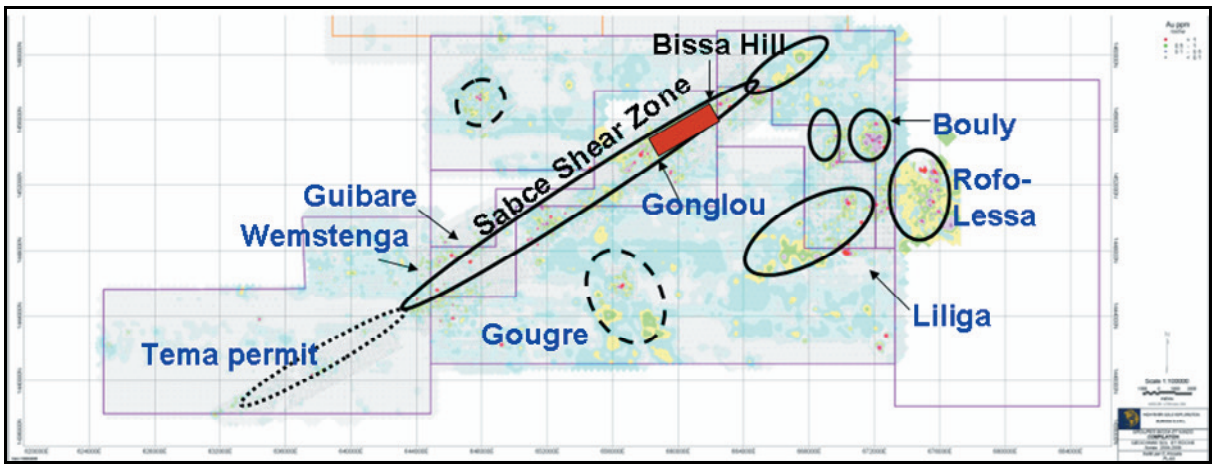

Figure 2.8: Main Deposits of the Bissa Hill Area

The principal areas of gold mineralisation are summarised below:

- At Bissa Hill, two elongated tabular auriferous bodies are located along the discontinuous quartz pebble conglomerate contact between clastic sedimentary rocks and mafic volcanic rocks and the mineralisation consists of quartz breccias and veins and sulphide-rich veinlets (Photo 2.1). It was traced by drilling over a strike length of approximately 900m to a depth of approximately 100m where it tapers off (from 60m at surface to 15m) and grades drop. The zone plunges 20° to the northeast. Boreole BS04-007 drilled to 63m, showed some high grade intersections including 20m @ 6.09g/t Au from 36-56m. Photo 2.2 shows core from around 42-47m with distinctive ferruginous alteration and importantly quartz-sulphide veinlets and wider areas of silicification.

Photo 2.1: Highly Foliated Host Rocks on Bissa Hill looking NE

Photo 2.2: BS04-007 at Bissa Hill showing Quartz Veins and Alteration

Figure 2.9 shows a detailed plan of the surface geology of Bissa Hill as well as notable mineralised intersections, whilst Figure 2.10 shows high-grade section 9880E which illustrates the generally steeply dipping, tapering mineralisation.

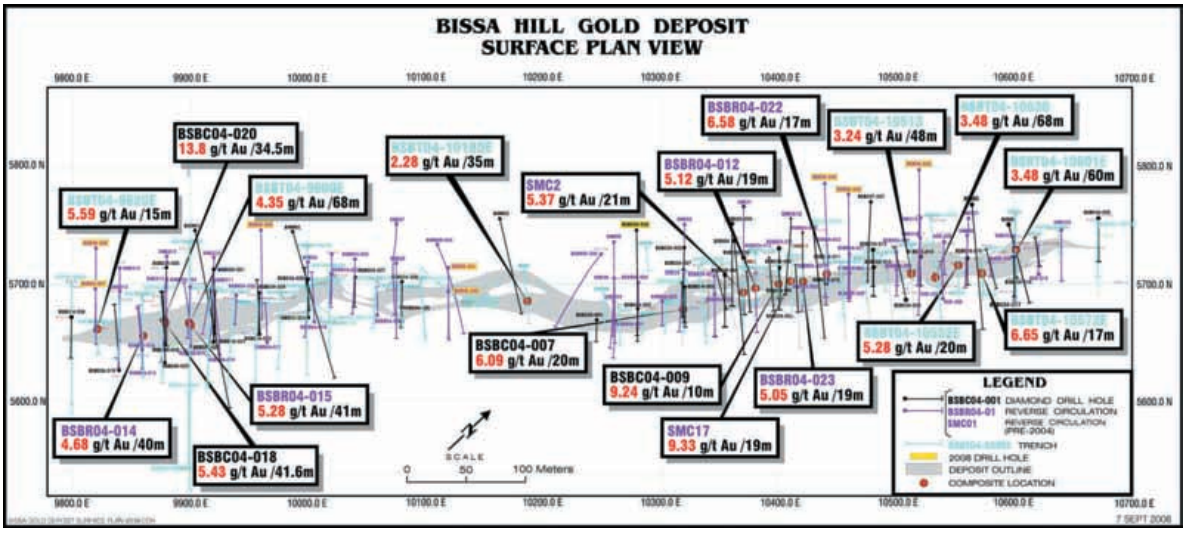

Figure 2.9: Surface Plan of the Bissa Hill Deposit

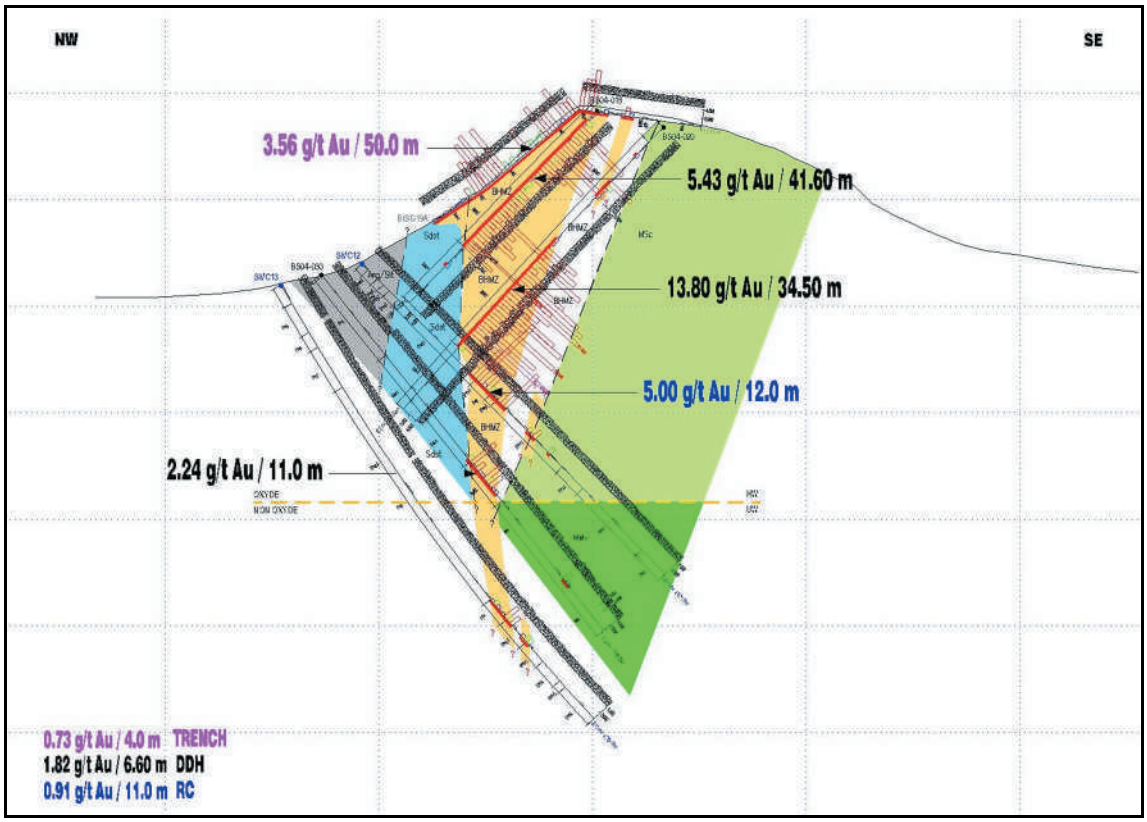

Figure 2.10: Bissa Hill Section 9880E

- The Bissa South Extension ("Bissa SE") area, which has a strike length of about 1.3km, represents the strike extension of the Bissa Hill deposit; however gold mineralisation (with some high grades >30g/t Au) is mainly developed in mafic schists to the southeast of the sedimentary-volcanic rock contact Figure 2.11 shows the complexity of the deformed mineralisation.

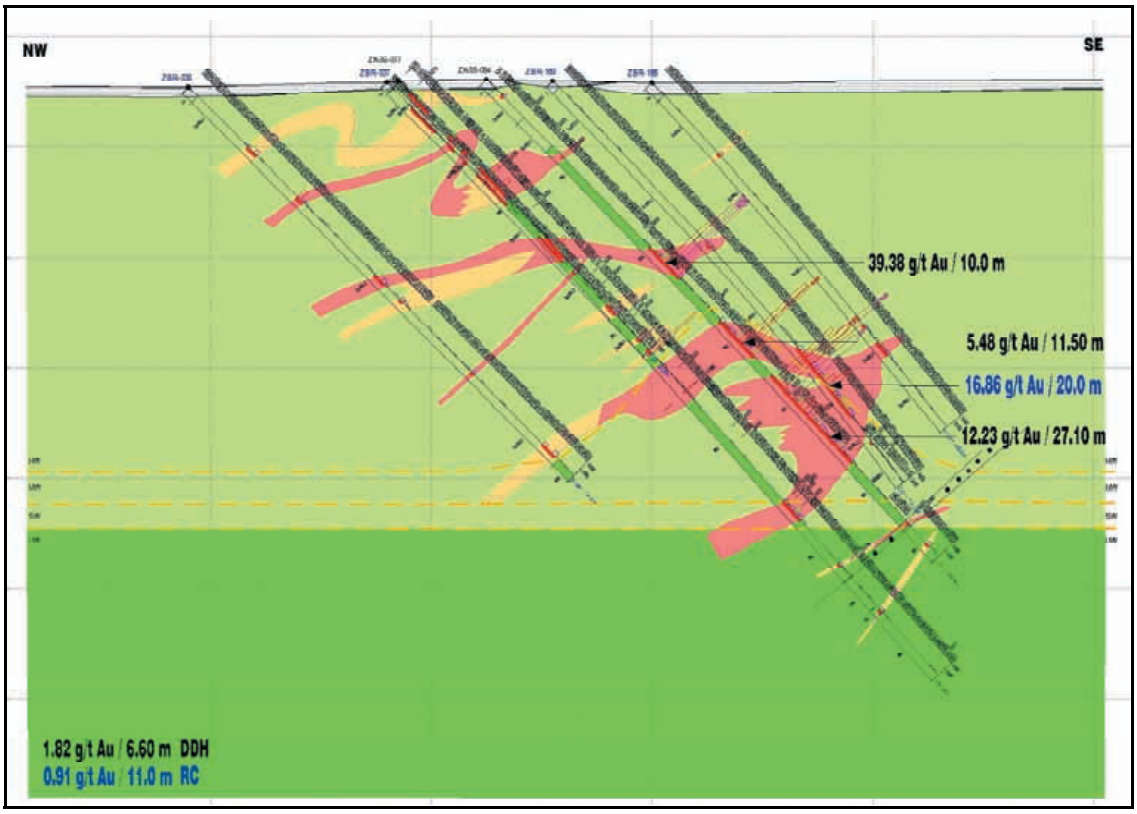

Figure 2.11: Bissa South Extension - Section 8740E

- The Bissa Southwest ("Bissa SW") area is situated to the west of Bissa Hill and Bissa SE; the gold mineralisation is related to weak to moderate hydrothermal alteration, developed along the sheared limbs of a train of folds affecting argillaceous and sandstone sub-units. An analysis of core from Bissa Southwest again showed some excellent intersections, albeit not as enriched a Bissa Hill e.g. borehole ZK05-061, which produced several intersections including 25m @ 1.01g/t Au (44-69m), 13.5m @ 1.25g/t Au (72.5-86m), 11m @ 1.06g/t Au (99-110m) and 13.5m @ 1.96g/t Au.

  Figure 2.12 shows Bissa Southwest Section 9100E which indicates that the mineralisation is associated with NE trending shears that intersect the synformal structures, commonly shearing off the limbs of minor folds.

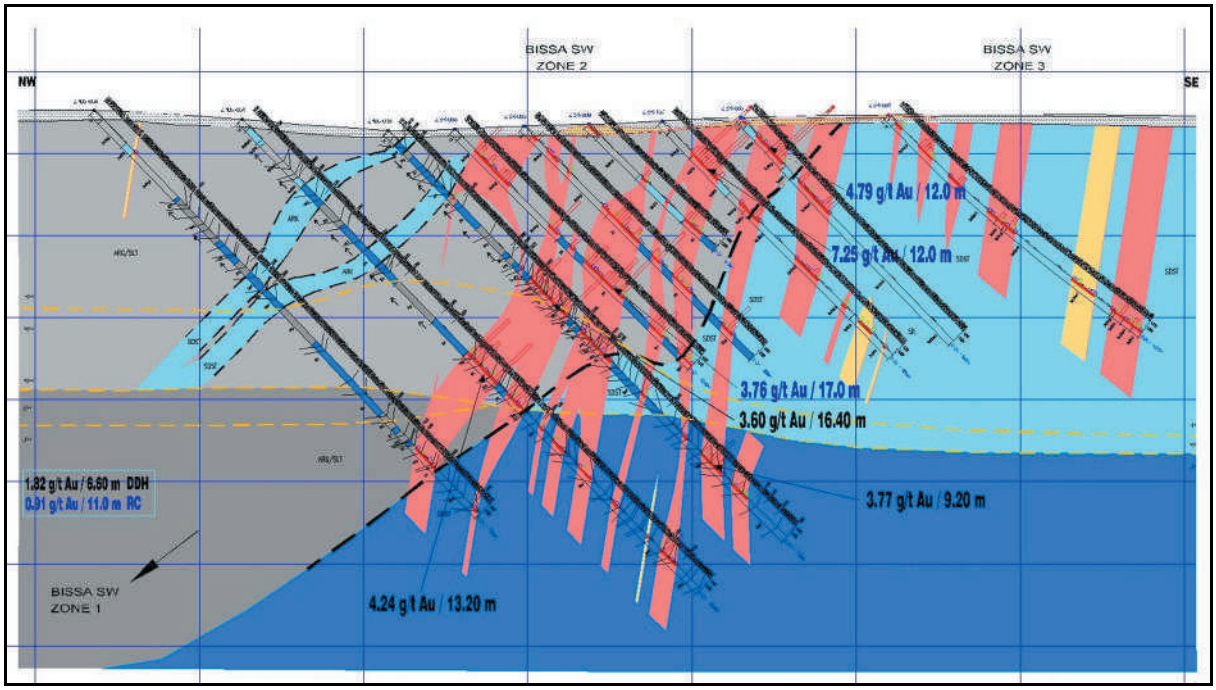

Figure 2.12: Bissa Southwest, Section 9100E

- The IO area is located to the southwest of Bissa SE and gold mineralisation occurs in mafic volcanic rock and forms a crescent shaped zone shallowly plunging to the northeast. This zone has recorded some spectacular drill intersections including 16m @ 17.6g/t Au (from 66-82m) with visible gold.
- Further to the southwest, Zones 51, 52 and 53 comprise gold mineralisation developed predominantly in mafic schists of volcanic origin over a broad area extending south of Bissa South Extension and Bissa Southwest to Imiougou village (Figure 2.13). Zone 51 which has a strike length of approximately 1.5km, is hosted in volcanic rocks, appears relatively thin and has a sub-vertical attitude, whilst Zone 52, which is also volcanic hosted, and also has a 1.5km strike length, has recently been extended by drilling.

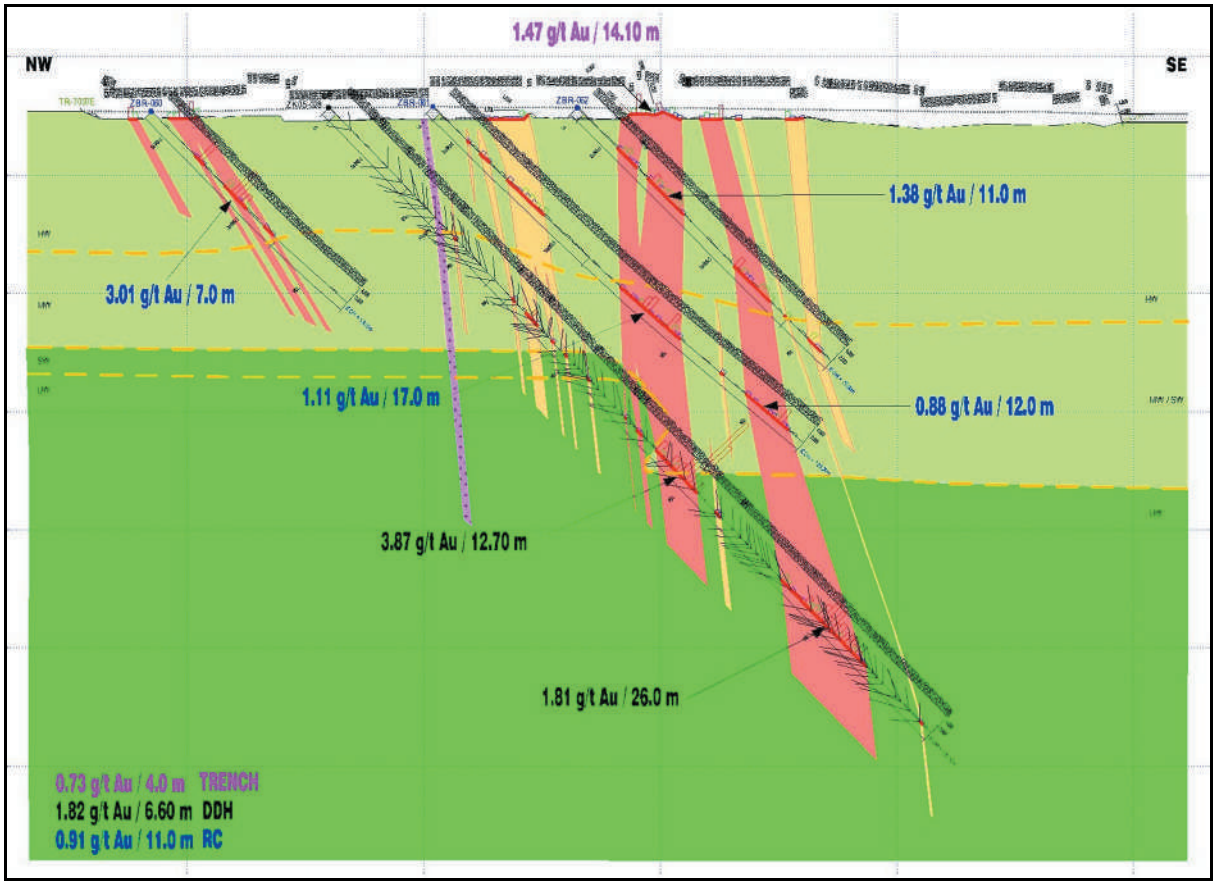

Figure 2.13: Zone 51, Section 7100E

Some 3km further to the southwest, the Boken area, which is partially off-set by NNE trending faults, has an estimated resource of approximately 300,000oz Au at 1.4g/t.

> ***WAI Comment:*** *to date, the mineralised structure extends for over 8km, and although not continuously mineralised along the entire length, does offer the possibility of significant project expansion.*

2.3.3 Other Permits

2.3.3.1 Introduction

HRG has ownership of many other exploration permits in Burkina Faso which WAI has not visited. However, data provided by HRG in January 2011 has summarised the activities during 2010 (Table 2.2) and projected budgets for 2011.

Table 2.2: Summary of 2010/2011 Drilling Activities					
Group of Permits	**Permit**	**Drilling (m)**			**Total Meters of drilling**
		RC	**DD**	**RAB**	
Bissa-Kindo-Kaya	Barsa	0	0	0	0
	Bissa (Liliga)	0	0	0	0
	Bissa Sud	0	0	0	0
	Gargo	0	1,813	0	1,13
	Namtenga	6,808	2,547	0	9,355
	Raka	669	0	0	669
	Tema	0	0	0	0
	Tosse	1,006	0	0	1,006
	Zandkom II,	0	0	0	0
	Sakou	0	0	0	0
	Yargo	3,389	0	0	3,389
	Balbo	0	0	0	0
	Mane	0	0	0	0
	Noungou	0	0	0	0
	Yimiougou	2,158	0	0	2,158
Bouroum-Taparko	Ankouma	0	0	0	0
	Nayiri	3,533	0	0	3,533
	Yeou	0	0	0	0
	Baola SudEst,	3,945	0	0	3,945
	Tanzaka	469	0	0	469
	Taranga	0	0	0	0
	Dyakolra	0	0	0	0
	Nongo-Fayere	0	0	0	0
Ouaga	Gandi	1,599	0	1,034	2,633
	Mango	3,049	0	9,312	12,361
	Wayin	2,094	0	0	2,094
	Tyegana	1,606	0	0	1,606
	Zibtenga	0	0	0	0
Banfora	Labola	7,790	0	0	7,790
	Danfora	0	0	0	0
Total		**38,115**	**4,360**	**10,346**	**52,821**

A primarily exploration budget for 2010 was approved of approximately US$9M. By September 2010, the exploration budget had been extended up US$17.1M. The main work planned is RC and DD drilling with additional RAB testing and minor trenching.

Regional work includes airborne geophysical and LIDAR survey, mapping of artisanal sites and some ground IP-resistivity survey. It is likely that by year end, only some US$15M will have been spent due to shortages with drill rigs, long analytical turnaround, and delays with permitting the airborne surveys.

2.3.3.2 Bouly

Bouly, located in the 68.56km^2 Namtenga Permit to the southeast of Bissa Hill.

Preliminary works identified a circular soil anomaly about 4km^2 in area (2.5km N-S x 2km E-W), with results of 320ppb Au (soil – maximum), 1.12 and 1.03g/t Au (two rock samples), and 0.57g/t Au (two trenches - maximum). A diamond core hole intersected 2.50g/t Au over 30.6m and had an average grade of 0.94g/t Au over 126m (complete hole).

The bedrock comprises massive non-foliated porphyritic mafic metavolcanics, brecciated by younger porphyritic intrusive dykes and gold is associated with quartz-pyrite-chalcopyrite veinlets with potassic alteration along the vein walls.

However, the main results from the early work outlined a strong Au-Cu bedrock anomaly which continues under the alluvium into the Bissa permit to the southwest (Figure 2.14).

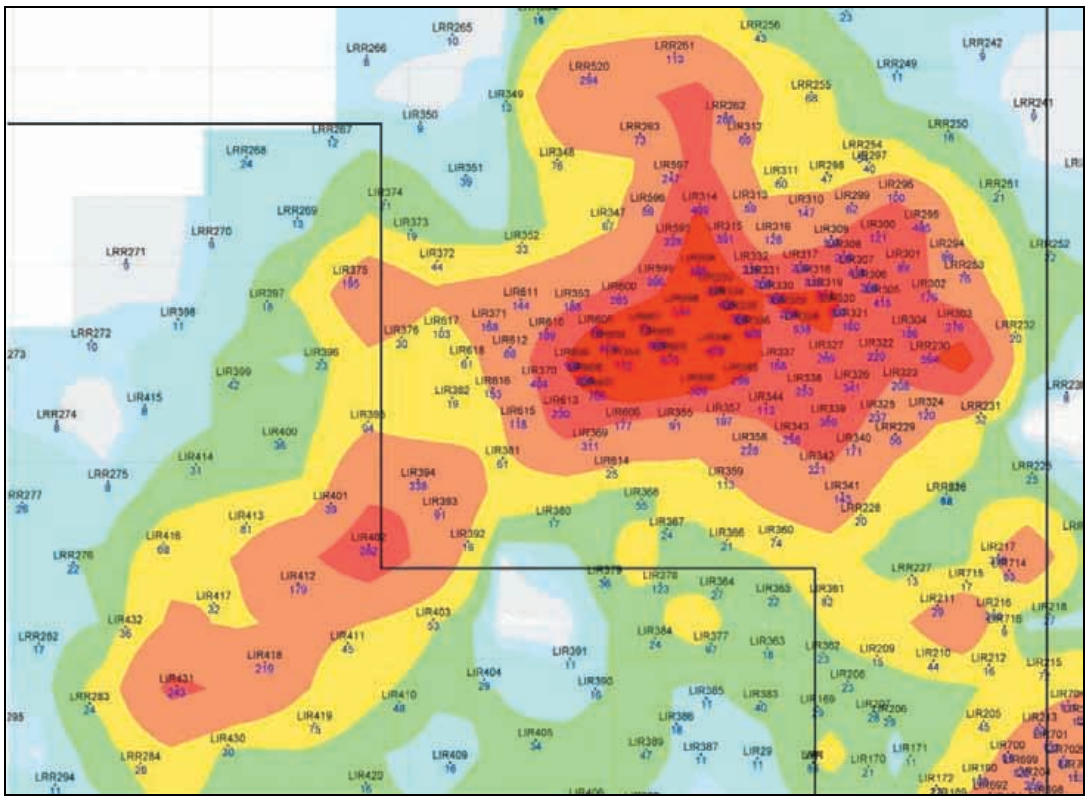

Figure 2.14: Vertical RAB Drilling; Mean Au ppb over the Entire Drill Hole

During 2009/10, the Bouly property has been further tested by a 60 hole programme of Air Core Drilling, on fences 80m apart, with holes 35-40m apart. The holes were drilled at 45° to 330°, with an average depth of about 80m, and totalling some 5,000m.

This work has indicated 15-20m of cover, and a depth of weathering of around 50m. Mineralisation appears open at depth and along strike.

A preliminary resource estimate has been derived by WAI.

> ***WAI Comment:*** *the Bouly project has significant potential for the generation of a large tonnage, low grade Au (+Cu) deposit.*

2.3.3.3 Gougre

The Gougre target (Figure 2.15), in the Gargo permit area, is coincident with a resistivity and chargeability gradient and appears to lie on the contact with a mafic volcanic. Gold mineralisation is associated with a strongly magnetic silicified unit cut by limonite-filled fractures and occurs in a zone constrained by two narrow intervals of intense fracturing.

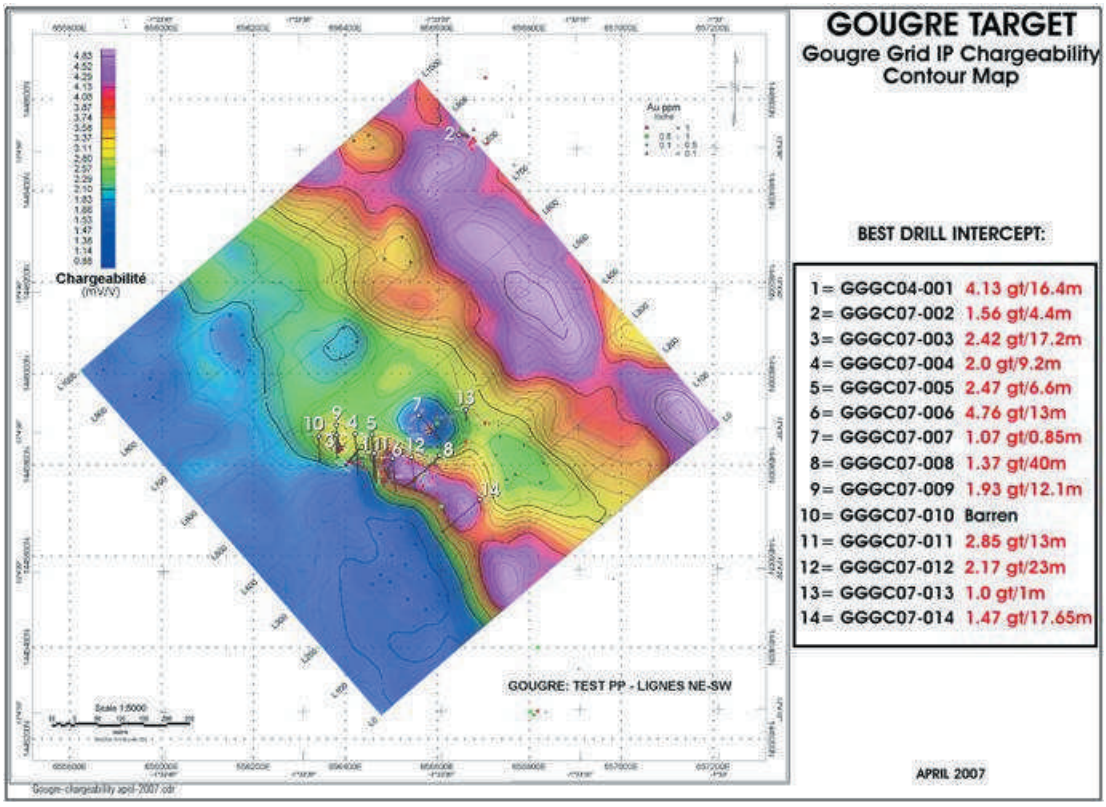

Figure 2.15: Gougre Chargeability with Overlain 2007 Drill Results

Further exploration work has indicated three different geological controls:

- Sheared basalt with quartz veinlets;
- Quartz stockwork hosted in undeformed metabasalt; and
- Several small outcrops showing pervasive silica-pyrite.

Of a total of 24 rock samples taken, 15 gave assay results >0.5g/t Au including 2 samples grading >10g/t Au (from the zone of pervasive alteration on the main outcrop); in addition, IP surveys along two different line directions NE-SW and NW-SE, were undertaken and results suggest that the stockwork zone on the main outcrop might have some continuity towards the SW, but probably does not continue on the NW side of the shear zone.

Most of the gold mineralisation at Gougre is hosted in pervasive silica-pyrite altered rocks associated with a ductile-brittle shear zone that forms the contact between the underlying and overlying metavolcanic units. The "Gougre fault" dips about 70°E and is only a few metres wide, yet it juxtaposes two lithological domains of contrasting metamorphic grade, (greenschist-amphibolite) implying a significant vertical component of displacement.
Minor significant mineralisation has been intersected in the hangingwall associated with hangingwall faults that probably merge with the main fault at depth.

Although mineralisation along the southern extension of the main zone is erratic, visual observation of the core suggested strong mineralisation was present all along the fault contact, which was successfully traced for a total distance of about 800m. Gold mineralisation at the main zone therefore has a geological/structural control that is not present along the northern and southern extensions.

In 2008, some 582m of infill drilling was undertaken along with 5 RAB profiles totalling some 2,331m from 55 holes.

This work established the results already known from previous works. In general, the deposit has been drilled down to 120m vertical, with holes between 40 and 20m apart. The thickness is variable, but in the main part varies between 5-30m, although it thins to the south.

Two new holes, down to 180m have been drilled, giving very encouraging results. Hole 55 gave 31m @ 3.2g/t (from 219-250m), whilst Hole 56 gave 85m @ 2.34g/t Au. The Company also proposes to drill one 250m hole, two 450m holes and one 650m hole to test the continuity of this zone.

Recent IP data from 2010 appears to indicate two structural corridors at depth (>200m), and the new planned drilling will test this.

A longitudinal section of the main target zone at Gougre is shown in Figure 2.16 below.

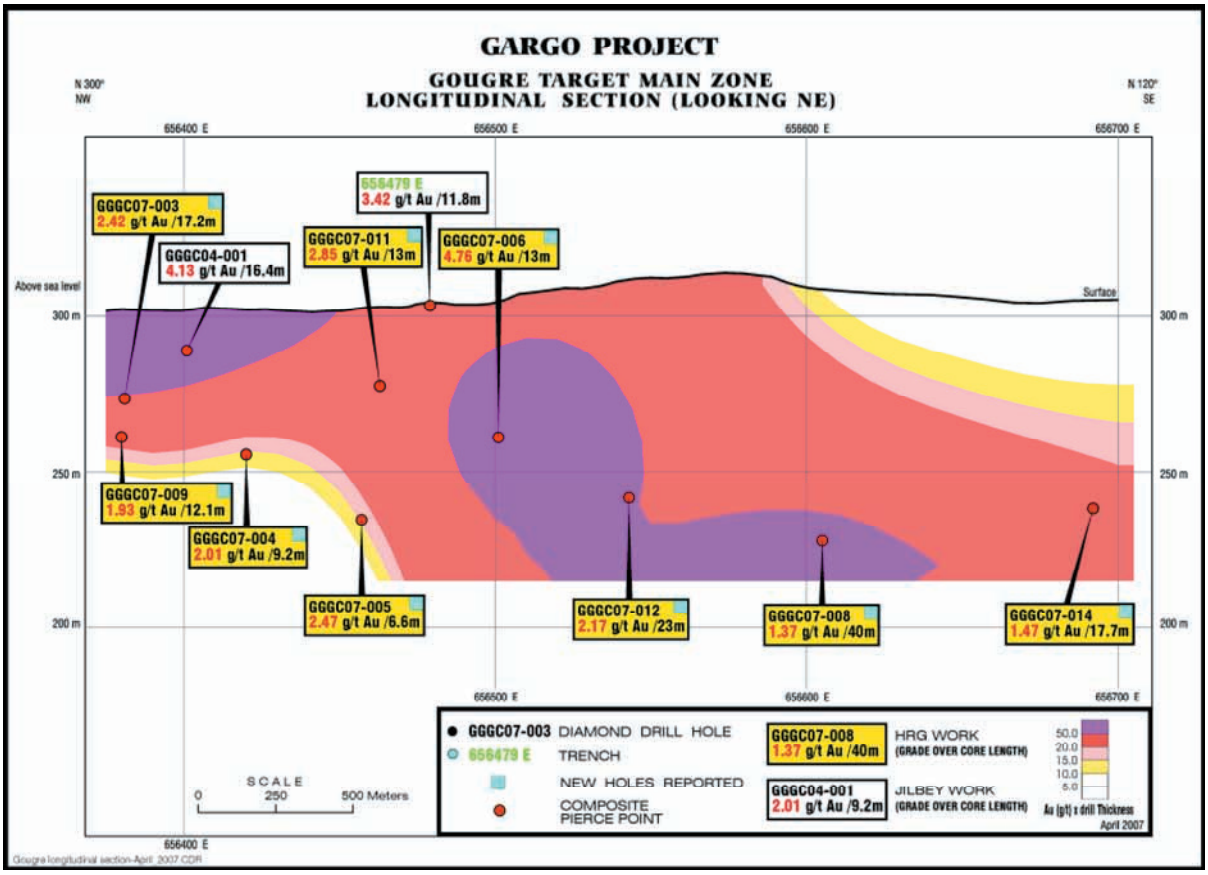

Figure 2.16: Longitudinal Section of Main Target Zone at Gougre

2.3.3.4 Guibare

The Guibare prospect, approximately 15km southwest of the Bissa Hill main trend in the Zandkom Permit (78km^2), is currently the site of extensive orpailleur (artisiral small scale mining) activity including many small shafts and open workings, as well as a centralised processing facility.

Guibare geology comprises quartz-tourmaline veins in variably deformed mafic metavolcanics, bounded to the south by metasediments. The mineralisation may resemble the mineralisation at Bissa S Extension and at zones 51 and 52, but these areas lack the abundant tourmaline in quartz veins.

The Guibare/Karengatenga orpaillage sites were tested with 22 RC holes totalling 2,618m and all of the principal orpaillage targets were tested. Results from the west side of the pit showed no significant results from the 5 holes; however all four drill holes from the east side of the pit, intersected significant results.

Mineralised zone (zone 1) is interpreted to dip steeply, and therefore the interval grading 8.22g/t Au from 50-52m in hole 50 may represent a second mineralised zone (zone 2) ~60m north of zone 1, although this intersection may also suggest that the mineralised zone 1 is a flat vein.

It is, therefore, possible that a narrow high-grade resource could be defined along one (or potentially two) mineralised zone(s) over a minimum strike length of 200m and potential strike length of >500m.

> ***WAI Comment:*** *The Guibare site is currently a very active orpailleur location and the extent of the workings, in combination with the favourable geological location of the site in relation to the continuation of the Bissa trend would indicate that the site warrants further work, although the contamination and instability caused by the orpailleur mining activity will make this all the more difficult.*

2.3.3.5 Yeou

Work done on the Yeou permit (247km^2) to the south of Bouroum between 2004 and 2007 and in 2008 included geological mapping, soil and rock geochemistry, IP and Ground Magnetics, trenching, 56 RC holes totalling 6151m and 185 RAB holes totalling 4,268m, and identified about 30 gold showings (cut-off 0.5g/t Au).

Gold mineralisation is associated with quartz veining hosted in granodiorite close to a major sheared contact (to the south) with mafic metavolcanic to gabbroic rocks. Most of the veining is parallel to the shear zone although some extensional and/or tension gash veining more or less perpendicular to the main trend, are present.

The most promising target is the Yeou 3 orpaillage site (Figure 2.17), about 400m long and located along the sheared contact between metagabbro and granodiorite and trending NE-SW. The trend can be extended southeast for several kilometres based on exposures, IP chargeability and resistivity, whilst magnetics help to establish the location of the sheared contact.

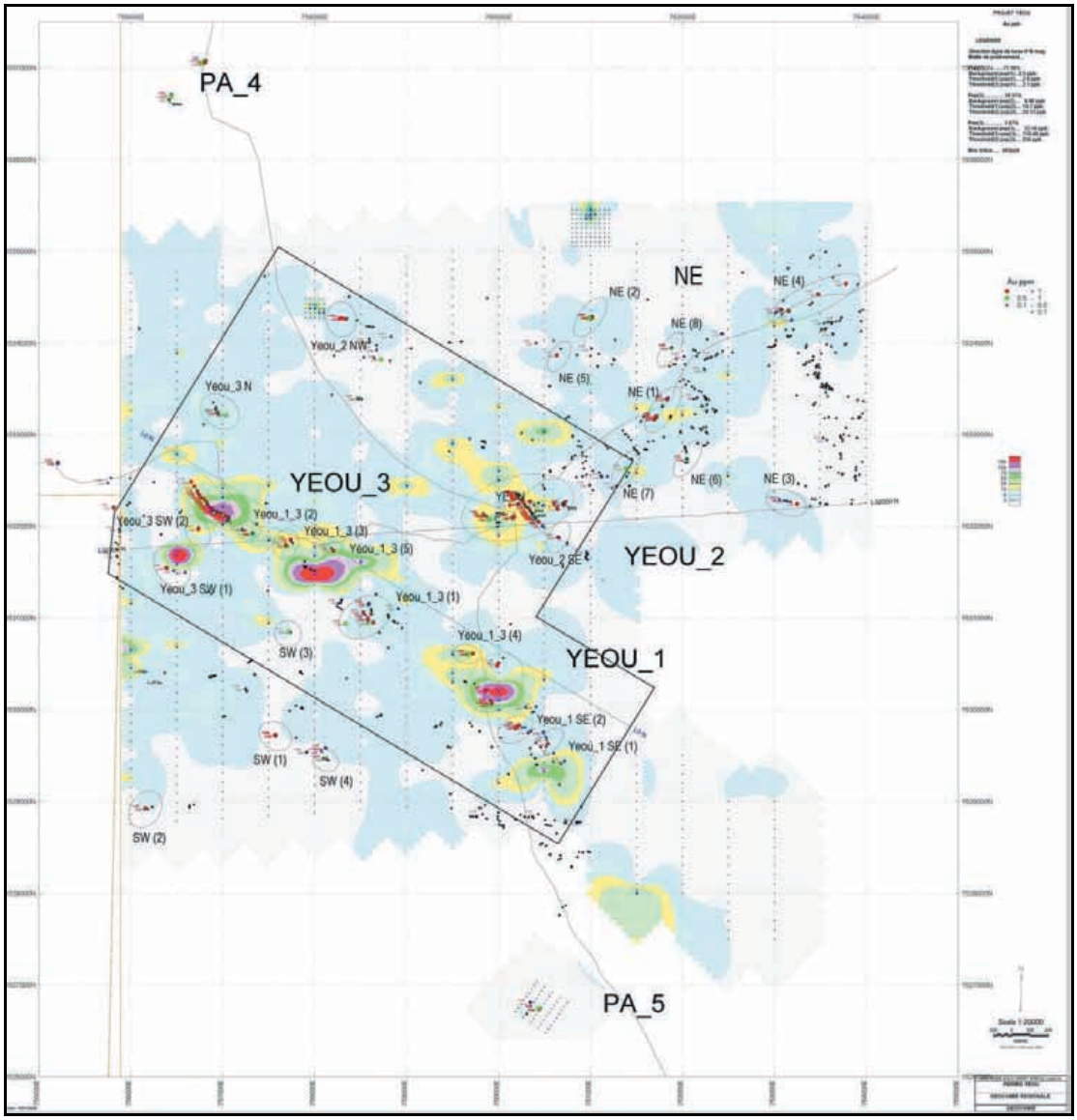

Figure 2.17: Soil Geochemistry & Gold Showings, in the Yeou Permit

Trenching confirms that most gold mineralisation is related to quartz veining and that the wall rocks are generally barren. Yeou 3 remains the highest priority target, but additional targets worthy of drill testing have been defined at other trenches *e.g.* 12.6g/t Au over 0.9m, 42.3g/t Au over 2.9m, and 9.25g/t Au over 1.2m, 1.43g/t Au over 14m (including 12.3g/t Au / 1m), 1.64g/t Au over 2m and 2.09g/t Au over 6.8m.

Detailed interpretation of the results of the 2008 RC drilling programme suggests potential resources of about 45,000oz of gold grading 2.2g/t Au in two small open pits, to a vertical depth of 60m.

> ***WAI Comment:*** *WAI believes that the magnitude and spatial distribution of the anomalous zones appear to be worthy of further work.*

2.3.3.6 Yargo

WAI visited the Yargo Permit, and in particular the Zinigma orpaillage site where an 800 x 300m zone of disturbance was noted, trending approximately east-west. Individual pits are from 10 to 60m deep chasing generally narrow (<50cm) white quartz stringers.

The deformation zone which contains the mineralisation is hosted within felsic volcanics (schists) which are strongly weathered and show extensive kaolin, hematite and limonite in the altered zones.

A recent (2010) RC drill programme (31 holes) has followed on from previous RAB and RC holes and has been able to define a low angle quartz-graphitic mineralised zone which does show continuity. Best results include 6m @2.19g/t, 12m @ 2.91g/t and 5m @ 5.39g/t Au.

WAI has been able to define a preliminary resource for this target.

> ***WAI Comment:*** *the Zinigma target is at early stage of exploration, but preliminary results are encouraging. The property warrants continued work.*

2.3.3.7 Sakou

WAI visited the Lagongo orpaillage site which comprises a series of east-west trending narrow (few centimetres) sub-vertical quartz veins hosted by mafic schists which have been exploited by local miners to a depth of >20m.

The site has been partially studies by soil geochemistry, RAB and RC drilling, with initial results good (35m @ 1.62g/t Au for example), but later infill disappointing indicating a complex structure.

However, the area shows numerous other gold showings, all of which are in need of follow-up.

> ***WAI Comment:*** *although subsequent RC results were disappointing, the scale and frequency of sub-cropping gold mineralisation around Lagongo make this area of continued interest, worthy of follow-up exploration.*

2.3.3.8 Yimiougou

WAI visited the Nonglado orpaillage site within this permit which encompasses some 300 x 50m in area and is located within the regional Yilatenga deformation zone.

This site has not been studied in detail by the Company, although previous works by Randgold had included 22 trenches and 9 core holes from which two narrow mineralised zones some 5-10m wide, trending northeastwards and dipping to the southeast, had been discovered.

Individual quartz veins tend to be narrow, sulphide rich, and have produced some spectacular rock chip results such as 74g/t and 24g/t Au.

In addition, the Konkin orpaillage site was also visited which occupies an area of approximately 1000 x 10m, trending northeastwards. This appears to be one thin structure and therefore would appear to be of little interest at this time.

> ***WAI Comment:*** *although the Nonglado project area appears small, the complex nature of veining (conjugate sets?) and the sulphide-gold association require further work to beeter delineate the overall potential of the site.*

2.3.3.9 Mane

WAI visited the Wabo orpaillage site which is composed of eight separate zones covering a large area, denoted M1 to M8. The sites tend to be concentrated along the contact of granite and meta-volcanics with an approximate northwest-southeast trend. Dip of the vein material is not known, although from the pits on site, it is likely to be sub-vertical.

Rock chip sampling has produced some good sample results including an 11g/t Au value from the M5 zone.

WAI Comment: *although little is known about the occurrence, the size and initial gold indications are very positive and are worthy of follow-up, probably with RC drilling.*

2.3.3.10 Noungou

This polymetallic occurrence was also visited by WAI where evidence of orpailleur activity was seen along with scattered copper oxide mineralisation at surface.

Surface rock chip data has provided some very high mineralised values including 15g/t Au and 1.66% Cu, although the true nature of the mineralisation has yet to be determined.

WAI Comment: *WAI believes that at the present time, although of interest, this site is of low priority.*

2.3.3.11 Tyegana

WAI visited a number of occurrences within the Tyegana permit.

At the Tigana orpaillage site, smoky quartz with tourmaline were seen within several sub-parallel structures, hosted by greenschists, trending east-west. The area of mineralisation appears to cover some 500 x 150m.

Mineralisation appears to be concentrated in the veins, but may also be present in the host rocks, probably as thin stringers.

Some trenching has been undertaken, although these have often not properly reached bedrock, except where more resistant quartz veins are present.

At the Nyoptenga orpaillage site which is some 500 x 25m in area, very thin (a few centimetres), sub-vertical quartz veins are seen, as well as wider (20cm) blue-grey quartz veins, probably representing one, east-west trending structure, dipping to the south. Sampling of the veins have produced values up to 11g/t Au.

At the Soubeiga site, which extends for approximately 500 x 25m, two mineralised structures containing white quartz stringers have been identified, trending east-west and dipping to the north. Rock chip samples from vein material have given values up to 15g/t, whilst sampling of waste dumps has shown gold grades >1g/t, and thus there may be an opportunity for a metasomatic, low grade halo to the vein mineralisation.

WAI Comment: *the Tyegana sites are of interest, particularly if it can be demonstrated that the wallrocks contain low-grade mineralisation, thus expanding the potential targets.*

2.3.3.12 Other Permits & Exploration Summary

Preliminary results provided by the Company and not audited by WAI from the 2010 exploration programme are as follows:

- Taparko-Bouroum group of permits. No data available, although there are some interesting asssays from Baola permit, but still not enough to make clear conclusion.
- Group of Bissa-Kindo-Kaya permits. The main target Gougre at Namtenga permit has generated a number of positive intersections which confirmed continuity of low grade gold-copper porphyry style mineralisation hosted by propylites after undeformed diorites. Gougre at Gargo permit had been tested by 5 DD holes for potential of deep levels. Only two holes are ready at the moment with relatively modest results. A final conclusion is awaited.
- Banfora group of permits. The Labola property with a large vein suite has generated first assays with grades 1-3g/t per 1-4m intervals that provide a positive signature for the continuity of gold mineralisation. Mapping and soil sampling with ground IP gradient survey at Danfora and Labola permits will allow follow-up of this mineralisation.

- Ouaga group of permits. The Wayin property has revealed a very large north-south striking gold-copper anomaly in soils and in termite mounds with a total extension of more than 5km. Two RC profiles produced gold values between 0.5-1g/t and with very impressive silver grades at the level 50-100g/t for approximately 100m. It seems that Wayin is high volume/low grade silver-gold-copper porphyry target located in the outer portion of undeformed diorites subjected to propylitic alteration. The Mango property came up with a number of high grade intersections from quartz-tourmaline veins in diorites (For example: RC-7 19m@1.48g/t Au, RC-8 4m@15.67g/t Au, RC-9 2m @22.65g/t Au). The Gandi property has revealed good intersections in trenches or in RC holes (best trench_29 gave 22m@3.55g/t Au, RC-9 10m@2.58g/t Au) which mainly cross-cut two types of mineralisation: quartz veins and sulphide impregnation after altered aplite dykes.

Recently, the company has met some problems with a deficit of drill rigs available in Burkina Faso, coupled with a long turnaround in the sample preparation and assaying.

For 2011, an exploration budget of approximately US$24M has been projected, with the main part allocated for RC and DD drilling at the flagship properties like Namtega (Bissa Group), Labola (Banfora Group), Ankouma (Taparko-Bouroum Group) and Wayin (Ouaga Group).

For the Bissa deposit, a preliminary budget has been allocated of US$5M for infill, step out drilling, as well as for condemnation drilling in areas planed for infrastructure.

2.4 Bissa Exploration

2.4.1 Introduction

Exploration work was initiated by previous operators during the 1990's leading to the discovery of a small, near surface gold resource at Bissa Hill.

Further exploration programmes followed in 2004, (Jilbey Burkina - resampling and drilling to verify historical data), 2005-2006, 2007 and 2008 (Jilbey Burkina and HRG – trenching and RC and core drilling).

2.4.2 Sampling Method & Approach

High River staff uses industry best practices to collect, handle and assay trench and drilling samples from the Bissa Gold Project. Trenches and angled boreholes sample the Bissa gold mineralisation approximately normal to its strike and dip along sections spaced at between 20 and 80m.

Core assay samples were collected from half core sawn lengthwise or cut with a knife over intervals averaging 1m; sections of core were used to measure specific gravity at regular intervals using a volumetric method and a water immersion technique with wax coating.

The Abilab laboratories do not have recognised accreditation, but are part of the ALS Laboratory Group and implement quality assurance and quality control measures generally meeting international industry standards. Reverse circulation and core pulp samples were also submitted to ALS Chemex, Sudbury and SGS, Ouagadougou laboratories for check assaying. High River partly relied on the laboratory internal quality control measures, and also implemented strict external quality control measures consisting of inserting an appropriate frequency of control samples (blanks, field standards and certified reference standards).

2.4.3 Data Verification

As part of their on-going resource work, SRK conducted a series of routine verifications to ensure the reliability of the electronic data provided by High River, and was of the opinion that the electronic data are reliable, appropriately documented and exhaustive.

In general, the performance of the control samples inserted with samples submitted for assaying is acceptable. Few potential failures identified in the dataset relate to sample mislabelling and have been investigated by High River.

Ultimately, SRK was of the opinion that the analytical results delivered by Abilab are sufficiently reliable for the purpose of resource estimation.

Bissa - Zandkom Feasibility Drilling - October-November 2009 In late September 2009, HRG initiated a field work campaign to gather enough data to complete a feasibility study on the Bissa – Zandkom orebody. This included some 15,900m RC drilling, 1,600m diamond drilling and 1,700m of trenching. New workings were emplaced either as infill (down to 20 or 40m) to upgrade data density/resource classification or to extend known mineralised zones.

To-date, all of the RC and core drilling as well as the trenching data and assays have been received and integrated into the database.

WAI has remodelled the entire Bissa – Zandkom orebody, the results of which appear in this document.

> ***WAI Comment:*** *The planned exploration programme and budget for 2010 seems appropriate and properly costed.*

2.5 Bissa Resources

2.5.1 Introduction

Wardell Armstrong International (WAI) was commissioned by Nord Gold (Client) to prepare a Mineral Resource estimate in accordance with the guidelines of the JORC Code (2004) for the Bissa Au deposit, Burkina Faso.

This work follows on from previous resource estimation work undertaken by SRK in 2009 which is not reported further here.

2.5.2 Topography

The topography used in this study is understood to be based on 3000 photos from a 2006 aerial survey and 14,000 points from a ground survey in 2008. Borehole collars subsequently surveyed were found generally to be within 30cm of the topographic surface constructed from the GPS survey. The survey is in two parts; the main Bissa area to the northeast and the Boken area separate to the southwest (Figure 2.18).

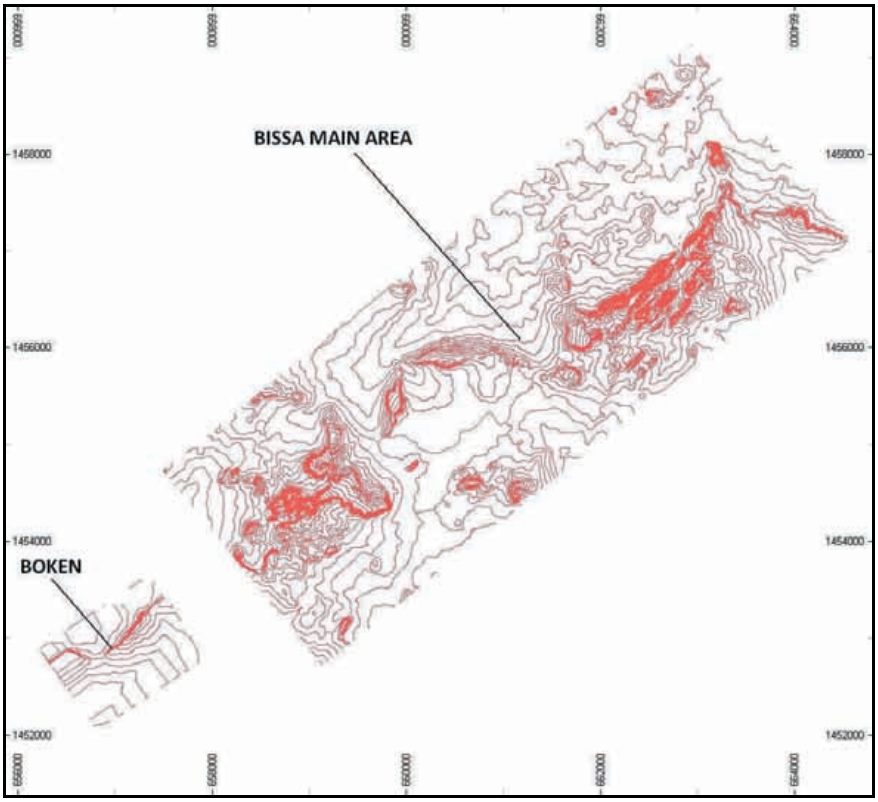

Figure 2.18: Plan View of Topographic Survey of Bissa Area

2.5.3 Sample Database

Sample data is made up of diamond drillholes (29,285m), reverse circulation drillholes (68,442m) and trenches (14,800m). Drillhole sections are spaced between 20 and 40m apart.

Table 2.3: Summary of Bissa Exploration Campaigns

Type	**Diamond Drilling**							
Year	1998	2004	2005	2006	2007	2008	2009	2010
Number	30	38	59	28	10	51	10	-
Min Length	42.00	25.50	61.00	75.50	106.50	57.00	135.00	-
Max Length	239.61	112.50	227.00	203.00	260.50	229.00	206.00	-
Total Length	3371.58	2170.50	8839.69	4179.25	1650.00	7340.25	1733.80	-
Mean Length	112.39	57.12	149.83	149.26	165.00	143.93	173.38	-
Type	**Reverse Circulation**							
Year	-	2004	2005	2006	2007	2008	2009	2010
Number	-	45	211	17	4	240	242	8
Min Length	-	20.00	50.00	58.00	87.00	10.00	24.00	97.00
Max Length	-	102.00	162.00	132.00	138.00	137.00	130.00	120.00
Total Length	-	2614.00	23495.00	1859.00	468.00	20865.00	18248.00	893.00
Type	**Trenches**							
Year	-	2004	2005	2006	2007	2008	2009	2010
Number	-	40	33	4	3	41	38	1
Min Length	-	20.00	19.60	100.20	180.00	51.50	25.00	150.00
Max Length	-	600.00	223.50	135.30	240.00	216.00	130.50	150.00
Total Length	-	3661.20	2842.50	475.50	660.00	4661.50	2350.10	150.00

2.5.4 Mineralised Zone Interpretation

Mineralised zones are generally steeply dipping towards the northwest and have been constructed based on a 0.5g/t Au cut-off. Mineralised zones have been combined into domains and three broad groups to aid in statistical and geostatistical interpretation.

A plan view of the location of the mineralised zones is shown in Figure 2.19 and isometric views of the mineralised zones are shown in Figure 2.20.

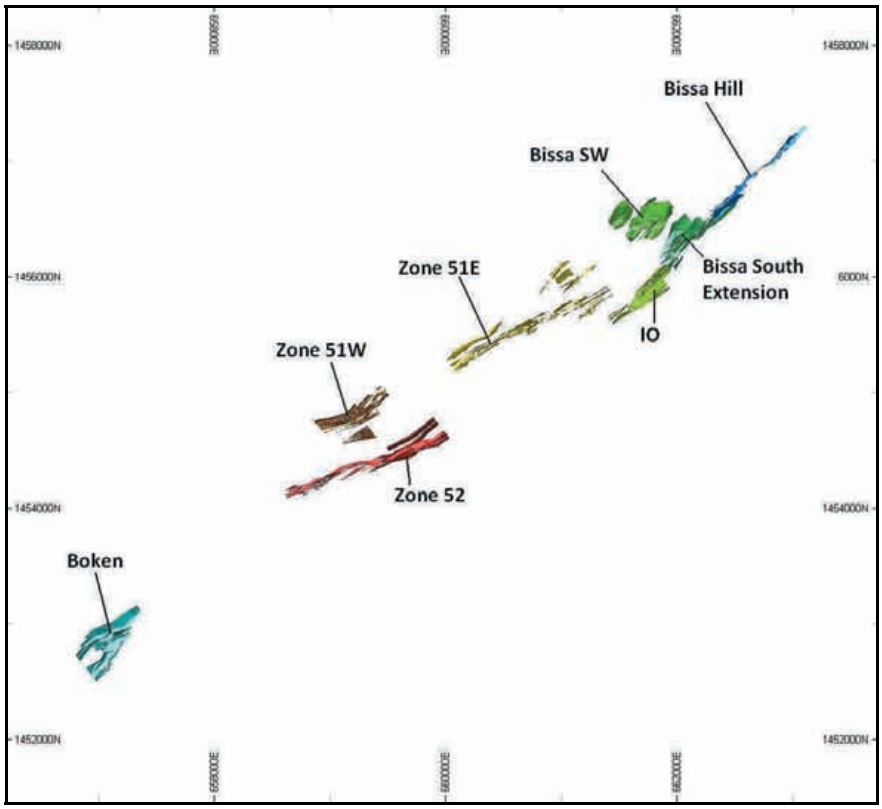

Figure 2.19: Plan View of the Location of Mineralised Zones

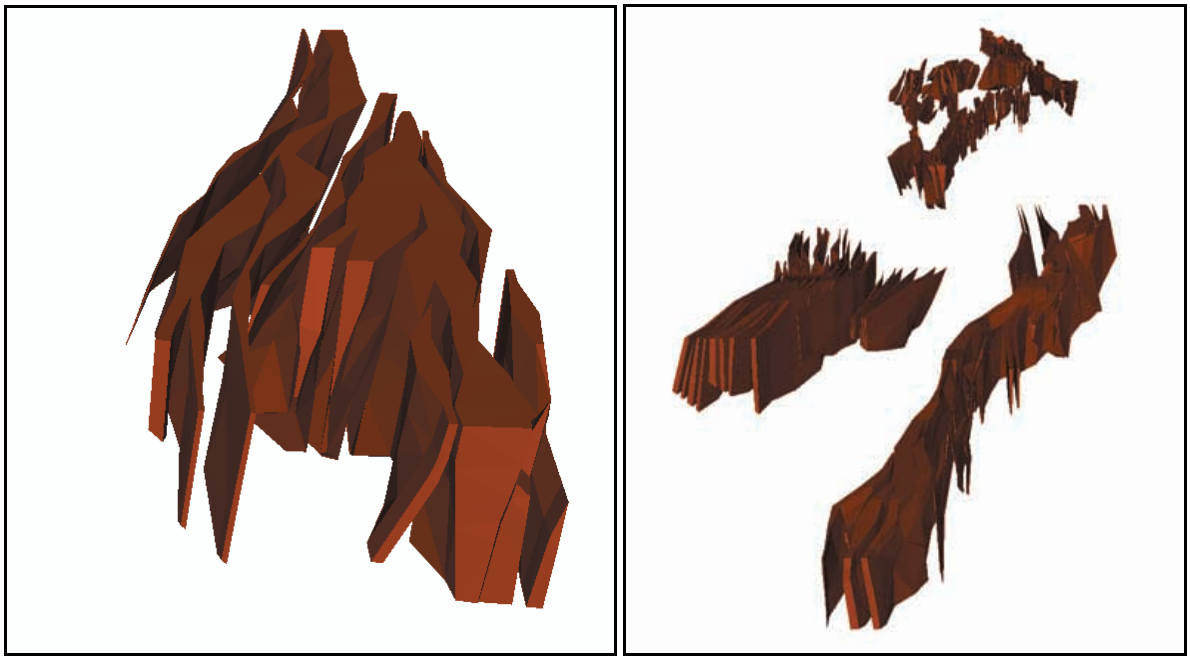

Figure 2.20: Isometric View looking North East of Mineralised Zone Wireframes based on a cut off grade of 0.5g/t Au in Boken Area (left) and Main Bissa Area (right)

2.5.5 Geostatistics

The sample data indicates approximately distinct log-normal population of gold grades within the different lithologies, as well as between the identified mineralized zones. A geostatistical study of 1m diamond-drillhole composites by mineralised zone group indicated variogram ranges of approximately 10m x 20m x 30m (along strike/across strike/down dip) for the mineralised zones in Group 1 (see Figure 2.21), 37m x 40m x 42m for Group 2 and 50m x 69m x 70m for Group 3.

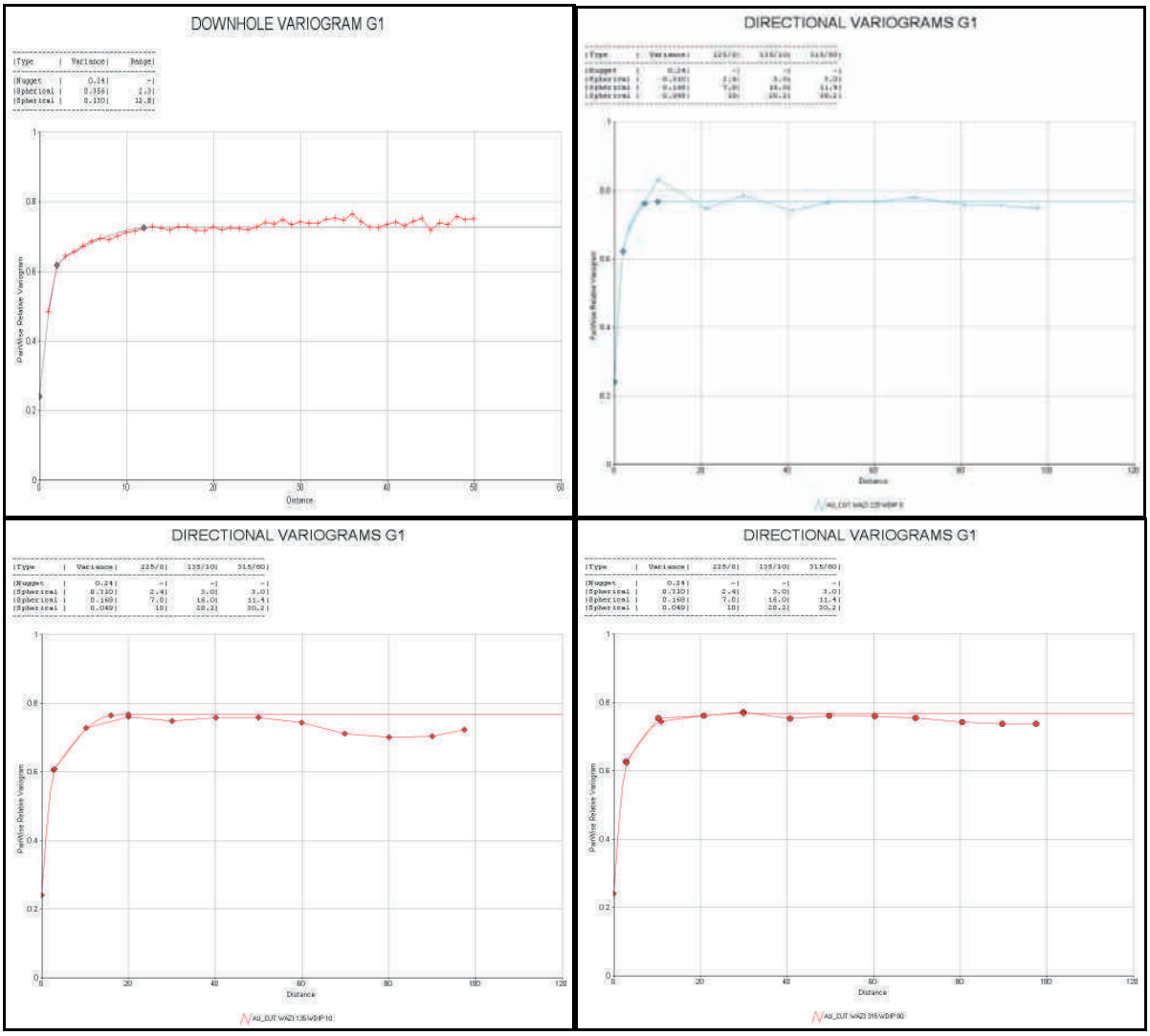

Figure 2.21: Variogram Models for Group 1

2.5.6 Block Model

A volumetric block model was set up with a 10m x 20m x 5m block size. Density values were calculated from a density database by weathering type. Density values used were 2.19t/m^3 for Laterite, 2.03t/m^3 for Saprolite, 2.31t/m^3 for Saprock and 2.73t/m^3 for Fresh rock (see Table 2.4).

Table 2.4: Densities

Weathering Zone	Number of Samples	Minimum	Maximum	Mean
Laterite	267	1.14	2.95	2.18
Saprolite	7,087	1.07	3.31	2.03
Saprock	1,955	1.07	3.08	2.31
Fresh	2,902	1.57	3.69	2.73

2.5.7 Grade Estimation

Gold grades were estimated within the mineralised zones using ordinary kriging. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes. A summary of the Kriging plan is shown below in Table 2.5.

Table 2.5: Summary of Kriging Plan

	Group 1	Group 2	Group 3	Waste
Search 1(along strike x down dip x cross strike)	20 x 20 x 27	25x 28 x 27	45 x 46 x 33	138 x 99 x 142
Search 2 (along strike x down dip x cross strike)	30 x 30 x 40.5	37.5 x 42 x 40.5	67.5 x 69 x 49.5	-
Search 3 (along strike x down dip x cross strike)	200 x 200 x 270	250 x 280 x 270	450 x 460 x 330	-
Discretisation (x/y/z)	3/3/1			3/3/1
Min no. composites (search 1/2/3)	4/4/1			4
Max no. composites (search 1/2/3)	24/24/24			24
Max no. composites per hole	3/3/3			3

NB –
1) Each ore domain has been interpolated separately using only composites contained within that ore domain
2) Directional anisotropy has been used during interpolation to orient the search ellipses and reflect local variation in strike and dip

2.5.8 Model Validation

A model validation process included the examination of block model versus composites, and the building up of a model grade profile, to compare average grades on vertical slices, as derived from the composites directly, as well as from interpolated model grades. An example Swath plot from this process is shown below in Figure 2.22.

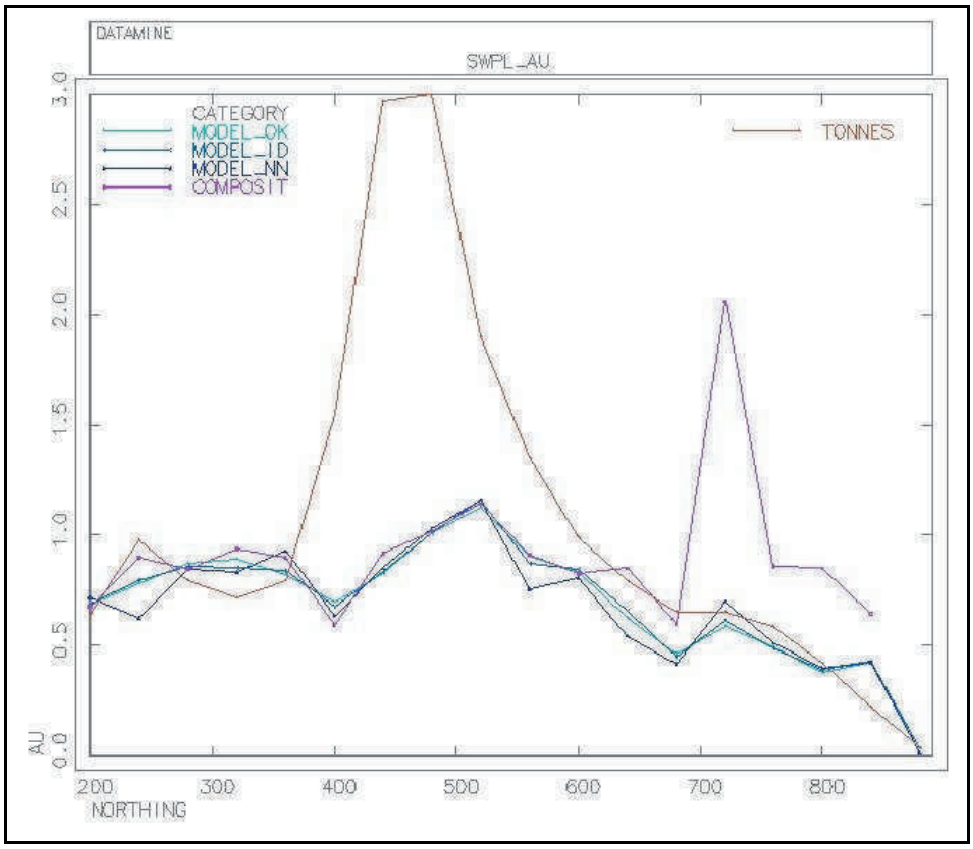

Figure 2.22: Example SWATH Plot; Group 3 by Northing

2.5.9 Resource Classification

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Measured* resources were 20m x 20m, for *Indicated* resources they were 40m x 40m (along-strike x down-dip). All of the modelled resources, covered by 80m x 80m drillings grids, have been classified as *Inferred*. Figure 2.23 shows the resource classification in the Bissa Hill Zone.

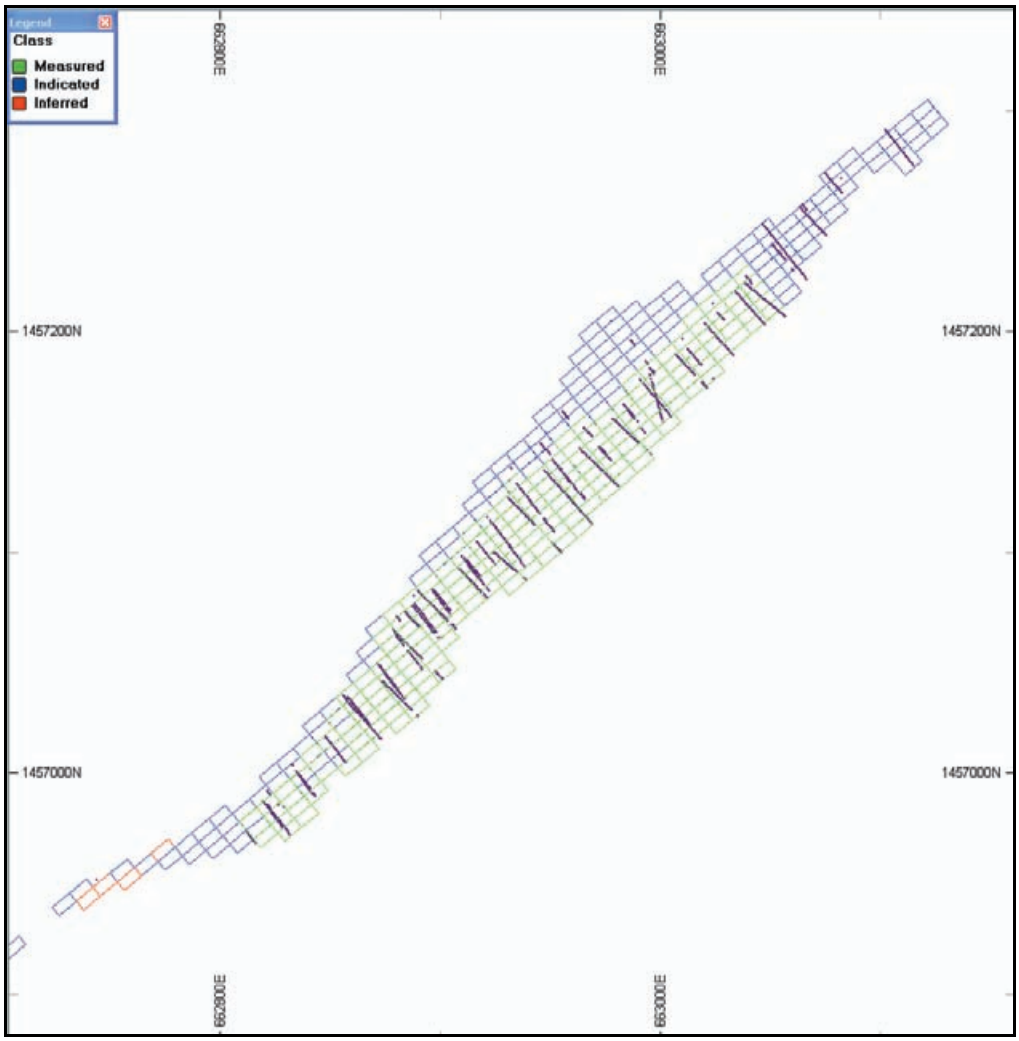

Figure 2.23: Resource Classification for Bissa Hill Zone – Plan View

2.5.10 Resource Evaluation

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in Table 2.6 to Table 2.8 below, by rock type, for three different cut-off grade levels: 0.5g/t, 0.8g/t and 1.1g/t.

Table 2.6: Bissa Mineral Resource Estimate – Total in-situ Resources OK– Whole Deposit – At COG of 0.5 g/t Au (WAI, 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Ore Type			Laterite	Saprolite	Saprock	Fresh	TOTAL
Cut Off Grade			**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Measured	**Tonnage (kt)**		-	467	22	8	**497**
	Au (g/t)		-	3.39	2.58	1.99	**3.33**
	Metal	**kg**	-	1583.7	57	16	**1,657**
		oz	-	50,916	1,844	502	**53,262**
Indicated	**Tonnage (kt)**		982	29,613	7,320	19,655	**57,570**
	Au (g/t)		0.75	1.48	1.45	1.30	**1.40**
	Metal	**kg**	736.2	43,827	10,615	25,552	**80,730**
		oz	23,668	1,409,085	341,266	821,499	**2,595,518**
Measured + Indicated	**Tonnage (kt)**		**982**	**30,080**	**7,343**	**19,663**	**58,068**
	Au (g/t)		**0.75**	**1.51**	**1.45**	**1.30**	**1.42**
	Metal	**kg**	**736.2**	**45,411**	**10,672**	**25,567**	**82,386**
		oz	**23,668**	**1,460,001**	**343,110**	**822,001**	**2,648,780**
Inferred	**Tonnage (kt)**		39	828	299	4,491	**5,657**
	Au (g/t)		0.69	1.49	1.15	1.15	**1.20**
	Metal	**kg**	26.9	1,233	343	5,165	**6,768**
		oz	864	39,652	11,039	166,054	**217,609**

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 2.7: Bissa Mineral Resource Estimate – Total in-situ Resources OK – Whole Deposit – At COG of 0.8 g/t Au (WAI 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Ore Type			Laterite	Saprolite	Saprock	Fresh	TOTAL
Cut Off Grade			0.8	0.8	0.8	0.8	0.8
Measured	Tonnage (kt)		0	463	22	8	**493**
	Au (g/t)		0	3.41	2.58	1.99	**3.35**
	Metal	kg	0	1579	57	16	**1,652**
		oz	0	50,771	1,844	502	**53,117**
Indicated	Tonnage (kt)		292	22,678	5,128	13,780	**41,878**
	Au (g/t)		1.03	1.73	1.79	1.57	**1.68**
	Metal	kg	301	39,233	9,179	21,635	**70,348**
		oz	9,665	1,261,363	295,110	695,569	**2,261,707**
Measured + Indicated	Tonnage (kt)		**292**	**23,141**	**5,150**	**13,788**	**42,371**
	Au (g/t)		**1.03**	**1.76**	**1.79**	**1.57**	**1.70**
	Metal	kg	**301**	**40,812**	**9,236**	**21,650**	**71,999**
		oz	**9,665**	**1,312,133**	**296,955**	**696,071**	**2,314,824**
Inferred	Tonnage (kt)		9	716	177	2,919	**3,821**
	Au (g/t)		0.91	1.62	1.48	1.42	**1.46**
	Metal	kg	8	1,161	262	4,146	**5,577**
		oz	263	37,310	8,409	133,282	**179,264**

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 2.8: Bissa Mineral Resource Estimate – Total in-situ Resources OK – Whole Deposit – At COG of 1.1 g/t Au (WAI 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Ore Type			Laterite	Saprolite	Saprock	Fresh	TOTAL
Cut Off Grade			1.1	1.1	1.1	1.1	1.1
Measured	Tonnage (kt)		0	456	20	8	**484**
	Au (g/t)		0	3.45	2.78	1.99	**3.40**
	Metal	kg	0	1572	55	16	**1,643**
		oz	0	50,550	1,755	502	**52,807**
Indicated	Tonnage (kt)		60	15,185	3,429	8,405	**27,079**
	Au (g/t)		1.48	2.12	2.22	1.98	**2.09**
	Metal	kg	88	32192	7612	16643	**56,535**
		oz	2,840	1,034,980	244,716	535,070	**1,817,606**
Measured + Indicated	Tonnage (kt)		**60**	**15,640**	**3,448**	**8,413**	**27,561**
	Au (g/t)		**1.48**	**2.16**	**2.22**	**1.98**	**2.11**
	Metal	kg	**88**	**33764**	**7666**	**16658**	**58,176**
		oz	**2,840**	**1,085,530**	**246,471**	**535,573**	**1,870,414**
Inferred	Tonnage (kt)		0	531	110	1,621	**2,262**
	Au (g/t)		0	1.85	1.82	1.81	**1.82**
	Metal	kg	0	983	201	2934	**4,118**
		oz	0	31,604	6,454	94,327	**132,385**

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

2.6 Other Resources

2.6.1 Introduction

In 2010, WAI revisited several of the exploration projects in the vicinity of Bissa with a view to preparing initial resource models in compliance with JORC (2004).

This study resulted in resource models being prepared for Bouly, Gougre and Zinigma. Details of these are provided below.

2.6.2 Bouly

The sample database is made up of 8,943.5m of RAB drilling, 7,399m of Air Core drilling, 164m of RC drilling, 126m of diamond drilling and 1,042.7m of trenching.

A mineralised zone wireframe (Figure 2.24) was constructed to a 0.3g/t Au cut-off as defined by contiguous length analysis.

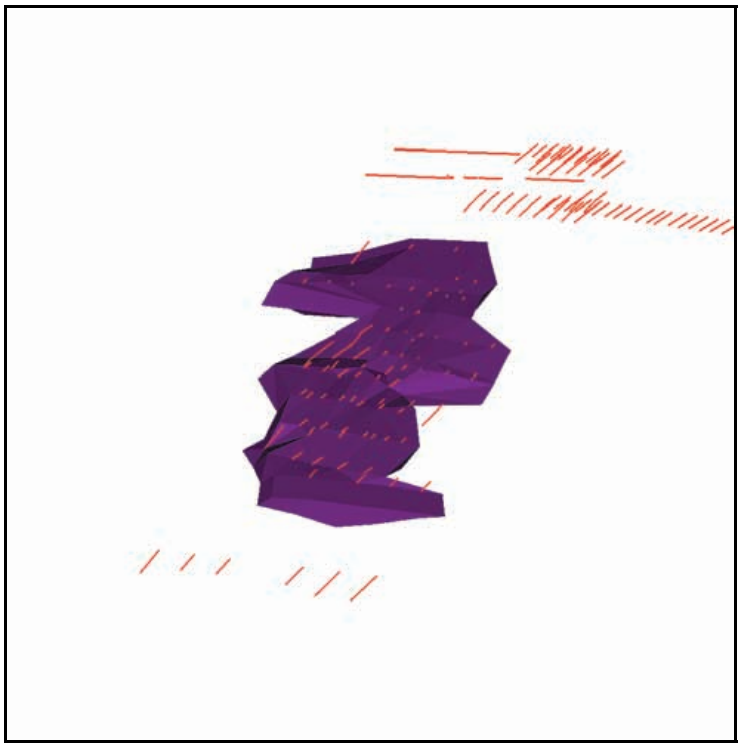

Figure 2.24: Bouly Isometric View looking Northeast of Mineralised Zone Wireframe Based on a Cut-off Grade of 0.3g/t Au with Drillhole Traces

The sample data indicates approximately log-normal population of samples within the defined mineralisation zone. A geostatistical study of 3m composites was carried out within the mineralised zone. Variogram models were constructed for the highly weathered Saprolite, the medium weathered Saprock and the transition zone/fresh rock.

Gold grades were estimated within the mineralised zone using Ordinary Kriging as the main estimator. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes.

The criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Inferred* resources were 80m x 80m (along-strike x down-dip).

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in Table 2.9 below, for four different cut-off grade levels: 0.3g/t, 0.6g/t, 0.8g/t and 1.0g/t Au. The resource is also shown at 0.6g/t Au COG by rock type (Table 2.10).

Table 2.9: Bouly Mineral Resource Estimate – Total in-situ Resources OK– Whole Deposit (WAI 01 November 2010) (in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.3	0.6	0.8	1.0
Inferred	Tonnage (kt)		16,571	9,607	3,680	1,143
	Au (g/t)		0.68	0.82	1.02	1.35
	Metal	kg	11,315	7,877	3,762	1,544
		oz	363,793	253.261	120,966	49,653

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 2.10: Bouly Mineral Resource Estimate By Rock Type At COG of 0.6g/t Au (WAI, 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Ore Type			Laterite	Saprolite	Saprock	Transition	TOTAL
Cut Off Grade			**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
Inferred	**Tonnage (kt)**		0	6,014	2,354	1,239	9,607
	Au (g/t)		0	0.79	0.92	0.76	0.82
	Metal	**kg**	0	4,779	2,158	941	7,877
		oz	0	153,636	69,379	30,246	253,261

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

2.6.3 Gougre

Sample data is made up of diamond drillholes (6,367m) and trenches (515m). Drillhole sections are spaced between 40 and 80m apart.

The mineralised zone is generally steeply dipping towards the northeast with an average strike approximately northwest to southeast. The mineralised zone has been constructed based on a 0.5g/t Au cut-off (Figure 2.25).

The sample data indicates approximately log-normal populations of gold grades within the different lithologies. A geostatistical study of 0.6m composites by lithology was carried out for Transition zone material and Fresh rock.

A volumetric block model was set up with a 10m x 20m x 5m block size. Density values were calculated from a density database by weathering type. Density values used were 2.34t/m^3 for Saprolite, 2.55t/m^3 for Saprock, 2.75t/m^3 for Transition zone and 2.78t/m^3 for Fresh rock.

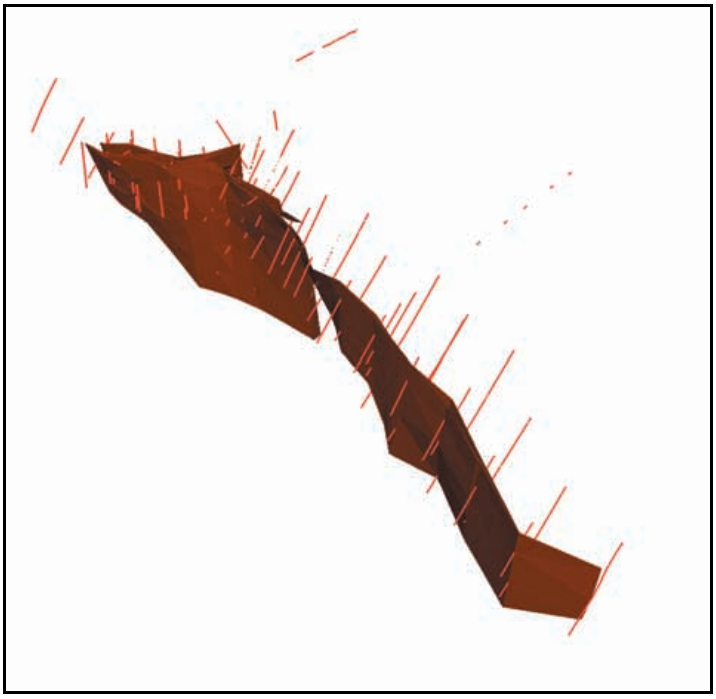

Figure 2.25: Gougre Isometric View Looking North of Mineralised Zone Wireframe Based on a Cut-off Grade of 0.5g/t Au with Drillhole Traces

Gold grades were estimated within the mineralized zones using ordinary Kriging as the main estimator. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes.

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *Inferred* resources were 40m x 40m (along-strike x down-dip).

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in Table 2.11 for four different cut-off grade levels: 0.5g/t, 1.0g/t, 1.5g/t and 2.0g/t Au. The resource is also shown at 0.5g/t Au COG by rock type (Table 2.12).

Table 2.11: Gougre Mineral Resource Estimate – Total in-situ Resources OK– Whole Deposit (WAI, 01 November 2010) (in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.5	1.0	1.5	2.0
Inferred	Tonnage (kt)		2,930	2,726	2,223	1,538
	Au (g/t)		2.39	2.52	2.82	3.33
	Metal	kg	7,002	6,869	6,269	5,122
		oz	225,123	220,844	201,544	164,680

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

Table 2.12: Gougre Mineral Resource Estimate By Rock Type At COG of 0.5g/t Au (WAI, 01 November 2010) (in accordance with the guidelines of the JORC Code (2004)

Ore Type			Laterite	Saprolite	Saprock	Fresh	TOTAL
Cut Off Grade			0.5	0.5	0.5	0.5	0.5
Inferred	Tonnage (kt)		0	0	266	2,670	2,936
	Au (g/t)		0	0	2.37	2.40	2.39
	Metal	kg	0	0	629	6,394	7,023
		oz	0	0	20,236	205,572	225,808

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery. 4. Inaccuracies may be due to rounding.

2.6.4 Zinigma

The sample database is made up of 11,076m of RAB drilling, 6,223m of RC drilling and 183m of trenching.

The mineralised zone (Figure 2.26) is interpreted as being shallowly dipping towards the southwest with an average strike approximately east-southeast to west-northwest. The mineralised zone was constructed on a 0.3g/t Au cut-off.

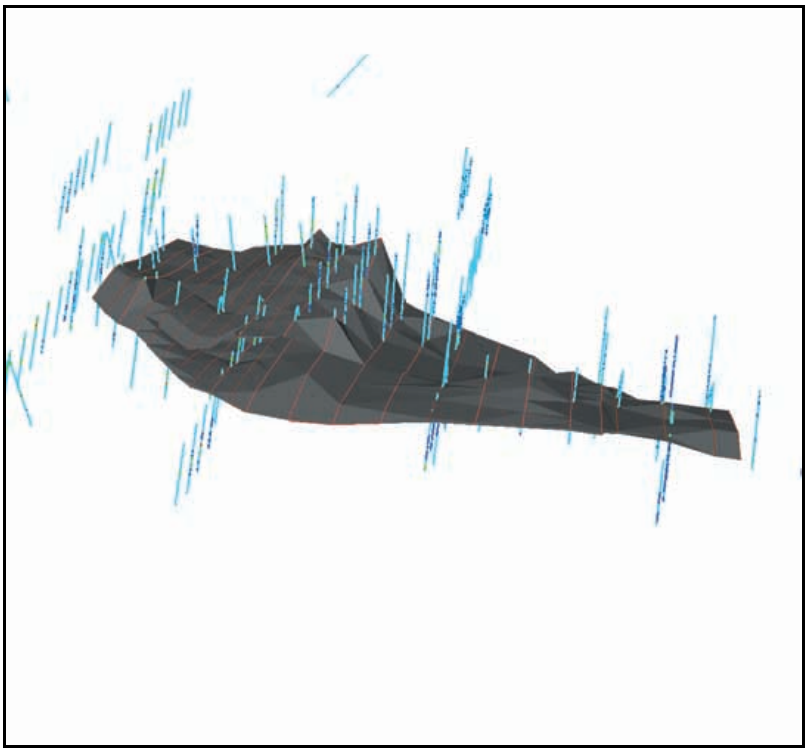

Figure 2.26: Zinigma Isometric View looking North of Mineralised Zone Wireframe Based on a Cut-off Grade of 0.3g/t Au with Drillhole Traces

The sample data indicates approximately log-normal population of samples within the defined mineralisation zone. A geostatistical study of 1.0m composites was carried out within the mineralised zone.

A volumetric block model was set up with a 10m x 10m x 5m block size. Density values were estimated using average density figures from the Bissa Au deposit using weathering type as a basis for comparison as no density calculations have been carried out at Zinigma.

Gold grades were estimated within the mineralized zones using Ordinary Kriging as the main estimator. Alternative grades were also interpolated using inverse distance weighting and nearest neighbour estimations for validation purposes.

Criteria for defining resource categories were derived from the geostatistical studies. Key drillhole spacings for the allocation of *inferred* resources were 66m x 55m (along-strike x down-dip).

The final block model was used as the basis for resource evaluation. Summary results of the evaluation of the in-situ resources are shown in Table 2.13 below, for four different cut-off grade levels: 0.5g/t, 1.0g/t, 1.5g/t and 2.0g/t Au.

Table 2.13: Zinigma Mineral Resource Estimate – Total in-situ Resources OK (WAI, 01 November 2010)
(in accordance with the guidelines of the JORC Code (2004)

Cut Off Grade			0.5	1.0	1.5	2.0
Inferred	Tonnage (kt)		3,687	1,854	839	361
	Au (g/t)		1.17	1.60	2.06	2.51
	Metal	kg	4,317	2,959	1,725	904
		oz	138,792	95,150	55,465	29,071

Notes:
1. Mineral Resources are not reserves until they have demonstrated economic viability based on a Feasibility study or pre-feasibility study. 2. Mineral Resources are reported inclusive of any reserves. 3. The contained Au represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery.

2.7 Mining

2.7.1 Introduction

The Bissa deposits are still in the exploration stage, although a Feasibility Study by Genivar has been prepared in order to satisfy the requirements for the Mining Licence.

The operation envisages open pit mining at an annual rate of approximately 3Mtpa, utilising drill & blast with a truck and shovel approach to ore and waste haulage. Processing will be by CIL.

WAI has used its own July 2010 resource estimate to provide an optimised reserve and mine schedule for the operations.

2.7.2 WAI Pit Optimisation

2.7.2.1 Introduction

As a continuation of Mineral Resource modelling of Bissa deposit WAI has undertaken a pit optimisation using the Mineral Resource Block Model prepared by WAI and updated in July 2010. The model was depleted to contain only those Mineral Resources, which have not been extracted on 01.11.2010. WAI used NPV Scheduler® software for the optimisation applying conceptual financial and technical parameters, provided by the Client.

NPV Scheduler® programme comprises three components, the ultimate pit shell generator, a push back generator and the optimising scheduler. The ultimate pit generator is the first stage of the optimisation process and utilises a Lerchs-Grossman algorithm to generate an economic open pit shell from the resource block model based on the initial input parameters.

The objective of this study was to obtain an optimised pit shell containing economically viable mineral resources, which therefore will provide an estimate of ore reserves. This estimate of ore reserves will form a basis for the mining schedule.

Prior to importing into NPV Scheduler®, the Mineral Resource block model was expanded by adding waste cells. A density of 2.73t/m^3 for fresh rock; 2.03t/m^3 for Saprolite; 2.31t/m^3 for saprock; 2.18t/m^3 for laterites was assumed for each new waste cell based on provided wireframes of weathering horizons. Zero grade values for gold were also assigned to each waste cell.

2.7.2.2 Pit Optimisation Parameters

The metal price used for the pit optimisation was US$900/oz Au. The major Key Performance Indicators such as mining and processing costs, and other parameters, considered during the optimisation, have been supplied by the Client within the Feasibility Study, performed by Genivar. WAI has reviewed the Feasibility Study and

technical data, obtained from the Client both during site visit and by request, and found the following technical and economical parameters to be the best suitable for the optimisation purposes (Table 2.14).

Table 2.14: WAI Pit Optimisation Parameters

Parameter	Units	Value
Metal Price (Au)	US$/oz	900
Metal Price (Au)	US$/g	28.94
Production rate	ktpa	3,000
Discount Rate	%	11.2
Dilution	%	6
Mining Recovery Factor	%	97
Mining Cost (Fresh Ore)	US$/t	3.23
Mining Cost (Weathered Ore)	US$/t	2.43
Mining Cost (Waste)	US$/t	1.9
Weathered Ore Processing Cost (per t of processed ore)	US$/t	13.79
Fresh Ore Processing Cost (per t of processed ore)	US$/t	21.22
Gold Recovery (Weathered and Fresh ore)	%	91.5/86.5
Final Pitwall Angle	Degrees	Various for 4 regions

WAI Comment: *mining costs for weathered and fresh ore were estimated within the Genivar Feasibility Study. WAI is of an opinion that these costs are likely to be overestimated. As no mining operation has commenced at the Bissa deposit, the actual mining costs are not available, therefore the Genivar estimates were used for optimisation purposes.*

One of the most crucial geotechnical parameters is the overall pit slope angle. The shallower the overall slope angle, the more waste cells that are included in the pit design. This has a great effect on the stripping ratio and hence economic viability. A detailed pitwall stability assessment was performed by Piteau Associates. WAI reviewed this study and separated the recommended slope angles into 4 groups, each of these groups have a set of estimated slope angles for weathered and fresh rock. A summary of the recommended slope angles used in the optimisation is given in Table 2.15 below.

2.7.2.3 Pit Optimisation Results

The results of the WAI Base case optimisation as calculated by NPV Scheduler® are presented in Table 2.16. The base case optimised pit shell 3D image is shown in Figure 2.27.

Only the *Measured* and Indicated Mineral Resources were utilised in the optimisation as only these categories of Mineral Resources can become *Ore Reserves*.

Table 2.15: Pit Slope Parameters

Area	Azimuth	Weathered Rock	Fresh Rock
Zone 52a	300	43	52
	0	43	52
	120	37	40
	180	40.5	49
Zone 51W	110	38	52
	170	37	48
	230	37	51
	290	34	40
	350	37	51
	20	38	53
	80	36	50
Zone 51E Zone 53	115	38	47
	175	37	45
	265	37	40
	295	36	45
	355	37	40
	85	39	47
Bissa South Ext. Bissa Hill Bissa SW	280	37	47
	340	41	53
	10	37	40
	70	41	53
	100	37	40
	160	38	49
	190	37	46

Table 2.16 Bissa Deposit Open Pit Optimisation Results (WAI 2010, COG=0.62g/t Au)

Rock (kt)	Waste (kt)	Ore Total (kt)	Au Grade (Total Ore, g/t)	Au (kg)	Stripping Ratio (t/t)	Weathered Ore (kt)	Weathered Ore Au Grade (g/t)	Fresh Ore (kt)	Fresh Ore Au Grade (g/t)
135,784	106,145	29,639	1.70	50,357	3.58	23,101	1.52	6,539	2.32

Note: 6% dilution and 97% mining recovery applied *Waste is given inclusive of *Inferred* material

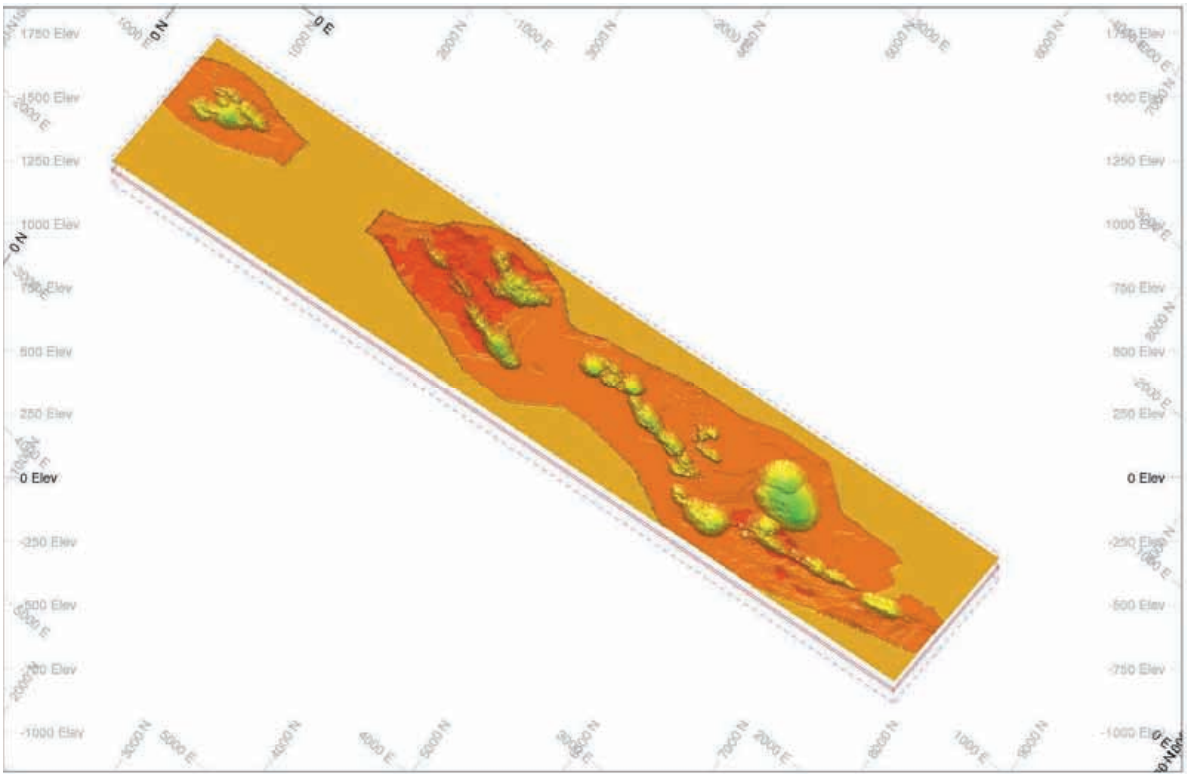

Figure 2.27: 3D View of WAI Optimised Pit

2.7.3 WAI Reserve Estimation

Based on the described above open pit optimisation, WAI estimated Bissa open pit *Ore Reserves*. Detailed results of this estimation are given in Table 2.17 below.

Table 2.17: Bissa Open Pit Ore Reserves as of 01.11.2010 (WAI, COG=0.62g/t Au) (in Accordance with the Guidelines of the JORC Code (2004)

Ore/Rock Type	Ore (kt)	Au (kg)	Au (g/t)
Weathered Proven	-	-	-
Weathered Probable	22,729	35,896	1.58
Fresh Proven	487	1,572	3.23
Fresh Probable	5,947	13,950	2.35
Weathered Proven and Probable	22,729	35,896	1.58
Fresh Proven and Probable	6,434	15,521	2.41
Total Proven and Probable	**29,163**	**51,417**	**1,76**
Waste*	106,621		

Note-
Mining Factors of 6% Dilution and 97% Mining Recovery applied. Waste is given inclusive of *Inferred* material, which is also treated as waste

A summary of the results is given in Table 2.18 below.

Table 2.18: Bissa Reserve Pit Summary (WAI, 01.07.2010)

Ore (Mt)	Waste (Mt)	Strip Ratio	Total Rock (Mt)
29.2	106.6	3.67	135.8

Note:
Ore Cut Off of 0.62g/t Au applied
Waste is given inclusive of *Inferred* material at ore grades

2.7.4 LOM Mining Schedule

After optimised pitshells were generated for each of the optimisation runs, WAI has designed a mining schedule for the Base Case.

The schedule is targeting 3Mtpa with a ramp-up of production during first year (year 1 production equals 0.5 of full production rate – 1.5Mtpa). The reserve statement was prepared by WAI as of 01.11.2010. LOM schedule targets to maintain consistent total volume of ore (at grade, equal to average grade for the deposit) and waste extracted, providing the required planed annual ore tonnage as well. During the first two years, mining is focused on extraction of high grade material.

Table 2.19 below describes mining schedule for the base case open pit shell designed by WAI.

Table 2.19: Bissa Deposit LOM Mining Schedule (WAI 2010)

Year		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	*Total*
Rock	kt	6,642	13,510	12,715	12,958	13,041	12,866	14,560	13,696	15,583	13,746	6,467	135,784
Waste	kt	5,166	10,558	9,763	10,005	10,091	9,913	11,609	10,744	12,632	10,793	5,347	106,621
Ore	kt	1,476	2,952	2,952	2,953	2,950	2,953	2,951	2,952	2,951	2,953	1,120	29,163
Au	g/t	2.14	1.87	1.79	1.88	1.61	1.52	1.52	1.65	2.02	1.57	2.38	1.76
Au	kg	3,162	5,516	5,291	5,551	4,763	4,492	4,476	4,883	5,975	4,637	2,671	51,417
Stripping Ratio	t/t	3.50	3.58	3.31	3.39	3.42	3.36	3.93	3.64	4.28	3.66	4.77	3.66
Weathered Ore	kt	1,476	2,584	2,426	2,023	2,844	2,334	2,473	1,959	2,730	1,675	205	22,729
Weathered Ore Au Grade	g/t	2.14	1.80	1.60	1.51	1.58	1.36	1.37	1.05	2.07	1.16	2.07	1.58
Fresh Ore	kt	-	368	525	930	107	618	478	993	221	1,278	915	6,434
Fresh Ore Au Grade	g/t	-	2.36	2.67	2.68	2.43	2.15	2.28	2.85	1.46	2.10	2.46	2.41

Note: 6% dilution and 97% mining recovery applied. Waste is given inclusive of *Inferred* material, which is also treated as waste

2.7.5 Mining Operations

The gold deposits at Bissa are near surface and suitable for conventional truck and shovel open pit mining. Ore will be hauled from the pits and taken to a run of mine (ROM) stockpile where it will be dumped prior to being tipped in the primary crusher.

The topsoil and any sensitive material will be removed and stockpiled, to be used in the rehabilitation of mine site and waste from the pits will be mainly composed of overburden (laterite, argillite and saprolite) and will be dumped near the topsoil stockpile. The two waste dumps will be located near the pits on the south side.

The recent work by WAI on a new resource and reserve estimate suggests a much larger mine throughput than the previous planned project at some 1.4Mtpa.

As such, at this time, it is not possible to be prescriptive with regards to equipment selection and personnel requirements.

2.7.6 Infrastructure

The basic planned infrastructure for the Bissa Hill open pit gold mining project is likely to remain similar to that illustrated in Figure 2.28 below.

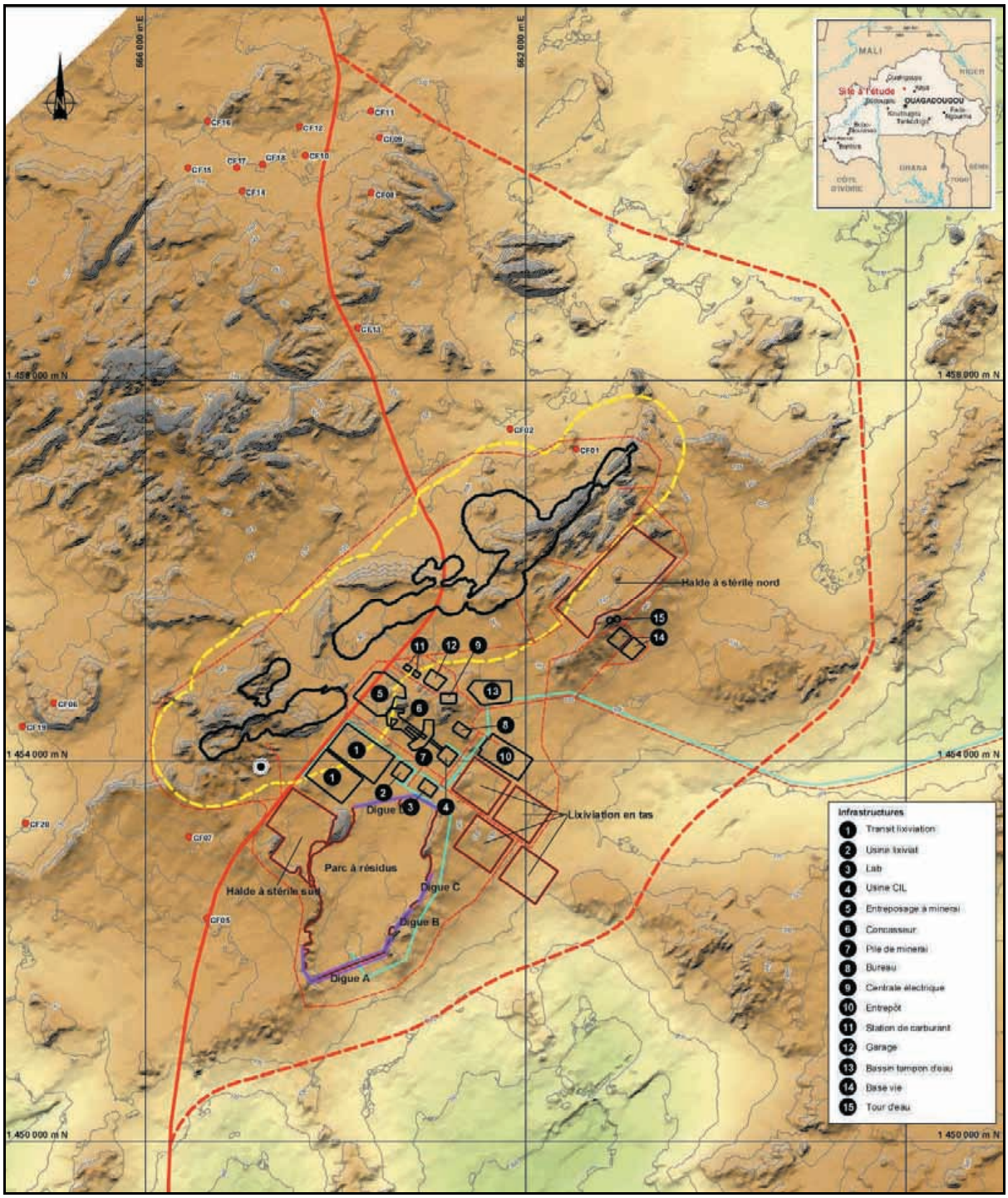

Figure 2.28: General Proposed Infrastructure at Bissa Hill

2.8 Processing

2.8.1 Introduction

The mineralisation of the various Bissa deposits is categorised into five different ore types, depending on the degree of weathering and oxidation. These are referred to as Laterite, Highly Weathered (HW), Moderately Weathered (MW), Slightly Weathered (SW) and Primary types.

In 2009, a programme of testwork undertaken as part of a Pre Feasibility study evaluated the heap leach potential of the Bissa laterite and weathered ore types. The focus of the project has now changed and Jibley (HRG) is now undertaking a Feasibility Study based on gold recovery using carbon in leach processing (CIL).

2.8.2 AMMTEC Pre Feasibility Study Testwork

2.8.2.1 Test Samples

Samples of the mineralisation from the Bissa deposits were sent to AMMTEC Ltd (Australia) for a programme of laboratory testwork in 2009 as part of the Pre-feasibility Study and Feasibility study. Ten samples of material totalling 1,897kg, were submitted.

The tests performed by AMMTEC consisted of head sample analysis, a characterisation of the response to crushing, accelerated bottle rolls tests, percolation tests, column tests to determine the amenability of the ore to heap leaching and preliminary cyanidation tests at a grind size of 80% passing 75 microns.

2.8.2.2 Heap Leach Testwork

The results of the accelerated bottle rolls tests, undertaken to determine the suitability of the ores to heap leaching, are summarised as follows:

- Coarse crush size cyanidation leach gave 26-93% extraction;
- Leaching rates/ultimate extraction increased with increasing fineness; and
- Lime (with one exception) and sodium cyanide consumption levels were low, <1.0kg/t.

Agglomeration and percolation testing indicated that each ore sample required agglomeration with cement for effective column leach testwork. Gold recovery ranged from 54.9% Bissa South (MW) to 92.3% (Laterite Zone 51).

2.8.2.3 Cyanidation Testwork on Ground Samples

Cyanidation Tests were undertaken on each sample at a grind size of 80% passing 75 microns, at 40% solids and using 0.1% NaCN at a pH of 10.5.

The results indicated that direct, whole ore cyanidation via a typical CIL/CIP milling and cyanidation process route would result in a relatively high gold extraction level of >84.5% for 7 out of the 10 samples tested. The exceptions were 60.0%, 79.9% and 75.9%.

Lime consumption was generally low, less than 1.0kg/t, but varied between 0.28 and 2.66kg/t. Sodium cyanide consumption was generally low, less than 1.0kg/t, but varied between 0.53 and 1.58kg/t.

2.8.3 Genivar PFS Report

Genivar considered both Heap Leach and CIL process options in their PFS report which was based on treating 1.4Mtpa of ore. The heap leach option has since been rejected.

The crushing circuit consisted of a primary jaw crusher and two cone crushers for the secondary and tertiary crushing stages. The crushed material would be fed, at a controlled rate, into a ball mill and classifier to reduce the grain size to 80% passing 75 microns, gold would be leached in the CIL circuit in a series of agitator tanks and the dissolved gold adsorbed onto activated carbon. The activated carbon would be recovered from the slurry by screening and directed towards an elution circuit. The leached slurry, at a density of 43% solids, would be sent *via* a pumping station to a tailings pond. Process water requirements were predicted to be in the order of 238m^3/h.

2.8.4 Mineralogical Examination of Primary (sulphide) ore samples

- Au+As+Sb characterise Bissa gold mineralisation;
- The mineralising event is represented by gold-bearing quartz and quartz+carbonate veins. The metallic minerals associated with the auriferous episode are: native gold, electrum (Au>20% Ag), pyrite, arsenopyrite, stibnite, chalcostibnite, tetrahedrite and boulangerite, rare chalcopyrite; and
- Two gold-bearing and two silver-bearing minerals.

WAI Comment: *the mineralogical report described the gold mineralisation as being free milling, but very fine grained, often as inclusions within sulphide minerals. The proportion of gold that might be recovered by cyanidation cannot be predicted from the study.*

2.8.5 Conclusions

The primary ore types are not being tested in the current programme of metallurgical testwork. WAI believed that the sulphide ore type for each deposit should be tested to at least obtain a preliminary indication of their processing characteristics. The mineralogical examination of selected sulphide samples noted an association of gold with sulphide minerals.

2.9 Environment & Social

2.9.1 Introduction

WAI was commissioned to undertake a review of environmental and social issues relating to development of the Bissa project for the purposes of preparation of an updated Competent Person's Report (CPR). According to the 2009 final EIA, the Bissa project includes 9 exploration targets at Raka, Gargo, Namtenga, Tosse, Tema, Bissa, Zandkom, Bissa Sud, and Barsa. The extent of these areas are defined by the related Exploration Permits, however, for the purposes of this review, the term 'Bissa Project' includes all sub-sects previously listed.

The objective of this review was to determine the potential social and environmental issues and impacts of the proposed project in respect to both local legislation and international best practice. The reviews builds upon work previously undertaken by WAI on the Bissa project, the methodology for which was to:

- Undertake a site visit to the Bissa sites;
- Make a visual inspection of the project area and its surroundings;
- Review project information and seek further clarification of project description as necessary;
- Interview the project technical staff;
- Request and receive related documents;
- Review and comment on key issues;
- Measure progress against standards and commitments, and
- Advise on recommendations.

WAI visited the Bissa project between 7 – 13 December 2009 in order to observe site conditions, conduct interviews with key staff and assess environmental, community, health and safety (EHSC) issues.

Prior to, during, and subsequent to the visit, various pieces of information were requested. The following information has been used to produce this update to the CPR:

- SRK Mineral Resource Evaluation Report, June 2009;
- SRK Mineral Resource Estimation Report, April 2007;
- HRG Presentation to WAI, December 2009;
- Mining Code of Burkina Faso, 2003;
- HRG Permit Status and Ranking (spreadsheet summary) and permit database;
- Miller & Associates petrological analyses, April 2007;
- GENIVAR EIS, May 2009;
- HRG Final EIA Report, February 2010;
- HRG Preliminary Project on Resettlement Action Plan, February 2009;
- ACET-BTP Evaluation of Infrastructure of Bissa-Zandkom Project Affected Communities, December 2009;
- HRG Initial Environmental and Social Management Plan, February 2010; and
- HRG Development and Tarmac covering of RN22 Ouagadougou-Kongoussi Diversion, February 2010-08-23.

2.9.2 Characteristics and Background of the Bissa Site

The Bissa gold exploration project has been fully described elsewhere in this report. However, since the sites comprising the Bissa project are Greenfield, there are no facilities, infrastructure or security considerations present. The sites are non-operational and, other than contracted exploration activities, such as those demonstrated in Photo 2.3, below, there are no sensitive EHSC issues associated with the current activities.

Photo 2.3: Drilling at Bouly (Namtenga Licence)

2.9.3 Facilities and infrastructure

The proposed mining method will be via the open pit method, at the rate of 4300t/day of ore and 10,000 to 25,000t/day of waste. Given the configuration of the mineralisation it is likely that several open pits will be operated along the length of the mineralised zone. Two waste dumps are anticipated in the vicinity of the

open pits. Treatment of ore will be via Carbon in Leach (CIL) and will require a sizeable tailings management facility (TMF) and water supply reservoir/dam.

National route 22 will have to be diverted in order for mining to be undertaken. Approximately 19km of new road will be constructed using 'self-assembly' techniques and will provide access to the mining site from the east. According to the Ministry of Infrastructure of Burkina Faso the construction of a new road will cost an estimated US$8M. The initial road diversion route has been revised, with two other alternatives now being considered. A meeting with the ministry responsible for roads and infrastructure and the ministry for the environment is scheduled for September 2010, to discuss these options, and any other alternatives, and to proceed with the required technical studies. Hence the report reviewed by WAI has now been superseded and WAI will await further updates with regard to the road diversion process. Ancillary roads will be constructed to the living accommodation and TMF sites respectively.

Additional, proposed mine infrastructure includes:

- Offices, warehousing and workshops
- Change rooms and accommodation camp
- Processing Plant, chemical storage facility and laboratory
- Explosives storage
- Fuel Supply Area
- Parking
- Security
- Domestic Landfill and waste recycling
- Incinerator
- Diesel Electricity Generators

2.9.4 Key EHSC Aspects & Issues

In the absence of a review of a formal Scoping Study, WAI consider that the key EHSC aspects and issues likely to arise with the development of this project include:

Corporate level:

- Health, Safety & Environmental (HSE) management;
- Social Responsibility and Community Engagement;
- Social & Environmental Assessment and HSE Permitting; and
- Labour & working conditions.

Project level:

- Processing facilities: air emissions, dust control, chemicals management, water and effluent management including groundwater protection, solid waste management, tailings management, cyanide and hazardous materials storage, handling and management as well as emergency response and pollution prevention & abatement;
- Mining activities: dust control, drainage, pit rehabilitation, land use and soil/vegetation protection, occupational health and safety, visual impacts and mine safety;
- Project closure, rehabilitation and post-closure monitoring;
- Infrastructure and associated facilities: public safety, resource conservation, dust control and hazards management and mitigation of transportation risks for explosive, materials, toxic substances and reagents (in particular cyanide);
- Surrounding communities: land acquisition, emergency preparedness & response, community health, safety & security, social/community development and sustainable local economic development; and
- Protection and conservation of biodiversity.

2.9.5 Environmental Permitting

With regard to environmental protection, the Bissa project is required to comply with national legislation, governed by the Ministry of Environmental Protection (MEP) and according to the Mining Code of Burkina Faso, which is reported to strict with regard. To Environmental Impact Assessment and the government has produced sectorial guides to assist developers in the preparation of such documents. Currently, the Client is agreeing the details of their mining licence area with the government; however, to obtain this a number of requirements pertaining to environmental and social responsibility must be satisfied.

An application to upgrade the Exploration (Research) Permit must include, among other items, the submission of a Feasibility Study (FS) and an Environmental Impact Assessment (EIA). Under the provisions of Act 17 of the Code, this should include public consultation, impact mitigation measures and an Environmental Management and Monitoring Plan (EMMP).

The general process of EIA submission to permit approval is demonstrated by Figure 2.29 below.

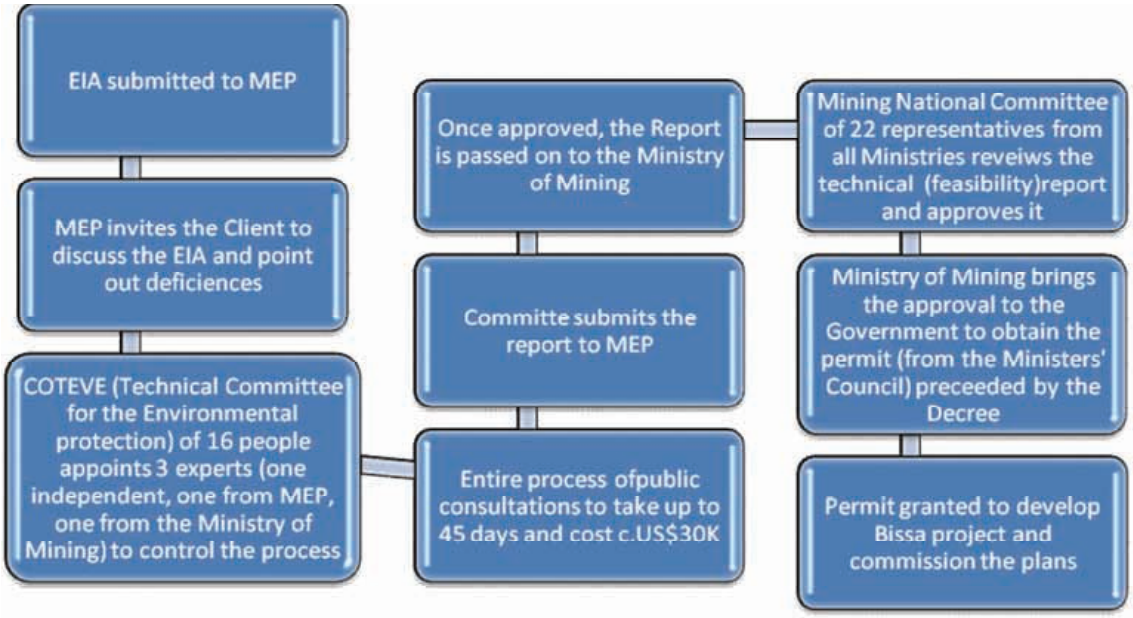

Figure 2.29: Process of Obtaining a Permit for the Bissa Project Development

Given that the Exploration Permit for Zandkom was due to expire in May 2009, HRG commissioned a Pre-feasibility Study (PFS) in 2008. However, the PFS is no longer synonymous with the proposed operation. It is therefore being revised and extended for resubmission as a Bankable Feasibility Study (BFS), to include the current resource/reserves base, planned annual production figures and projected life of the Bissa project, with an agreed deadline of March 2010.

> ***WAI Comment:*** *WAI considers that the final EIA largely satisfies international requirements, however is somewhat deficient with regard to the lack of a separate scoping study, as stated above, and some deficiencies in terms of baseline data. These areas will be discussed in later sections. WAI considers that the EIA has been developed to meet national requirements, and that with minor amendments and additions would also satisfy international requirements.*

WAI has not reviewed any post-2003 revision of the Mining Code, however, since it is unlikely that an Exploitation Permit will be granted without adequate public consultation and a detailed Environmental Management and Monitoring Plan, these issues should be formalised and appropriate plans drafted where necessary and WAI is informed that HRG consider this to be an integral part of the process, and that this approach is being followed by the Bissa poroject team.

2.9.6 Environmental Studies, Management and Monitoring

An initial EIA was completed by GENIVAR in May 2009. Jilbey and HRG prepared a Terms of Reference Document (TOR) for an Environmental Impact Study (EIS) in 2008. These were approved and subsequent to this date they have carried out various environmental studies designed to inform the EIS and were incorporated into the FS by GENIVAR. GENIVAR issued a Technical Economic Feasibility Study (in French) in May 2009.

The EIS is a comprehensive report and makes reference to the baseline data collected by Jilbey Burkona Sarl (from 2005) in addition to the data collected by GENIVAR in March 2009. This data appears to relate to an area of 121km^2 within the Bissa project.

A consideration of alternatives has been conducted by GENIVAR in relation to preferred processing methods. Two refining options for the product are considered: heap leaching (HL) and carbon-in-leach (CIL) processes. The main environmental advantage of the HL process is that there is no requirement to transport waste to a tailings facility as the ore residues remain in place at the initial cells, however, subsequent to this report, it is understood that the preferred option will now be CIL. The consideration of other alternatives has not been undertaken.

A basic impact assessment has been undertaken as part of the GENIVAR report and is presented via an impact matrix. This has been based on the severity of the impact and the likelihood of occurrence with respect to regional local and point impacts, over the short- to long-term.

Mitigation measures are mainly addressed in the GENIVAR report through engineering project design considerations. Mitigation is suggested for atmosphere, water, social and ecological environments.

The GENIVAR report includes a framework Environmental and Social Management Plan (ESMP) detailing requirements and content of an appropriate plan, but this has not been expanded.

In June 2009, SRK prepared a revised mineral resource estimate to support conceptual mine design work currently being completed by engineering consultants GENIVAR ("GENIVAR") to evaluate the feasibility of an open pit mining and processing operation at Bissa. The effective date of the Mineral Resource Statement was April 23, 2009. The Mineral Resource Statement was contained within a Technical Report prepared by SRK dated June 18, 2009.

Subsequent to the above studies, a final EIA was produced by HRG-Jilbey in February 2010, accompanied by a standalone study of the proposed RN 22 diversion, (to be revised in consultation with the relevant ministries),a preliminary Environmental and Social Management Plan, a Condition Survey of Infrastructure in Project Affected Communities, and a Preliminary Resettlement Action Plan Study.

> ***WAI Comment:*** *It is reported that the baseline data collection area includes the full licence areas for all project areas. It is reported to WAI that SRK has been contracted to undertake detailed hydrogeological studies for the TMF design. Hydrogeological studes will also be required for the water reservoir design, and additional flora and fauna (to include invertebrates, not currently incorporated) should be collected over a more representative seasonal cycle in order to satisfy international requirements. A map showing sampling locations on the licence area should be presented, to ensure that spatial distribution of samples covers all the permit areas. . A formal Scoping exercise as part of the EIA is required to be presented to show that the likely impacts were identified and addressed in the EIA process. This should be drafted as a standalone document. .Additionally, some consideration should be given in the EIA to impacts associated with mine closure, rather that simply in construction and operation stages. As a minimum, these impacts should be addressed in a detailed draft Mine Closure and Rehabilitation Plan (MCRP).*

TMF

A Tailings Management Facility (TMF) is proposed to the southwest of the open pit location and is reported to comprise 4 dams, the largest having a height of 13m. The proposed site of the TMF has artisanal mining activity at the periphery.

The TMF will include a drainage ditch to accommodate rainfall events and reduce the risk from over-topping and, according to the GENIVAR report, the TMF design has taken into account that evaporation could amount to a loss of 75% of the water received. This report also highlights assumptions that the tails have been characterised as non-acid generating and non-leachable and that tailings water that could infiltrate to the base of the facility would not damage the environment. It has been assumed that the geology at the proposed TMF site is comparable to that at the open pits, but that site investigation has not yet been undertaken.

> ***WAI Comment:*** *GENIVAR recommend environmental characterisation of the tails and WAI would agree that, in common with international best practice, the tails should be analysed for processing chemical concentration, hydrocarbon content, pH and acid generating potential. The facility should be adequately designed to prevent contaminated water orparticules permeating the ground and reaching the groundwater table and adequate environmental monitoring should be carried out and detailed in the EMMP to ascertain baseline conditions and ensure continual protection of the soil and groundwater media. Testwork to assess acid generating potential and leaching potential will be instrumental in dictating the TMF design.*

The solid and superficial geology at the proposed TMF site should be confirmed and the nature and thickness of the overburden assessed for the purposes of the construction of the facility and to ensure environmental protection can be optimised. Furthermore, soil and hydrogeological studies will aid the assessment of whether drainage ditches are appropriate or whether alternative options are necessary to prevent environmental damage in the event of an over-topping or breach.

It is considered unlikely that the artisanal mining is permitted, however, this issue requires consideration if this location remains the preferred option upon the results of further exploration. This issue is briefly touched upon in the EIA, but should be formally considered as part of a Needs Assessment.

2.9.7 Fuel Storage

A proposed fuel supply area comprising 2 reservoirs will be constructed with a capacity of 500m^3.

2.9.8 Waste Management & Recycling

The waste dumps will be segregated, to allow the reuse of suitable aggregate material for the haul roads.

> ***WAI Comment:*** *In accordance with international best practice, a framework waste management plan, building on principles already included in the EIA, should be prepared for the proposed operations. This can be extended and finalised upon commencement of operations.*

2.9.9 Community Relations and Development

Development of the Bissa project will necessitate the potential relocation of 2 villages. These are Bissa, with an estimated population of 800 (see Photo 2.4), and Imiogou, with a population of around 3,000. Bissa village contains sites of potential cultural significance, such as cemeteries and a Sacred Place, which may be adversely affected if mining at Bissa is extended to the south. In addition, the construction of a water dam will necessitate the loss of agricultural lands. The preliminary resettlement study estimates that a total of 2,783 people from 323 households will need to be relocated.

Photo 2.4: Bissa Village, Burkina Faso

The plan for resettlement of the Bissa village has to be prepared by an independent consultant and should be designed according to the results of the scoping study, and in line with the principles outlined in the Preliminary Resettlement Action Plan Study.

Resettlement costs have been indicated to be in the order of US$2M to US$2.5M and it would appear that compensation has already been negotiated by HRG with some residents of the area.

Since November 2005 several public consultation meetings have been held in the Bissa community and meetings have also taken place in 2009. This has facilitated an assessment of the concerns and expectations of the inhabitants of Bissa and Imiougou.

The Scoping Study, resettlement plan and the Environmental Impact Assessment (EIA) were expected to be submitted to the MEP early January 2010, and it has been reported that the EIA was submitted to the Ministry as part of the environmental permitting process. It is also reported that a validation was held at the Ministry in May 2010, and recommendations were made concerning content and format. In June 2010, the final version was submitted, taking into account recommendations from the May meeting. The final report was also sent to the Ministry of Mines as part of the application process for the operating permit. WAI is not aware whether the EIA document has been formally approved, at the time of writing, and has not seen any such approval documents.

> ***WAI Comment:*** *WAI is encouraged with the recent commitment to public consultation procedure and would emphasise the need for appropriate negotiation and compensation for damage to surface land and crops to be undertaken and consideration to be given to the identification and sensitive consideration important sacred sites in the locality. The assessment appears to have been handled sensitively, with efforts made to reduce the negative impact of further exploratory activities. It is important that these considerations, and the impact on communities and livelihoods as a whole, are formalised and addressed via a Public Consultation and Disclosure Plan (PCDP) and in accordance with IFC Performance Standards (PS 5 and PS 1). The summary for such a PCDP has been provided to WAI, however in order to assess its compliance with international standards, the whole plan would need to be reviewed. The basis appears reasonable, and WAI understands that the plan has been developed in line with national requirements. The PCDP summary includes a time line for consultation, although WAI is not aware how much progress has been made in respect of this.*

Any potential relocation or resettlement will require the drafting of a formal Resettlement Action Plan (RAP). The preliminary RAP outlines the principles for inclusion, and the procedures for implementing a full RAP, which WAI consider to be sound. The full RAP should outline the proposed location for resettlement. Information on existing condition of the infrastructure in affected communities, and details on the affected communities has been provided in the preliminary RAP and the infrastructure study.

The information for the above studies was collected on the settlements of Bissa, Imiougou, Tiben (Baskouda village) and Bissighin, which are reported to be the only villages affected by the project. It should be confirmed whether the social data collection requires extension, to cover all permit areas currently comprising the Bissa Project (1,000km^2).

2.9.10 Mine Closure & Rehabilitation

Although a total mitigation cost has been estimated in the EIA, there is only minimal comment on closure concepts, and the EIA does not consider impacts associated with post closure phases. Principles for closure are also included in the preliminary Environmental and Social Management Plan, and states that funds will be placed with the Central Bank for Western African States, or a Commercial Burkinabé bank. It has been reported to WAI that a Mine Closure and Rehabilitation Plan (MCRP) is being prepared and will be finalised when the mine enters the production phase.

> ***WAI Comment:*** *The 2003 Mining Code requires that funds are allocated to the Bank of West Africa to cover environmental conservation and restoration costs, and this code also stipulates compliance with the environmental code. In accordance with national requirement and international best practice, the MCRP will need to include detailed financial provision, including budget for environmental expenditure, will need to be prepared. The final fate for mine closure will need to be agreed with all project stakeholders, including legislative authorities and community members. The MCRP should cover requirements for post closure monitoring requirements and protect the community from closure and the closure fund should be based on realistic estimates, based on actual closure costs and include costs for post closure monitoring. The plan should be revisited throughout the life of the mine.*

2.9.11 Natural Resource Use

2.9.11.1 Water Supply

WAI understands that the water supply for the technical purposes is one of the vital issues requiring immediate resolution. The EIA states that the average water requirements for a CIL and HL scenario have been calculated and the technical water requirements will amount to 2Mm^3 annually and require the construction of a water reservoir/dam with a calculated volume of 23Mm^3.

The prerequisites of a suitable site are suitable topography to create a valley impoundment and maximum altitude of 298m at minimum elevation of 286m. To aid the design of the reservoir, precipitation and evaporation data have been used from published material for the Lac Bam lake, Kongoussi.

The Client was considering two sites and is currently conducting an assessment of the feasibility of both. Option 1 is the construction of a water catchment dam to be wholly owned and used by the future mine and is the preferred option. Option 2 is to utilise the Lac Bam reservoir that will involve building a barrage, the height of which must not exceed 10m, as stipulated by the State representatives. The water catchment area downstream from Kongoussi has a drainage basin of 394Mm^3 and seasonal variations in precipitation volume have been estimated. The dam will require the construction of a barrage and the current causeway level to be raised. Water would need to be piped 12-18km to the operational mine site. Preliminary topographic studies and calculations undertaken by the Client on the Lac Bam area have shown that the proposed barrage would not exceed 8m in height and as such no public disclosures and consultations would be required.

The construction of a water retainment feature at this scale at either location will be at the sacrifice of agricultural (crop and pasture) lands.

Detailed hydrological and hydrogeological surveys, including soil classification and permeability testing, will be required in order to assess the suitability of the site/s, potential environmental impact and the geotechnical design parameters of the structure. It is reported that drilling and hydrogeological testing are scheduled to begin in September 2010. A barrage design report has been submitted (14th December 2009) and is pending approval. WAI is not aware whether approval for this report has been received, and has not reviewed the content of this report.

> ***WAI Comment:*** *Several potential sites have been identified however in the EIA it is stated that the coordinates for the chosen valley site are as follows:*
>
> *N 13° 09' 82"*
> *E ° 22' 92"*

It is also stated that detailed studies, including hydrological and Hydrogeological studies, would be performed during the construction phase.

A supplementary EIA for any major proposed infrastructure associated with the water reservoir site will be required in accordance with international best practice. Depending upon the extent of this infrastructure, these may need to be the subject of a separate assessment. This will include the construction of any new roads and additional infrastructure, which the client anticipates completing in 2010.

2.9.12 Guibare Exploration Site

WAI has visited the Guibare site which contains a potential mineral interest to the Client. This area is covered by an Exploration Licence and artisanal mining is currently undertaken in the area. This comprises a shaft reaching 50m depth and several surface excavations. The excavated material is crushed and processed at a local artisanal facility. Panning and/or mercury combination is currently used to produce the final saleable product.

> ***WAI Comment:*** *Although WAI has limited information on Guibare, it is supposed that any license application or commercial development by the Company in this area shall necessitate the resolution of socio-economic issues, including negotiations and possible compensation and movement of the artisanal miners.*

WAI would advise that the Company undertakes a comprehensive programme of public consultations in order to ensure that local communities are aware of the nature of operations and to address any concerns that they may have regarding the projects. It is WAI's opinion that external assistance may be required from international consultants to prepare and implement the plans and actions described above.

2.9.13 Conclusions and Recommendations

The project is in compliance with national standards and is moving towards international compliance.

In this regard, it is noted that these documents have been provided but will need further development in line with international standards.

- Environmental and Social Action Plan (ESAP);
- Environmental Management and Monitoring Plan;
- Waste Management Plan – is well developed but requires documentation for all liquid and solid wastes;
- Water Management Plan – including water supply, conservation, protection measures, treatment, monitoring and water balance. The issue of water protection is considered by WAI to be critical to the success of the project;
- Mine Closure and Rehabilitation Plan – will need further development in the future to secure sufficient finance for the mine closure funding;

- Community Health, Safety and Security Plan; Emergency Preparedness and Response Plan – required to be prepared to cover procedures in the event of potential incidents;
- Emergency Preparedness and Response Plan; and
- Community Development, Public Consultation and Disclosure Plans.

2.10 Life of Mine Model for the Project

2.10.1 Introduction

A life of mine model for the Bissa project has been prepared in order to demonstrate the potential economical outcome of the project and its robustness. This model was based on reserve figures, described above, capital investment requirement estimates provided by the Client and audited by WAI with a view to similar projects, and other parameters. Input parameters were implemented into a life of mine model. The details of this evaluation are given below.

2.10.2 Capital Costs

The life of the mine capital costs will be US$196M. US$169M of those costs spent during 2011 and 2012 and the remaining expenditure has been allocated to sustaining capital of US$5M in 2013 and US$2.5M per year from 2014 – 2022.

Table 2.20: Bissa Capital Costs, US$(000) (Target Production Rate 3.0Mtpa)	
G&A	**4,915**
Infrastructure & Construction	
Graveyard relocation	1,205
Site roads construction	3,329
RN22 deviation construction	3,872
Camp construction	1,963
Fuel storage	2,903
Security fence	605
subtotal	**13,876**
Mining Fleet & Pre-Stripping	
Haul trucks 90t (17)	18,785
Front end loaders 14,5 m^3 (3)	5,471
Backhoe excavator 10m^3	2,341
Backhoe excavator 5m^3	687
Wheeled dozers (2)	2,364
Tracked dozers (3)	1,665
Drilling rigs (4)	2,039
Motor graders (2)	1,222
Water truck	1,224
Compactor	455
Tank trucks (2)	516
Pick-up vehicles (14)	517
Pumps (4) and pipes for pit dewatering	354
Truck for tire replacement	286
Lubrication truck	194
Pre-stripping	1,041
subtotal	**39,160**
Electricity & Communication	
Diesel power station	8,543
Other	1,516
subtotal	**10,059**
Processing plant	
Crushing	4,884
Grinding	23,270
Leaching	17,603
Elution, electrowinning, fusion	5,154
Ore stockpiling	2,938
Electric circuits, automation	3,491
Other	22,232
subtotal	**79,573**
Tailings dam & Water supply	
Tailings	10,032
Water dam	5,652
Other	2,170
subtotal	**17,853**
Environmental and social settlement relocation fee	**3,478**
Total	**168,914**

2.10.3 Life of Mine Assumptions and Input Data

The assumptions made in the WAI life of mine for Bissa Gold project were based on:

- Au price of US$900/oz;
- Ore reserves as of 01.11.2010, estimated by WAI in accordance with JORC code guidelines;
- Mining Schedule, Prepared by WAI. The Mining Schedule targeting 3.0Mtpa ore mining rate with appropriate ramp-up of production; first year ore tonnage is estimated to be equal ½ of total targeted production;
- Long-term operating costs forecasts based on Genivar Feasibility Study estimation review and considering analogous deposits (such as Taparko);
- Overall Au recovery indices obtained from testwork results;
- Annual discount factor of 11.2% (Base case);
- General and administration costs estimated based on Client's assumption considering actual figures from neighbouring deposit Taparko; and
- Overall tax at 20% of net income applied.

A summary of the Bissa financial model assumptions and input data is given in Table 2.21 below.

Table 2.21: Bissa Life of Mine Assumptions and Input Data

Year	*TOTAL*	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Gold Price, US$/Oz	0	900	900	900	900	900	900	900	900	900	900	900	900	900
Ore (oxide) production (diluted) kt	22,729	0	0	1,476	2,584	2,426	2,023	2,844	2,334	2,473	1,959	2,730	1,675	205
Waste (oxide) mined, kt	106,621	-	-	5,166	10,558	9,763	10,005	10,091	9,913	11,609	10,744	12,632	10,793	5,347
Ore (oxide) Mining cost, US$/t	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
Waste (oxide) Mining cost, US$/t	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Au (oxide) Grade g/t	1.58	0.00	0.00	2.14	1.80	1.60	1.51	1.58	1.36	1.37	1.05	2.07	1.16	2.07
Gold (oxide) mined, kg	35,896	0	0	3,162	4,650	3,889	3,060	4,502	3,165	3,387	2,055	5,651	1,951	423
Recovery (oxide) , %	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5	91.5
Gold (oxide) recovered, kg	32,844	0	0	2,893	4,255	3,558	2,800	4,120	2,896	3,099	1,880	5,171	1,785	387
Processing (oxide) cost, US$/t	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79	13.79
Proc and Mining (oxide) Costs US$/Oz	505	-	-	331	410	459	517	449	551	562	772	370	737	901
Ore (sulphide) production (diluted) kt	6,434	-	-	-	368	525	930	107	618	478	993	221	1,278	915
Ore (sulphide) Mining cost, US$/t	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
Mining (sulphide) OPEX, k US$	12,224	-	-	-	699	998	1,767	203	1,175	908	1,887	420	2,428	1,739
Au (sulphide) Grade g/t	2.41	-	-	0.00	2.36	2.67	2.68	2.43	2.15	2.28	2.85	1.46	2.10	2.46
Gold (sulphide) mined, kg	15,521	-	-	-	866	1,402	2,491	260	1,327	1,089	2,828	323	2,686	2,248
Recovery (sulphide) , %	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5	86.5
Gold (sulphide) recovered, kg	13,426	-	-	-	749	1,213	2,154	225	1,148	942	2,446	280	2,323	1,944
Processing (sulphide) cost, US$/t	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2
Proc and Mining (sulphide) Costs US$/Oz	333	-	-	-	353	311	310	341	387	365	292	567	395	338
Gold Recovered TOTAL, Oz	1,487,624	0	0	93,024	160,888	153,396	159,295	139,688	130,017	129,922	139,104	175,247	132,086	74,958
Proc and Mining TOTAL Costs US$/Oz	377	-	-	331	402	421	427	443	504	516	500	380	544	432
Depreciation (total) k US$	224,908	-	-	19,535	33,786	32,213	33,452	29,334	27,304	27,284	14,500	2,500	2,500	2,500
Revenue, k US$	1,338,862	0	0	83,722	144,799	138,056	143,366	125,719	117,015	116,930	125,194	157,722	118,877	67,462
Operating Costs, k US$	662,899	-	-	30,763	64,615	64,606	68,031	61,937	65,549	67,012	69,599	66,614	71,817	32,355
G&A, Sales	130,000	0	0	6,500	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	6,500
Royalty, 3%	40,166	-	-	2,512	4,344	4,142	4,301	3,772	3,510	3,508	3,756	4,732	3,566	2,024
CAPEX, k US$	196,414	90,032	78,882	5,000	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	-

2.10.4 Conclusions

The WAI life of mine model results in a positive NPV at various discount rates and at various gold prices, as well as the relatively high internal rate of return at nominal input parameters. It shows that the reserves considered in the financial model are profitable for exploitation in the current economic environment.

The deposit consists of a large gold ore resource, majority of which is represented by weathered ore. This type of ore is relatively easy to mine and process.

The fact that the key financial indices remain reasonably high given the conservative cost input parameters (such as mining and processing costs) used in the models, shows good economic potential for the project.