High River Gold Mines Ltd

Taparko-Bouroum Gold Mine Independent Technical Report Burkina Faso

Report Prepared for

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Taparko-Bouroum Gold Project, Independent Technical Report, Burkina Faso

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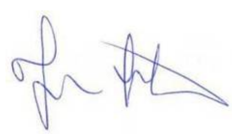

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Cover: Top. Taparko processing mill looking east. Bottom, typical landscape at the Bouroum site.

Executive Summary

Introduction and Terms of Reference

High River Gold Mines Ltd. ("HRG"), through its Burkinabe subsidiary Société des Mines de Taparko ("SOMITA"), is operating an open pit gold mine in Burkina Faso, West Africa. Commercial production was achieved in October 2007.

In December 2007 HRG commissioned SRK Consulting (Canada) Inc. ("SRK") to conduct a site visit and to compile an updated Technical Report compliant with N.I 43-101. SRK's scope of work included updating the pit optimizations based on a gold price of US$800/ounce (specified by HRG) and utilizing current estimates of site operating costs. United States currency and the metric system of measurement are used in this report.

Property Description

The Taparko-Bouroum gold project is located in Burkina Faso in West Africa, approximately 200 kilometres northeast of Ouagadougou, the Capital City. It is accessible by road from Ouagadougou. The project comprises two separate sites. The Bouroum site is located approximately 49 kilometres northwest of the main Taparko site where most of the mining is scheduled and where the milling and support infrastructure is located.

HRG's right to the Taparko-Bouroum gold project are held through the Société des Mines de Taparko, SOMITA SA, a Burkinabe subsidiary. SOMITA SA is owned 90 percent by HRG with the remaining 10 percent carried interest held by the Government of Burkina Faso. The Taparko-Bouroum gold project comprises two non-contiguous tenements granted by the Government of Burkina Faso covering an aggregated area of 678.2 square kilometres (Table 2). The tenements are registered in the name of SOMITA SA and are valid for a period of 20 years from their grant date, renewable for consecutive 5 year periods until depletion of mineral reserves.

Facilities and infrastructure at the Taparko site include a fully functional mining and gold processing operation comprising:

- Two operating open pits, two waste rock dumps and a fleet of mobile mining equipment;
- An explosives storage site with magazines, and a fuel storage facility;
- A gold processing plant with an assay laboratory and tailing storage facility;
- A maintenance shop and warehouse;
- An administration building, mine dry facilities and a security building;
- A diesel generating station for site electrical power;
- A water storage dam 4 kilometres from the plant;
- A camp complete with kitchen and catering facilities.

Mining support facilities at the Bouroum site will be constructed in 2008.

Exploration and Property History

Modern exploration in the Taparko-Bouroum area followed "discovery" by the state geological survey in the 1970s and commenced in 1995 and 1996 at Bouroum and Taparko, respectively. Surface exploration has delineated 6 gold deposits.

Work completed at Taparko includes 182 trenches (10,630 metres) 412 core boreholes (44,900 metres), and 189 reverse circulation ("RC") boreholes (11,950 metres). At Bouroum the exploration database includes 56 core boreholes (4,100 metres) and 241 RC boreholes (28,300 metres). Most of this information was used in the mineral resource estimates for the two properties.

The exploration data for the Taparko project was acquired by HRG over the period 1996-2003. The Bouroum exploration data were acquired by Channel Resources Ltd. and Viceroy Resources Corp between 1995 and 2000, and subsequently by AXMIN Inc. from 2000 to 2003. SRK reviewed the exploration data for both projects and considers the data reliable for the purpose of resource estimation.

Geology and Mineralization

The Taparko-Bouroum area lies within the early Proterozoic Birimian Greenstone Belts of the West African Craton. The two gold deposits are hosted on opposite limbs of the Y-shaped Bouroum-Yalogo greenstone belt and are hosted by volcano-sedimentary rocks such as amphibolitic schists, mafic lavas, pyroclastics, and argillaceous sediments all of which have been intruded by large bodies of diorite or quartz-diorite, and by diabase dikes.

Gold at Taparko occurs predominantly in the northwesterly trending Taparko shear zone dissecting a thin band of sedimentary and volcanic rocks enclosed by granodiorite. The shear zone has been traced over at least 10 kilometres in strike length and dips from 40 to 50 degrees to the northeast. Economically important gold mineralization is restricted to discrete stretches of the shear zone defining three deposits: the GT, 2N/2K and 3/5 Zones spanning over 2 kilometres of strike length and tested to vertical depths of at least 150 metres. Gold at Bouroum occurs in a number of relatively small, structurally complex deposits, three of which (Bissinga, F-12 and Welcome Stranger) form economic deposits amenable to open pit mining.

The Taparko and Bouroum gold deposits are characterized by sulphide-poor quartz veins hosted by shear zones of various attitudes. Gold occurs in the quartz veins and in quartz vein selvages, and is also found in the shear zone itself where gold grades similar to the quartz vein mineralization occur. Graphite and other base metals are known to occur with the gold mineralization.

Metallurgical Testing

A number of metallurgical studies were carried out prior to the feasibility study. Testwork for the feasibility study was carried out by Lakefield Research, South Africa on Taparko and Bouroum ores and concentrated on the Taparko material. Metallurgical testwork was confined to main testwork on the Taparko material, with only variability testwork carried out on the smaller Bouroum deposits. This was because of extensive previous test work on the Bouroum deposits. This variability testwork was carried out to ensure that material peripheral to the proposed Taparko pits was also amenable to processing via the selected flowsheet.

Testing results provided the following key information. Fresh ore materials have relatively high Bond Rod (17.8) and Mill (18.0) Work Indices, as does the Saprock oxide material (14.7-15.1). The Saprolite ore exhibits low comminution Work Indices (Ball Work indices of 9.6 to 12.1). All types of ore are amenable to the proposed Taparko plant design which specified a grind of 80 percent minus 75 microns.

Mineral Resources

The mineral resource models supporting the mineral reserves estimates presented herein were prepared by SRK in 2003 as part of feasibility studies prepared by HRG and SRK. The mineral resource estimates were documented in a technical report prepared by HRG and SRK in 2003 (June 2004 technical report). Since 2003 no additional exploration was conducted on the Taparko-Bouroum deposits. Hence the mineral resource estimates prepared in 2003 remain current and are the ones in use at the mine.

A three-dimensional solid body representing the extent of the gold mineralization/ alteration/quartz veining was constructed for each auriferous zone of the Taparko and Bouroum projects. Gold assay data were composited to 2.0 metre lengths and used to interpolate gold grades into block models. Search neighbourhood criteria and interpolation parameters were determined after relative semi-variogram analysis. For the Takarko deposits gold grades were interpolated using ordinary kriging, while for Bouroum, an inverse distance algorithm was used. A combination of grade capping and restricted influence was used to limit the influence of high grade outliers during grade interpolation. Three interpolation passes were completed using inflated search ranges to interpolate a gold grade into each block.

The mineral resources for the Taparko and Bouroum deposits were classified according to the "CIM Definition Standards for Mineral Resources and Mineral Reserves (August, 2000)" essentially based on density of drilling data. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

For reporting purposes SRK tabulated the mineral resources within a pit shell optimized using a gold price of US$1,000 and the same mining and recovery assumptions used for estimating mineral reserves. The mineral resources are reported at the same cut-off grades used for reporting mineral reserves. The 2007 year end mineral resource statement for the Taparko-Bouroum gold project is presented in Table i.

Table i: Mineral Resource Statement*, Taparko and Bouroum Gold Project, Burkina Faso, SRK Consulting, December 31, 2007

Zone		Quantity (tonnes x1000)	Grade (g/t gold)	Gold Content (ounces)
		Taparko Project		
Indicated Resources				
	3/5	6,562	2.72	574,800
	2N/2K	1,493	1.91	91,500
	GT	1,288	3.70	153,400
Total Indicated		**9,344**	**2.73**	**819,700**
Inferred Resources				
	3/5	598	2.41	46,400
	2N/2K	108	2.68	9,300
	GT	328	3.55	37,400
Total inferred		**1,034**	**2.80**	**93,100**
		Bouroum Project		
Indicated Resources				
	Bissinga	94	6.53	19,700
	F12	1,363	2.88	126,200
	WS	140	5.17	23,200
Total Indicated		**1,596**	**3.30**	**169,200**
Inferred Resources				
	Bissinga	6	3.26	600
	F12	62	3.62	7,200
	WS	8	3.16	800
Total Inferred		**75**	**3.54**	**8,600**

*Note: Reported at cut-off grades varying between 0.97 and 1.27 g/t gold within pit shells optimized using a gold price of US$1,000 per ounce and mining reserving assumptions. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures rounded to reflect the relative accuracy of the estimates. Mineral resources include mineral reserves.

Mineral Reserves

In early 2008, SRK worked with SOMITA to re-evaluate the Taparko and Bouroum pit optimizations at a gold price of US$800/ounce using current 2008 estimates of operating costs and metallurgical recoveries.

Updated cut off grades estimated by SRK were 1.0 g/t gold for Taparko pits and range from 1.1 to 1.3 g/t gold for Bouroum pits.

Compared to previous work, an additional 5 percent external dilution was added with an assumed grade of 0.5 g/t gold, as SOMITA has found that the external dilution estimate in the feasibility study was insufficient. A mining ore recovery factor of 97 percent was used.

The 2008 pit optimization results were not significantly different than the previous work by SRK reported in May 2005, and did not warrant changes to pit designs.

The December 31, 2007 Mineral Reserve estimate prepared by SRK based on the pit optimization results at $800/ounce gold is shown in Table ii. The RoM stockpile at the Taparko processing plant is included in the estimate.

Table ii: Mineral Reserve Statement*, Taparko-Bouroum Gold Project, SRK Consulting, December 31, 2007.

Deposit / Source	Ore (kt)	Grade (g/t Au)	Contained Gold (000's oz)
Probable Mineral Reserve			
3/5	5,510	2.73	483
GT	1,060	3.68	125
2N/2K	1,180	1.83	70
Taparko Sub-Total	**7,750**	**2.72**	**677**
Bissinga	83	6.77	18
Welcome Stranger	117	5.17	19
F12	711	2.95	67
Bouroum Sub-Total	**911**	**3.58**	**105**
Total Probable Mineral Reserves	**8,660**	**2.81**	**782**
Proven Reserves			
RoM Stockpile	194	2.89	18
Total Proven & Probable Mineral Reserves	**8,850**	**2.81**	**800**

*Based on a gold price of US$800 per ounce and cut-off grades varying between 1.0 and 1.3 g/t gold depending on the deposit. Mineral reserves included in mineral resources.

Mining Operations

The gold deposits at Taparko and Bouroum are near surface and amenable to open pit mining methods. Plans have been developed for three open pits at Taparko and three relatively smaller pits at Bouroum.

From the start of operations in 2005 to the end of 2007, mining has advanced in 2 pits at the Taparko site; 3/5 pit and GT pit. Table iii shows a summary of the reported pit production from the start of the project up to December 31, 2007.

The 2008 mining plan is based on ore mining of 853 kilotonnes at a grade of 3.33g/t gold and waste mining of 5,170 kilotonnes for a strip ratio of 6.1.

Table iii: Taparko-Bouroum Gold Mine Production. Period 2005-2007

Year	Ore (t)	g/t Au	Waste (t)
2005	0	0	1,252,764
2006	132,921	2.69	3,338,017
2007	261,009	2.73	3,691,901
Totals	**393,930**	**2.71**	**8,282,682**

Due to the deep weathering profile, most of the upper benches can be excavated as free digging material. Drilling and blasting requirements are expected to increase with depth as fresh rock is excavated. Open pit drilling utilizes 114 millimetre holes and top hammer drill rigs equipped with hydraulic rock drills.

Ore is mined on a split bench height of 2.5 metres for good control in identifying ore and separating it from waste. Two Cat 385 hydraulic (backhoe) excavators and two Cat 988 loaders are used to load Cat 773 trucks of 54 tonne capacity. Ore is hauled to the Taparko stockpile/plant feed area and either dumped into the plant feed bin or onto the run-of-mine ("RoM") stockpile. Waste is hauled to the individual rock dumps that have been established near each pit.

Performance of the mine in 2007 was adversely affected by a shortage of operating funds in the fall, and low mechanical availabilities on some mining equipment due to the long delivery time required to obtain certain critical repair parts.

It is SRK's opinion that the mine has demonstrated the ability to deliver planned tonnes of ore and waste. SOMITA reports that the implementation of a new grade control management system is underway. It will include grade control staff training, better tracking of ore mined and of ore destination, and mill to mine reconciliation and analysis.

Processing Plant

The plant flowsheet planned in the feasibility study showed single stage crushing for the hard ore treatment circuit and SAG/ball mill grinding. The actual crushing/grinding circuit was constructed differently. Instead, the hard ore circuit was built using three stage crushing. The grinding circuit was in turn reduced to single stage ball milling.

The actual processing plant flowsheet comprises 9 main circuits: three stage crushing and stockpiling for hard saprock and oxide ores, breaker crushing for soft saprolite oxide ore, ball mill grinding, gravity concentration, CIL, acid wash and elution, carbon regeneration and gold recovery. The tailings are thickened and sent to the tailings storage facility for disposal. Processing plant recoveries are expected to range from 92 to 97 percent for the different ore types.

The present grinding circuit has not to date allowed the full tonnage treatment of harder ores. As a result, plant performance to date has been less than the expected 124 t/h.

The processing plant water is supplied from a new water storage dam (maximum capacity of 1.3 million cubic metres), 4.3 kilometres from the processing plant. A pipeline from a new pump station located at the Yalogo reservoir approximately 9 kilometres away supplies water to this storage dam.

The lined tailings containment area, 200 metres south of the plant area, has a total area of 90 hectares ("ha"), and the maximum final height of the outer embankment will be

20 metres. Tailings deposition is from pipes at ±150 metre centres around the perimeter of the facility, and water is being decanted by a vertical penstock discharging to a lined return water pond and all water is recycled to the plant.

The area is being developed in two phases. Initially, the western area of approximately 43 ha is being utilized in Phase 1 and, after 1.5 years, the facility will be extended to the full deposition area. At the time of SRK's site visit (January 2008), Phase I of the tailings management facility was operational and construction work was taking place on Phase II which is expected to come on line during 2009.

Manpower

As of the end of 2007 there were 410 SOMITA employees working at the site and 216 contractors. SOMITA employees are generally responsible for mining, processing maintenance and general and administration services. Contractors are utilized for the functions of accommodation and catering, security, power plant operation and maintenance, explosives loading, employee transportation, and for mill laboratory staff.

Approximately 25 percent of the workforce lives in the nearby village of Taparko and approximately 75 percent of the workforce resides in the city of Ouagadougou and surrounding area.

Environmental

A full environmental feasibility study was completed in October 2003 by Roche Ltee, Quebec, Canada with the assistance of various sub consultants from Burkina Faso. The identification and evaluation of the environmental impacts was done in accordance with the standards of the African Development Bank (Manual # BAD 2001) and those of the World Bank (Manual # BM 1999). The project aimed to meet the highest standards of Canadian, Burkina Faso and World Bank norms. The study area was quite extensive and covered the potential mining areas, infrastructure and presently known exploration areas.

The results of the environmental study were positive overall with no major issues identified. Many mitigation measures were incorporated into the project design while other measures were included in the capital or operating costs.

During the environmental feasibility study, 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 potential for acid generation. At Bouroum, the sulphurous waste rock of F12, Bissinga and Welcome Stranger do not show the potential for acid mine drainage.

The Taparko-Bouroum project rehabilitation and closure plan was updated in November 2007 by SOCREGE, an environmental consultancy group in Burkina Faso. The cost for closing and rehabilitation of the project was estimated at $2.24 million.

SOMITA LoM Plan

SOMITA provided SRK with a life-of-mine financial model for review, dated March 12, 2008. The duration of the plan is from January 1, 2008 to mid-2014 and it is based on the following parameters:

- A gold price of US$800 per ounce, and an exchange rate of CFA/US of 452;
- Life-of-mine waste rock stripping of 39.8 megatonnes, for a 4.6 strip ratio;

- Life-of-mine plant feed of 8,842 kilotonnes at an average grade of 2.82 g/t gold with 801,400 contained gold ounces;
- LoM recovered gold ounces of 760,500, and an average recovery of 94.9 percent;
- Estimated LoM average operating costs of $36.06/tonne of plant feed;
- Operating costs reflect the latest SOMITA estimate, reviewed by SRK;
- Sustaining capital requirements of $23.2 million. Major items included are Bouroum infrastructure and Taparko plant expansion to 1.5Mt/a.

A summary of the LoM Plan financial results is presented in Table iv.

Table iv: Summary of Taparko-Bouroum LoM Plan

Item	Units	Quantity
Gold Price	US$/ounce	800
Gross Revenue	$ million	608.4
Production Royalty, Sales	$ million	9.9
Net Revenue	**$ million**	**598.4**
Total Operating Cost	$ million	318.8
Gross Margin	$ million	279.6
Less Other Costs:		
Royalty and Profit Taxes	$ million	30.9
Sustaining Capital	$ million	23.2
Cash Flow (before loan repayment)	**$ million**	**225.6**

At the time of writing, SRK is using a long term gold price projection of US$650 per ounce for its own in-house technical-economic analyses.

Conclusions and Recommendations

Conclusions

- In the opinion of SRK, the exploration database for the Taparko and Bouroum projects are reliable for resource estimation;
- The mineral resource estimates prepared by SRK in 2003 remain current;
- The Mineral Resources have been classified according to the “CIM Definition Standards for Mineral Resources and Mineral Reserves (August, 2000)”;
- For reporting, SRK tabulated the mineral resources within pit shells optimized using a gold price of US$1,000 per ounce of gold and other reserve estimation assumptions;
- The external dilution estimate in the feasibility study was insufficient. In 2008, an additional 5 percent external dilution has been assumed in planning;
- The 2008 pit optimization results using a US$800/ounce gold price were not significantly different than the previous work reported in May 2005;
- SRK estimates the Taparko - Bouroum Proven and Probable Mineral Reserves as of December 31, 2007 at 8,850 kilotonnes at 2.82 g/t gold;
- Performance of the mine in 2007 was adversely affected by a shortage of operating funds in the fall, and low mechanical availabilities on some mining equipment due to the long delivery time on certain critical repair parts;
- It is SRK’s opinion that the mine has demonstrated the ability to move the scheduled tonnes of ore (to the plant) and waste;
- SOMITA reports that the implementation of a new grade control management system is underway with accompanying grade control staff training and reconciliation of mill versus mine results;
- Problems with the ball mill gearbox and drive alignment caused significant downtime up to and including February 2008. Repairs were made and this problem has been overcome;

- The present grinding circuit has not to date allowed full tonnage treatment of harder ores. As a result, plant performance to date has been less than the expected 124 t/h. In March, the actual tonnage milled was 82 percent of budget;
- Good mill operating availability was achieved in March 2008;
- Plans have been made by SOMITA to get proper grinding design data for the expansion to 1.5 mtpa. This will be done by adding a properly sized mill (SAG or ball depending on cost and availability) to the circuit that will allow treatment of the hardest ore at the full design tonnage rate of 186 t/h;
- In SRK's opinion, the tonnage versus grind performance function needs to be properly defined, and improved to meet production objectives. The present circuit has not yet achieved the target grind and tonnage at the same time, but since continuous operating data was only available for one month (March 08), it is reasonable to suggest that further optimization work will improve results, during the period prior to the addition of more grinding capacity;
- Sampling of sulphurous waste rock at Taparko and Bouroum showed a low to negligible potential for acid generation;
- The Taparko-Bouroum project rehabilitation and closure plan was updated in November 2007. The closure cost was estimated at $2.24 million;
- SOMITA has prepared a LoM financial plan from January 2008 through to 2014 based on plant feed of 8.84Mt at an average grade of 2.28 g/t gold;
- A maximum plant feed rate of 1.5Mt/a is planned from 2010 to 2013;
- Average gold recovery is 94.9 percent yielding 760,500 recovered ounces;
- The plan is based on a constant gold price of $800/ounce;
- Planned operating costs total $36.05/tonne processed. Cash costs average $408/ounce of recovered gold;
- LoM sustaining capital requirements are estimated at $23.2 million;
- The plan results in cash flow of $226 million before loan repayment.

Recommendations

- SRK endorses the implementation of SOMITA's new grade control management system that will include mill to mine reconciliation and analysis;
- Update the LoM plan based on the December 31, 2007 Mineral Reserves;
- SRK endorses SOMITA's intention to undertake additional drilling of the Taparko gold zones during 2008;
- The mineral resource block models should be updated based on the results of mine versus mill reconciliations and other geological data collected during mining;
- Maintaining the grind will need to be closely monitored to achieve the forecast recoveries;
- Monitor the grind size in the leach feed and develop a grind versus recovery function so that the present equipment can be operated at maximum profitability by balancing grind size, throughput and recovery until the additional grinding capacity is available;
- Proceed with the expansion plans for additional grinding capacity. Testwork for this expansion is already being done and test results will be available by the end of April 2008.

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1 Introduction and Terms of Reference

1.1 Background of the Project

High River Gold Mines Ltd. (“HRG”), through its Burkinabe subsidiary Société des Mines de Taparko (SOMITA SA), is operating an open pit gold mine in Burkina Faso, West Africa. The Taparko-Bouroum project is located 200 kilometres northeast of the capital of Ouagadougou, with the Bouroum satellite gold deposits approximately 49 kilometres northwest of Taparko.

Plans have been developed for a total of six open pits with three located at the Taparko site and three relatively smaller pits at the Bouroum site.

Mining started at the Taparko site in 2005 in GT pit and 3/5 pit. As of year end 2007, a total of 394kt of ore has been extracted and 8.2Mt of waste stripping has been completed. Mining is scheduled to start at the Bouroum site in 2008.

Commercial production was achieved in October 2007. Plans for 2008 include the processing of 1.0Mt of ore.

1.2 Previous Taparko-Bouroum Project Work by SRK

Since 1998, SRK has prepared more than 10 technical reports on Taparko and/or Bouroum dealing with aspects of the project related to geology, mineral resources and mining.

The most recent, comprehensive open pit mining study was prepared in October 2003, “Open Pit Mine Study on the Taparko and Bouroum Deposits, Burkina Faso”. A gold price of US$350/oz was assumed.

Subsequently, in March 2004, SRK prepared a follow up Addendum Report for HRG to refine the production schedule through the use of pit phase drawings, and to update the fleet estimation and operating costs.

in May 2005, SRK prepared a follow up report for HRG addressing the effect of an increased gold price of US$400 per ounce on the pit designs, and including a modified production schedule at a higher production rate, and adjusted operating costs.

This current N.I. 43-101 compliant Technical Report is an update on the status of mining operations at Taparko-Bouroum, including an assessment of the open pit optimization at a gold price of US$800/ounce.

1.3 Qualification of SRK

SRK Consulting (“SRK”) is an independent, international consulting company providing focused advice and problem solving. SRK provides specialist services to mining and exploration companies for the entire life cycle of a mining project, from exploration through to mine closure. Among SRK's 1,500 clients are most of the world’s major and medium-sized metal and industrial mineral mining houses, exploration companies, banks, petroleum exploration companies, agribusiness companies, construction firms and government departments.

Formed in Johannesburg, South Africa, in 1974 as Steffen, Robertson and Kirsten, SRK now employs more than 700 professionals internationally in 27 permanent offices on five continents. A broad range of internationally recognized associate consultants complements the core staff.

SRK employs leading specialists in each field of science and engineering related to the minerals sector. Its seamless integration of services and global base have both made the company the world's leading practice in due diligence, feasibility studies and confidential internal reviews.

The SRK Group’s independence is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its staff. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgement issues.

1.4 Scope of work

HRG approached SRK with a requirement to update the Technical Report describing its Taparko-Bouroum gold mine assets.

SRK’s scope of work was therefore to assemble a Technical Report for the Taparko-Bouroum project in compliance with Canadian Securities Administrators “National Instrument 43-101 Standards of Disclosure for Mineral Properties” guidelines and Form 43-101F1.

In December 2007 HRG commissioned SRK Consulting (Canada) Inc. to conduct a site visit and to compile an updated Technical Report. SRK’s scope of work included updating the pit optimizations based on a gold price of US$800/ounce (specified by HRG) and utilizing current estimates of site operating costs.

1.5 Project Team

The SRK professional staff who have provided input to this Technical Report, who are listed below in Table 1-1, have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

Table 1-1: SRK Project Team

SRK Professional	Discipline
Dr. Jean-François Couture, Principal Geologist	Lead Geologist
Mr. Ken Reipas, Principal Mine Engineer	Lead Engineer
Mr. Rene Carapetian, Associate Mining Engineer	Mining- Pit Optimization
Mr. Brian Connolly, Principal Mine Engineer	Open Pit Specialist, Economics
Mr. Glen Cole, Principal Resource Geologist	Mineral Resources Review
Mr. John Starkey, Associate Metallurgical Consultant	Metallurgy and Process

1.6 Site visit

Acting as Qualified Persons under National Instrument 43-101, site visits to the Taparko-Bouroum facilities in Burkina Faso were undertaken by SRK professionals as follows:

- Mr. Starkey visited the Taparko mine/mill site in December 2007;
- Dr.Couture, Mr. Reipas and Mr. Cole visited the Taparko and Bouroum sites on January 9-11, 2008.

1.7 Basis of the Technical Report

In preparation of this Technical Report, SRK relied on the following information and documents:

- A number of previous technical studies on the Taparko - Bouroum Project by SRK and by HRG. Refer to the list of References at the end of this report;
- Resource block models for Taparko and Bouroum, previously prepared by SRK;
- Updated mine site operating cost information provided by HRG;
- Access to SOMITA SA mine site personnel for interview, including; Daniel Frigon, acting General Mine Manager, Marco Kelly, Mine Manager, Martin Dupuis, Chief Geologist, and Bernard Daigle, Chief Mine Engineer;
- Mine site inspections by SRK;
- Monthly mine site reports for Taparko-Bouroum operations;
- Information on the SOMITA 2008 budget plan;
- The SOMITA SA LoM Plan as provided to SRK by HRG March 12, 2008.

United States currency and the metric system of measurement are used in this report.

2 Reliance on Other Experts and Declaration

SRK's opinion contained herein and effective **March 31, 2008**, is based on information provided to SRK by HRG and SOMITA SA throughout the course of SRK's investigations, which in turn reflect various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently actual results may be significantly more or less favourable.

This report includes technical information, which requires subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

SRK is not an insider, associate or an affiliate of HRG, and neither SRK nor any affiliate has acted as advisor to HRG or its affiliates in connection with this project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

SRK reviewed a limited amount of correspondence, pertinent maps and agreements to assess the validity and ownership of the mining titles. However, SRK did not conduct an in-depth review of mineral title and ownership; consequently, SRK has relied on information provided by HRG on this subject.

SRK has also relied on information provided by HRG in the areas of legal/permitting aspects of the project (section 3.3), environmental aspects and closure planning (section 17.8), estimates of open pit mining operating and capital costs (sections 17.9.5 and 17.9.6), and Burkina Faso corporate taxation (17.9.7).

3 Property Description and Location

3.1 Location

The Taparko-Bouroum gold project is located in the Namantenga Province, Burkina Faso in West Africa, approximately 200 kilometres northeast of Ouagadougou, the Capital City of Burkina Faso (Figure 3-1). The Taparko project is accessible via a sealed road from Ouagadougou. The project comprises two separate sites. The Bouroum site is located approximately 49 kilometres 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 centroid of the Taparko deposits is located at approximately 0 degrees 20 minutes and 20 seconds (-0.339 degrees) longitude west and 13 degrees 30 minutes and 40 seconds (14.511 degrees) latitude north. The centroid of the F12 pit of the Bouroum project is located at 0 degrees 42 minutes and 17 seconds (-0.705 degrees) longitude west and 13 degrees, 36 minutes and 19 seconds (13.605 degrees) latitude north.

3.2 Land Tenure

HRG’s 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 percent owned by HRG with the remaining 10 percent carried interest held by the Government of Burkina Faso.

The Taparko-Bouroum gold project comprises two non-contiguous tenements granted by the Government of Burkina Faso covering an aggregated area of 678.2 square kilometres (Table 3-1). The tenements are registered in the name of SOMITA SA and are valid for a period of 20 years from their grant date, renewable for consecutive 5 year period until depletion of mineral reserves.

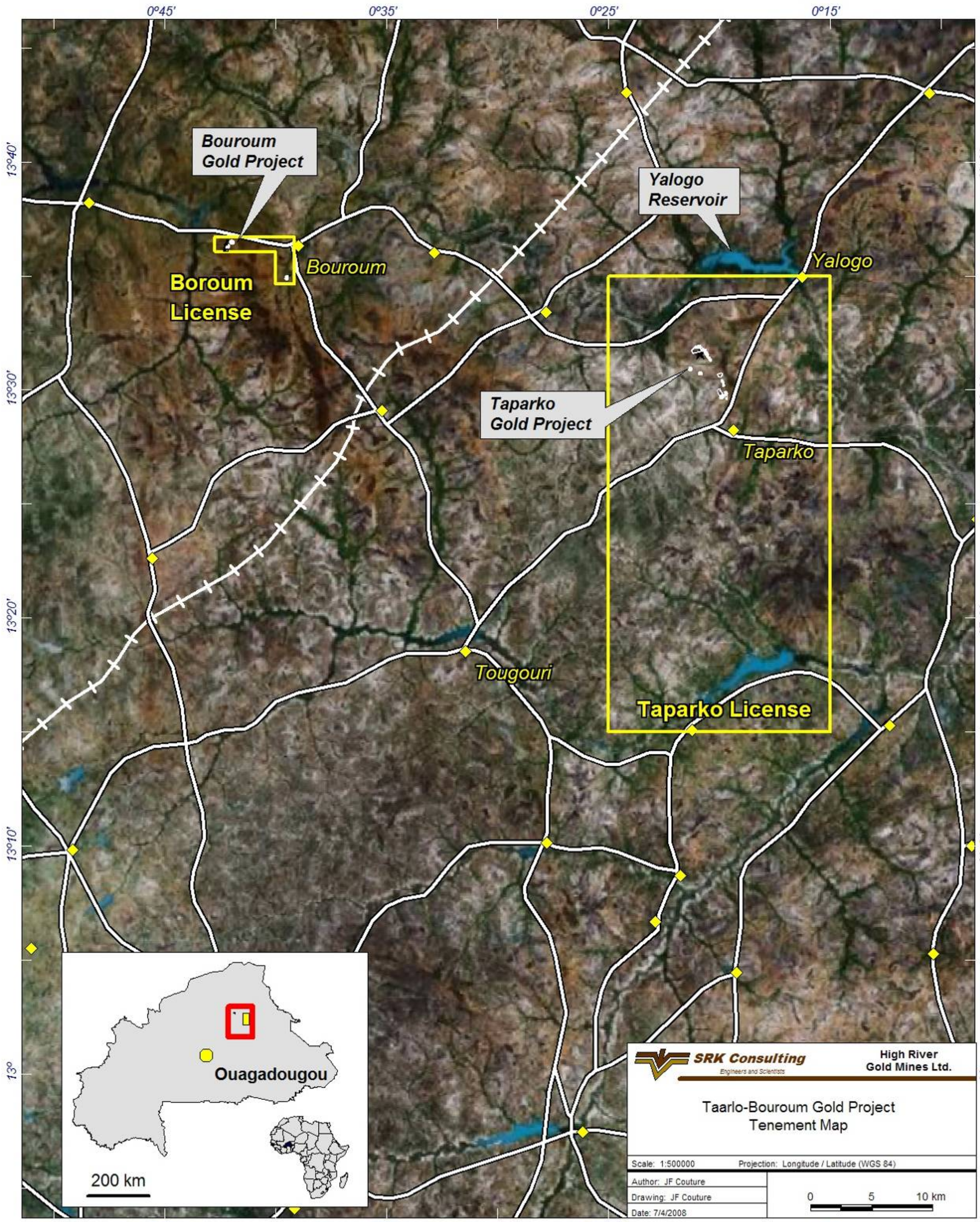


Figure 3-1: Taparko-Bouroum Project Location Map

The land tenure information presented herein is derived from copies of the Décrets of the Ministère des Mines, des carrières et de l'énergie granting each exploitation permit. The boundaries of each permit are defined by corner posts positioned according to geographic coordinates (UTM Clarke 1880 elipsoid, Adindan Datum). The geographic coordinates of each corner post and a copy of the Décrets are presented in Appendix A. The boundaries of each permit are not physically marked on the ground, and have not been legally surveyed.

Table 3-1. Taparko and Bouroum Tenement Information

Permit Name	Registered to	Date Granted	Décret number	Validity Period	Area (km2)
Taparko	Société SOMITA SA	August 4, 2004	2004/329/PRES/PM/MCR/MFB	20 years	666.5
Bouroum	Société SOMITA SA	June 25, 2005	2005-342/PRES/PM/MCE/MFB	20 years	11.7
				total	**678.2**

3.3 Underlying Agreements

SOMITA entered into an agreement with Royal Gold, Inc. ("RGI") for project financing of US$35,000,000 for the construction and development of the Taparko-Bouroum Project. In exchange for the financing, RGI will receive two concurrent production payments, a tail royalty and a milling fee.

The first production payment will continue until US$35,000,000 (the loan principal) has been paid, or until 804,420 ounces of gold have been produced, whichever occurs first. The first production payment is calculated as 15 percent of the total gold production processed at the Taparko-Bouroum processing facility during each quarter multiplied by the average gold price, as quoted on the London Metal Exchange, for the particular quarter.

The second production payment is set at a 4.3 percent fixed percentage rate of the produced ounces when the average monthly gold price falls between US$385 and US$430 per ounce, or a sliding-scale at a calculated percentage rate, when the average monthly gold price falls outside of this range. The calculated rate, expressed as a percentage, is determined by dividing the average monthly gold price by 100 for gold prices above US$430 per ounce, not to exceed 10.0 percent, or by dividing the average monthly gold price by 90 for gold prices below US$385 per ounce (i.e., a US$450 per ounce gold price results in a rate of 450/100 = 4.5%). Both production payments continue until the earlier of the production of 804,420 ounces or payments totalling US$35,000,000 under the first production payment.

The tail royalty of 2 percent is applicable to gold production from defined portions of the Taparko-Bouroum Project area. The milling fee is 0.75 percent on ore that is mined outside of the defined area of the Taparko-Bouroum Project and is processed through the Taparko processing facilities to a maximum of 1.1 million tonnes. The tail royalty and milling fee commence once the two concurrent production payments have ceased.

A total of US$33,560,000 has been advanced on the loan as at December 31, 2006 and the remaining US$1,440,000 was drawn in 2007. The loan has been unconditionally guaranteed by High River until project completion and is secured by a pledge over the shares of SOMITA, Pelangio and Intrepid. On completion, the pledged shares will be released and re-pledged by High River in support of the Standard facilities. Post completion, High River has not guaranteed the total loan but has guaranteed that, should SOMITA not be able to pay the full amount of a quarterly production payment, High River will make up the difference. As at December 31, 2007, High River had not met the RGI completion test.

3.4 Environmental Considerations

The Taparko-Bouroum gold project is an open pit gold mine operating within the limits of Burkina Faso government environmental regulations.

Environmental considerations relating to the Taparko-Bouroum project are discussed in details in section 17.8 below.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Property Access

The Taparko-Bouroum Project area is located in a sparsely populated area readily accessible by road from Ouagadougou. The road to Taparko, a distance of approximately 200 kilometres, is paved.

There is air service to Ouagadougou from major airports in Europe and from other neighbouring countries. There is a rail line from the port of Abijan, Cote d'Ivoire to Kaya, but the political instability in Cote d'Ivoire means that at present other neighbouring coastal country ports are utilized. Most of the freight destined for Burkina Faso arrives at Tema, Ghana, though ports in Togo and Benin are also used. Freight for the project is shipped to Tema, Ghana and then trucked on paved road from Tema to Ouagadougou. The total transportation distance from Tema to Taparko is 1,288 kilometres.

4.2 Topography and Climate

The topography of Burkina Faso is generally very flat with only modest relief in a few locations. The Taparko and Bouroum sites' topography is also relatively flat with some hills on the east side of the Taparko property where basaltic rocks outcrop. The surface cover over the majority of the sites is composed of a hard laterite capping with the balance of the property surface covered with sandy soil. Widely spaced trees are common in the areas of sandy soil.

The local climate is that of the Sahel zone, near the transition from savannah in the south to the steppes (desert) in the north. The wet season extends from June to September. August is the month of heaviest precipitation, usually with cloud bursts and thunderstorms that can be severe. The mean annual rainfall is between 400 and 600 millimetres. Typical daytime temperatures range from 25°C in December to 45°C in May, with nighttime temperatures dropping by approximately 10 degrees. Temperatures exceeding 40°C prior to the wet season are common. No surface accumulations of water remain year round except for man-made storage reservoirs such as the Yalogo dam (about nine kilometres from the Taparko mining operations).

Wind speeds for most of the year are relatively moderate but at the end of the dry season, before the arrival of the rains, there are very strong, dry, hot winds coming from the northeast and from the Sahara that are referred to as the Harmattan. These winds carry large amounts of dust and particulate matter.

4.3 Local Infrastructure

Local Infrastructure is minimal as the population base is sparsely distributed in a few small villages in the area of the project. The major local infrastructure is the Yalogo water reservoir (Figure 3-1) and a state owned telecommunications tower providing access to worldwide telephony and internet services.

The Yalogo reservoir is primarily used for regional agricultural purposes and a significant fish population is used as a food source by local people. The reservoir at the end of the dry season retains approximately 6 million cubic metres of water, while after the wet season the maximum capacity of 19.2 million cubic metres of water is stored. 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.

There is an abundant unskilled but willing workforce in the vicinity of Taparko. Skilled workers and tradesman are available from other parts of Burkina Faso, primarily Ouagadougou. There are university trained technical and professional personnel available as well. The area has artisanal miners and security measures dealing with them are in effect.

4.4 Property Infrastructure and Operations

Facilities and infrastructure at the Taparko site (Figure 4-1) consists of:

- Two operating open pits, two waste rock dumps and a fleet of mobile mining equipment;
- An explosives storage site with magazines, and a fuel storage facility;
- A 1.0Mt/a gold processing plant and associated tailing storage facility;
- A Maintenance shop and warehouse;
- An assay laboratory;
- An administration building;
- Mine dry facilities;
- A diesel generating station for site electrical power;
- A water storage dam 4km from the plant;
- A camp complete with kitchen and catering facilities;
- A microwave telecommunications system;
- Security building and personnel.

Facilities at the Bouroum site (Figure 4-2) will be constructed in 2008 and are described in report section 17.5.

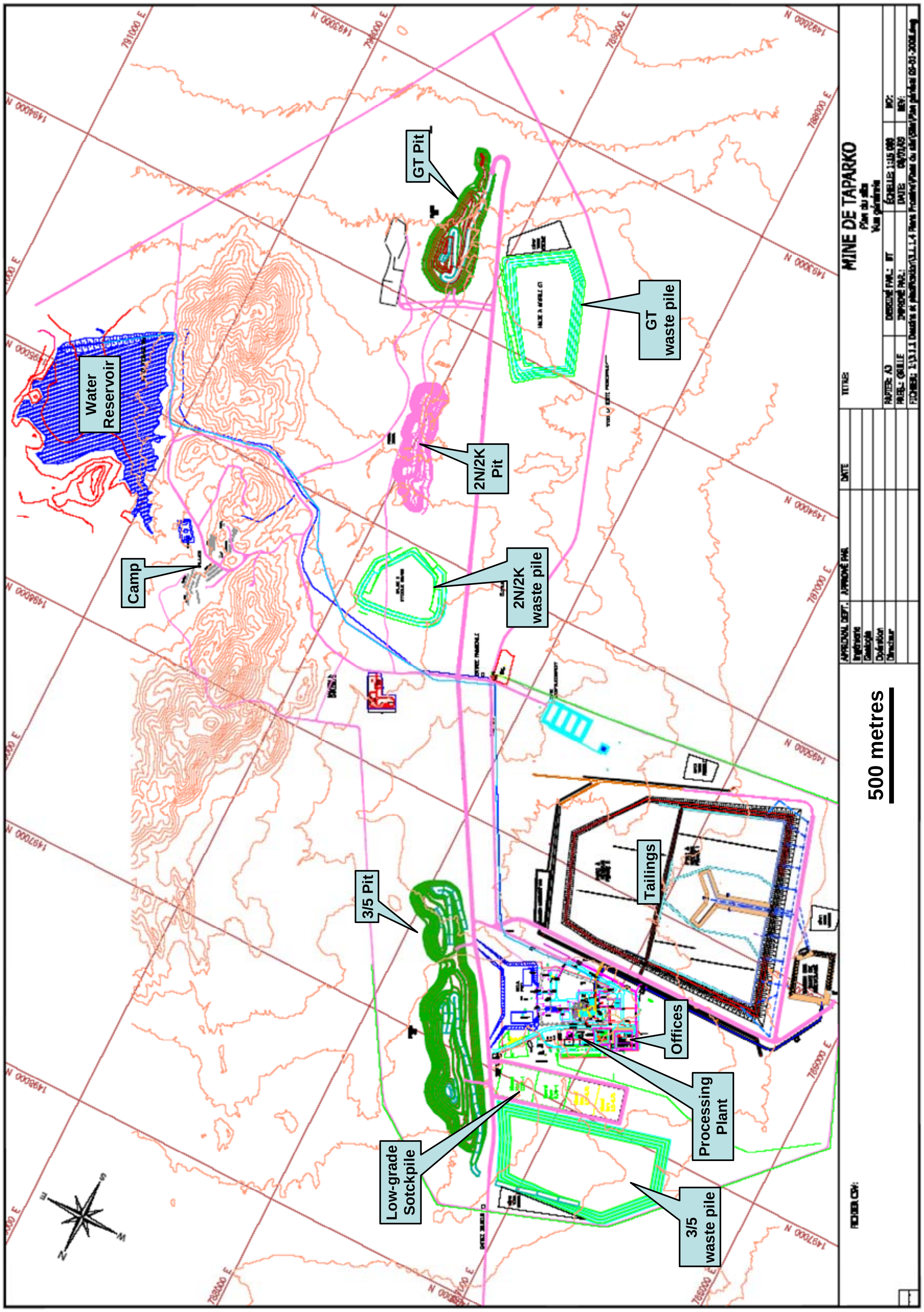


Figure 4-1: Surface infrastructure of the Taparko Site.

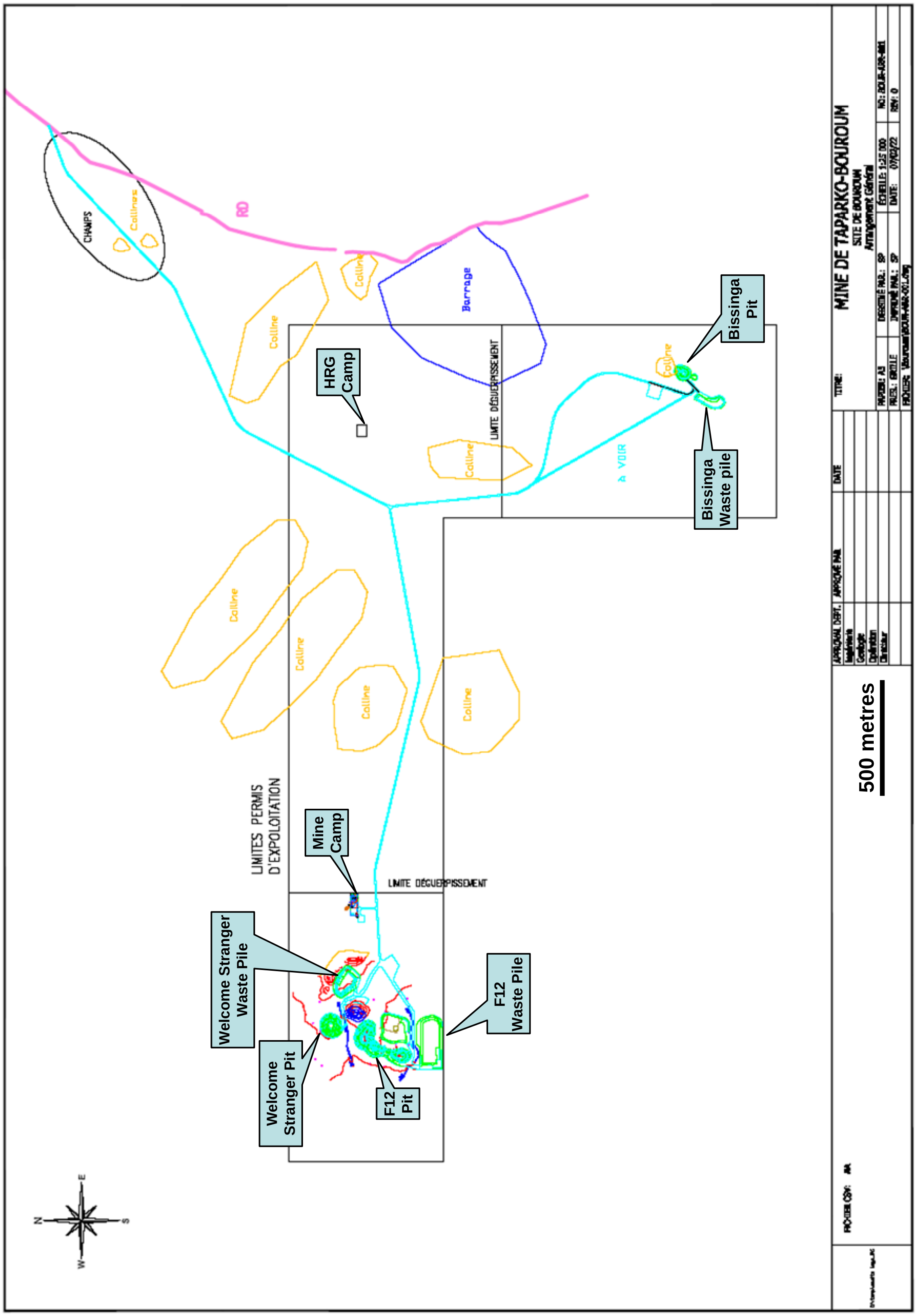


Figure 4-2: Surface Infrastructure of the Bouroum Site.

5 History of Previous Work Results

5.1 Owners

5.1.1 Taparko Property

The original discovery at Taparko was made in 1980 by the Burkina Faso Government department of geology and mining. Minorex, a Canadian consultant, continued exploration starting in 1987 and subsequently solicited expressions of interest from mining companies that might be interested in the property.

Incanore Gold Mines Ltd. (“Incanore”) and HRG entered into a joint venture agreement for the Taparko property in August 1993 and entered negotiations with the State of Burkina Faso for granting of the Taparko permit in September 1993. A Mining Investment Convention was successfully negotiated and initialled in January 1994 and approved by the different levels of government effective February 19, 1996. Incanore’s 18.5 percent interest was acquired by Queenstake Resources Ltd. (“Queenstake”) in August 2000. On July 11, 2002 HRG acquired the Queenstake interest to increase its ownership to the present level.

In August 2004, with the granting of the exploitation permit for Taparko, HRG increased its interest to its current 90 percent in the project. The remaining 10 percent carried interest is held by the Government of Burkina Faso.

5.1.2 Bouroum Property

During the period 1985-1987, the French Bureau de Recherches Géologiques et Minières (“BRGM”) and BUMIGEB (the Burkina Faso geological survey) carried out regional exploration studies in the Bouroum area. This included an assessment of auriferous quartz veins in the F-12 area of the Bouroum Permit. Artisanal mining activity at F-12 commenced in 1987 following the departure of BUMIGEB and has been an active artisanal mining site since.

No significant exploration work was done on the Bouroum property following the departure of BUMIGEB in 1987 until Channel Resources Ltd. (“Channel”) was granted the Bouroum license in August 1994 that was renewed twice in August 1998 and September 2001 with a reduced surface area of 275 square kilometres. On July 1, 1996 Channel entered into an Option Agreement with Viceroy Resources Corporation (“Viceroy”) granting Viceroy rights to earn a 60 percent interest in the Bouroum permit by completing certain exploration work by October 1, 2000. The option was terminated before Viceroy earned any interest in the project.

In May 2002, Channel entered into a joint venture agreement with AXMIN Limited “AXMIN”) granting AXMIN an option to acquire a 65 percent interest in the Bouroum permit by completing a Bankable Feasibility Study. In May 2002, HRG signed a Heads of Agreement with AXMIN to conduct a joint prefeasibility study on the Taparko and Bouroum properties. In June 2004, HRG purchased the Bouroum property for US$3.3 million. The Government of Burkina Faso issued the exploitation permit for the Bouroum property in June 2005.

5.2 Exploration History

Gold mineralization at both Taparko and Bouroum was originally “discovered” by local people who have conducted primitive mining operations in both areas for some time. At Bouroum, this has led to a noticeable depletion of near-surface mineralization over the years. The “modern” exploration history prior to the involvement of the present owners is described in the following sections.

5.2.3 Taparko

The original discovery of gold at Taparko was made in 1980 by the Bureau Voltaique de la Geologie et des Mines, the predecessor of BUMIGEB, the current state agency of Burkina Faso for geology and mining during a regional reconnaissance exploration program funded by the United Nations Development Program. In 1980-82, BUMIGEB conducted limited surface exploration including geological mapping, trenching (16 trenches), geophysical and soil geochemical surveys covering an area extending over 4000 metres from the GT Zone to 3/5 Zone.

BUMIGEB contracted Minorex, a Canadian consultant, in 1987 to help promote the discovery. Minorex excavated six new trenches in the southern part of the Taparko prospect area, exposing a gold-bearing dark grey quartz vein over a distance of 170 metres. This trench was called the Grande Tranchée (GT) Zone. A total of 766 metres of diamond drilling in 13 holes (TS-1 to TS-13) were completed. Drilling was at 20-metre spacing, targeting the GT quartz vein at a vertical depth of 20 to 25 metres, but core recovery in the GT quartz vein was poor. In 1989, initial metallurgical testwork was conducted at Centre the Recherces Minérales in (“CRM”) in Quebec City indicating good recovery at standard operating conditions.

Following this work, Minorex prepared an initial “reserve estimate” for the explored part of the GT Zone that amounted to 110 000 tonnes with an average grade of 14.5 g /t gold. This historic mineral resource estimate published before National Instrument 43-101 was not verified by a qualified person and this information should not be relied upon.

5.2.4 Bouroum

The BRGM and BUMIGEB carried out an assessment of the auriferous quartz veins in the F 12 area of the Bouroum Permit. BUMIGEB obtained a small plant to treat quartz vein material at Bouroum, however, the plant was never erected or commissioned.

The Bouroum permit was acquired by Channel in August 1994 and optioned to Viceroy in July 1996. Channel and Viceroy completed substantial drilling in 1995 and 1996 on the Bissinga North, F-12 and Welcome Stranger gold deposits. The information of this drilling is included in the database used for estimating mineral resource. Table 5-1 provides a summary of all of the drilling on the Bouroum property in 1995 and 1996, by year and by deposit.

The field programs carried out by Channel and Viceroy had the dual purpose of investigating the known gold mineralization and of searching for new occurrences. The entire permit area was covered with airborne geophysics, soil and rock geochemistry, geological mapping and ground magnetic and electromagnetic surveys. Gold occurrences arising from this work were investigated with ground geophysics followed by reverse circulation drilling. The option expired in 2000, without any additional field work by Viceroy. AXMIN Inc. optioned the property from Channel in December 2000.

Table 5-1: Drilling Completed by Channel Resources/Viceroy Resources, Bouroum Property

Drilling type	**Diamond Core**		**Reverse Circulation**	
	Number of Holes	Length (metres)	Number of Holes	Length (metres)
1995			121	14,911
1996	6	808	101	13,143
Total	**6**	**808**	**222**	**28,054**
Bissinga North	1	120	19	2,133
Bissinga South			18	2,056
F 12	3	509	79	10,391
Welcome Stranger	2	179	65	8,298
Other Areas			41	5,176
Total	**6**	**808**	**222**	**28,054**

5.3 Historic Mineral Resource Estimates

Two resource estimates were produced for the Taparko gold deposits prior to the resource and reserve estimates reported herein. For the Bouroum gold deposits, three previous resource estimates were prepared.

5.3.5 Taparko Property

The first resource estimate for the Taparko property was performed by Watts, Griffis, McOuat Limited in 1997. This historic mineral resource estimate was published before National Instrument 43-101 and should not be relied upon. The second resource model was prepared by SRK in 2000 also before the adoption of National Instrument 43-101, but reported under the CIM 1996 guidelines. Both resource estimates were reported using a 0.5 g/t gold cut-off grade, as shown in Table 5-2.

Table 5-2: Historical Resource* Estimates, Taparko Property.

	Quantity (tonne)	Grade (g/t gold)
Watts, Griffis McOuat (1997)		
Total Indicated	2,878,000	3.73
Total Inferred	6,898,000	3.3
SRK Consulting (2000)		
Total Indicated	11,357,233	2.25
Total Inferred	5,757,861	1.73

* Reported at a cut-off of 0.5 g/t gold. Both estimates were prepared before the adoption of National Instrument 43-101 and therefore this information should not be relied upon.

5.3.6 Bouroum Property

The first two resource estimates for the Bouroum gold deposits were prepared for Viceroy in 1997 and 1999 (Table 5-3). The 1997 resource model was prepared by Taggart and Rescan Engineering as part of a scoping study, and reported at a cut-off grade of 0.8 g/t gold while the 1999 estimate was reported at a 2.0 g/t gold cut-off. Both historic mineral resource estimates were published before National Instrument 43-101 and should not be relied upon. The third resource estimate was prepared by SRK in March 2002 following the JORC guidelines. The SRK (UK) resource estimate presented in Table 5-3 is reported at a cut-off grade of 1.0 g/t gold.

Table 5-3: Historical Resource Estimates*, Bouroum Property,

	Resources		Reserves		
Deposit	**Quantity (tonnes)**	**Grade Gold (g/t)**	**Quantity (tonnes)**	**Grade Gold (g/t)**	**Strip ratio**
*Taggart and Rescan 1997 Scoping Study (for Viceroy)**					
F-12	7,571,000	1.3	2,552,000	1.8	2.3
WS	1,682,000	1.4	427,000	2.2	7.6
Bissinga	793,000	2.3	170,000	5.3	7.1
Total	**10,046,000**	**1.4**	**3,148,000**	**2.0**	**3.3**
Viceroy Internal "Reserve" Estimate, 1999					
F12			374,000	6.1	6.7
WS			174,000	8.7	21
Bissinga			108,000	7.2	6.6
Total			**656,000**	**7.0**	**10.4**
SRK(UK) Resource Estimate, March 2002 (for AXMIN)					
Indicated					
F12	1,800,000	3.2			
WS	500,000	2.6			
Bissinga	None	None			
Total	**2,300,000**	**3.1**			
Inferred					
F-12	1,400,000	2.4			
WS	700,000	2.9			
Bissinga	500,000	4.0			
Total	**2,600,000**	**2.8**			

* Reported at a cut-off of 0.8 g/t gold for the Taggart and Rescan 1997 estimate, 2.0 g/t gold for the Viceroy 1999 estimate and 1.0 g/t gold for the SRK 2000 estimate. All three estimates were prepared before the adoption of National Instrument 43-101 and therefore this information should not be relied upon.

5.4 Historic Gold Production

Both the Bouroum and Taparko project have been subject to artisan mining by local people. At Taparko, limited mining occurred on 15 to 20 small pits that were excavated to a maximum depth of eight metres in an area covering approximately 80 by 20 metres in Zone 3/5. No gold production was recorded from this limited artisanal mining.

At Bouroum, more extensive artisan mining operations have been active for over 25 years until HRG stopped the operations in early 2000s. Artisan mining focussed on the F-12 and Welcome Stranger zones and to a lesser extent on the Bissinga South zone.

At Welcome Stranger pits on average vary between two and six metres in depth with the occasional pit reaching a maximum depth of 15 metres. A few shafts are more than 15 metres deep. King (2003) has estimated the tonnage depletion from the artisanal pits by calculating their estimated total volume and adding back the estimated volume of the nearby spoil heaps. The depletion was estimated at 8,500 tonnes with an average grade of somewhere between 5.0 and 10.0 g/t gold. The spoil heaps remaining on the property were estimated to contain some 5,000 tonnes at an average grade of 3.6 g/t gold.

For the mineral resource estimate presented herein, the volume of the pits was simply subtracted from the block model, a total of 17,000 tonnes with an average grade of 2.0 g/t gold were removed. This is considered by SRK a somewhat conservative estimate.

6 Geological Setting

6.1 Regional Geology

The Taparko/Bouroum area lies within the early Proterozoic Birimian Greenstone Belt of the West African Craton. The area was deformed repeatedly between 2,400 to 1,200 million years ("Ma") 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.

The Birimian rocks are subdivided into an early and a late volcano-sedimentary sequence, each followed by an orogenic episode of folding and metamorphism ("Eburnian 1" and "Eburnian 2" orogenies). The total spanned some 110 Ma, from 2,190 to 2,080 Ma. The earlier cycle saw the deposition of volcanic and volcaniclastic rocks and is intruded by early felsic intrusive rocks. Gold deposits formed at this time are of the "syngenetic type" associated with manganese in carbonaceous schists, exhalitative and stratiform sulphide occurrences, and of the quartz-vein type.

During the Eburnian 2 cycle, intra-montane basins were filled with sediments, including the Tarkwa quartz-pebble conglomerates that contains paleo-placer gold mineralization mined in Ghana near Tarkwa. Ongoing tectonic movements led to the development of shear zones of regional importance that were important loci for many of the major West African gold deposits such as Obuasi or Bibiani in Ghana, Sadiola Hill in Mali, and similar deposits in Côte d'Ivoire. The Taparko and Bouroum gold deposits are interpreted to have formed during this second orogenic episode.

The Taparko and Bouroum gold deposits are hosted on opposite limbs of the Y-shaped Bouroum-Yalogo greenstone belt (Figure 6-1). The Birimian volcano-sedimentary rocks consist of amphibolitic schists ("Bamga" series in Figure 6-1), mafic lava, pyroclastic, argillaceous sedimentary rock and rare quartzite, all intruded by large bodies of diorite or quartz-diorite, and by late diabase dikes. The greenstone rocks are approximately 15 kilometres wide and trend NNW. Several prominent faults have been interpreted from airborne geophysical data and SPOT imaging. In the east, this includes the Markoye Fault. In the west, two NNW-SSE faults are recognized some seven kilometres apart, the Bouroum West and East Faults.

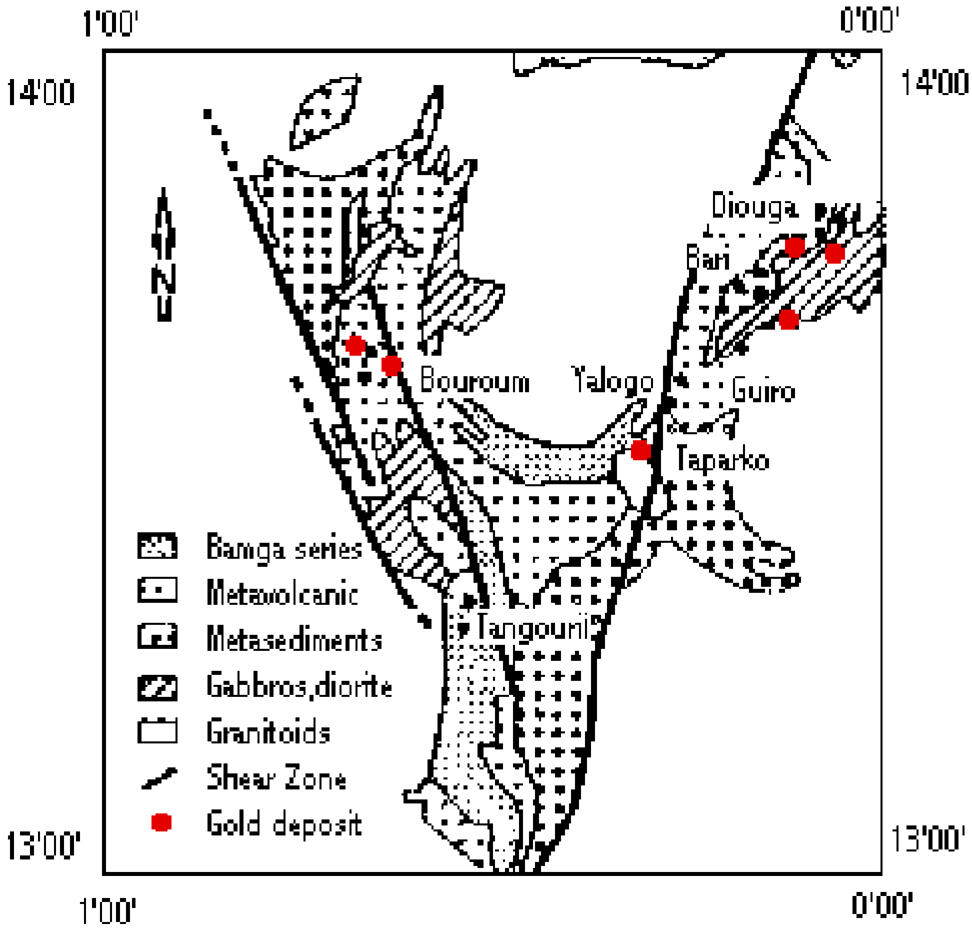


Figure 6-1: Regional Geology of the Taparko-Bouroum Area

6.2 Local Geology

6.2.1 Taparko

Gold at Taparko occurs predominantly associated with the Taparko shear zone, a northwesterly trending structure interpreted as a splay off the regional Markoye Fault (Figure 6-2). The shear zone is located along a thing band of metavolcanic and metasedimentary rocks enclosed on both sides by granodiorite. This structure was mapped over a strike length exceeding 10 kilometres. It dips at 40 to 50 degrees to the northeast, providing for a natural footwall to the gold mineralization.

Gold-bearing quartz veins and veinlets occur throughout most of the known length of the Taparko shear zone, but economically important accumulations of gold mineralization are restricted to a number of discrete zones (Figure 6-2).

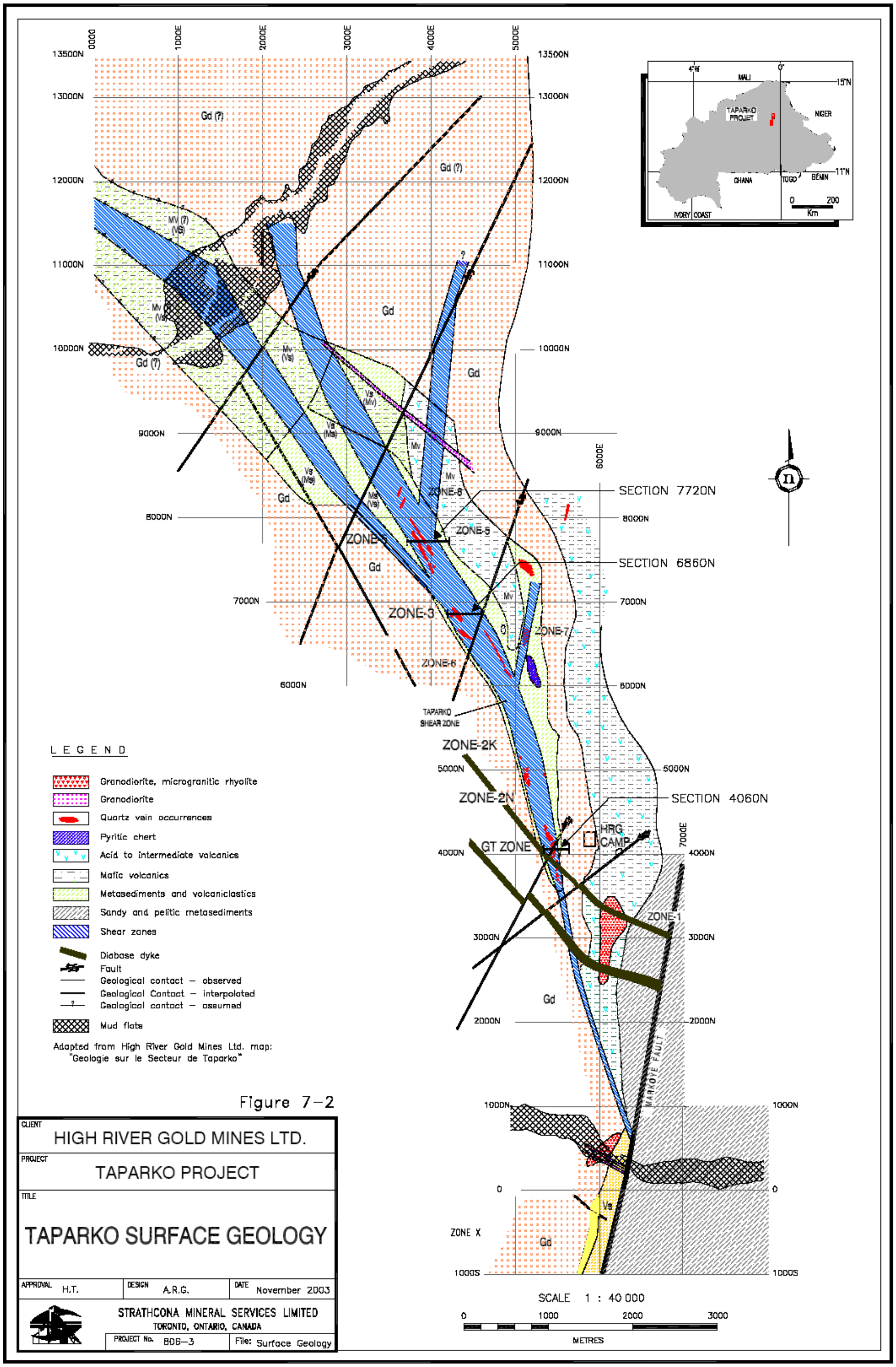


Figure 6-2: Taparko Deposit Geology

The GT Zone is the most southerly auriferous zones of economic importance. It is also characterized by the highest grade of the Taparko auriferous zones. The GT deposit has a strike extent of 400 metres; stretching from 3800 N to 4200 N. The gold mineralization is concentrated in the upper of two quartz vein systems (Figure 6-3) over true width between five and fifteen metres. Little if any gold mineralization is found outside of this vein. The lower quartz vein system is virtually barren.

Zone 2 extends from 4700 N to 5200 N, a distance of 500 metres. It is subdivided into a southern part called Zone 2N, and a northern part called Zone 2K, separated by a short very low grade interval. The amount of quartz veining is much less than in the other zones. Zone 2 is characterized by relatively local and restricted accumulations of quartz with good gold grades in a generally low-grade environment.

Zone 3/5 is the largest of the individual Taparko gold deposits, stretching from 6800 N to 7900 N, a distance of 1,100 metres. Figure 6-4 is near the southern end of the zone, showing its offset along a post-ore fault, while Figure 6-5 is near its northern limit. The overall quartz content of the zone is about 60 percent, but attempts at correlating individual quartz veins or quartz-vein swarms across several sections have failed. The gold grade distribution within the overall shear zone is not substantially different between the quartz veins and the shear zone material itself, and thus the earlier concept of distinguishing between a quartz-vein rich core and a halo without veins is unwarranted.

Zone 3/5 has excellent grade continuity above cut-off and shows several areas with elevated gold grades relative to overall deposit. It was originally thought that there was a strong structural control to the higher-grade gold segments, but the detailed in-fill drilling during 2003 allowed more accurate modelling with no obvious relationship with structural architecture of the vein system.

Post-mineralization deformation is largely restricted to offsets of the shear zone and the enclosed auriferous quartz veins by occasional northeast trending, brittle faults, such as is depicted in Figure 6-4.

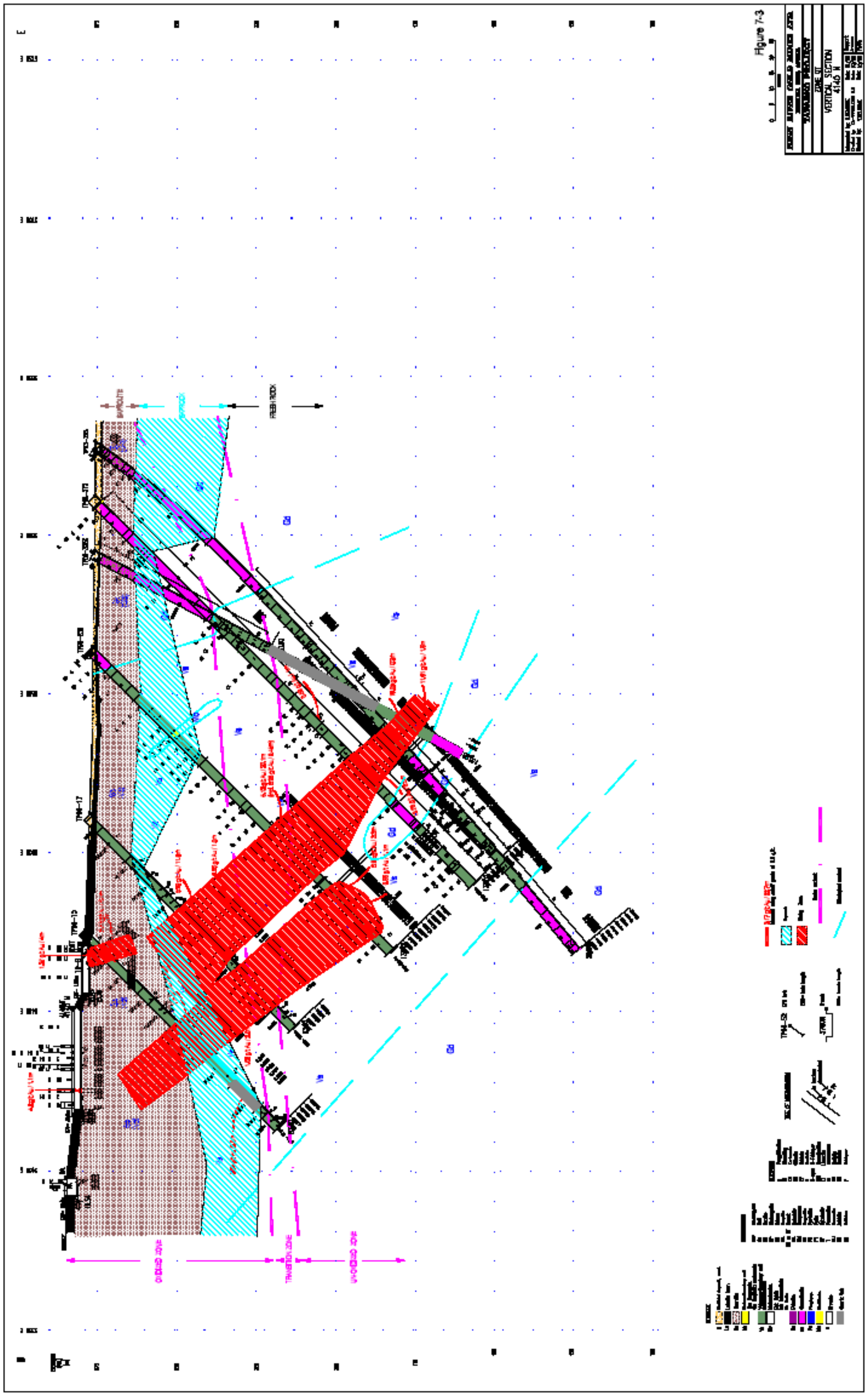


Figure 6-3: Taparko GT Zone Geology Section 4140 N.

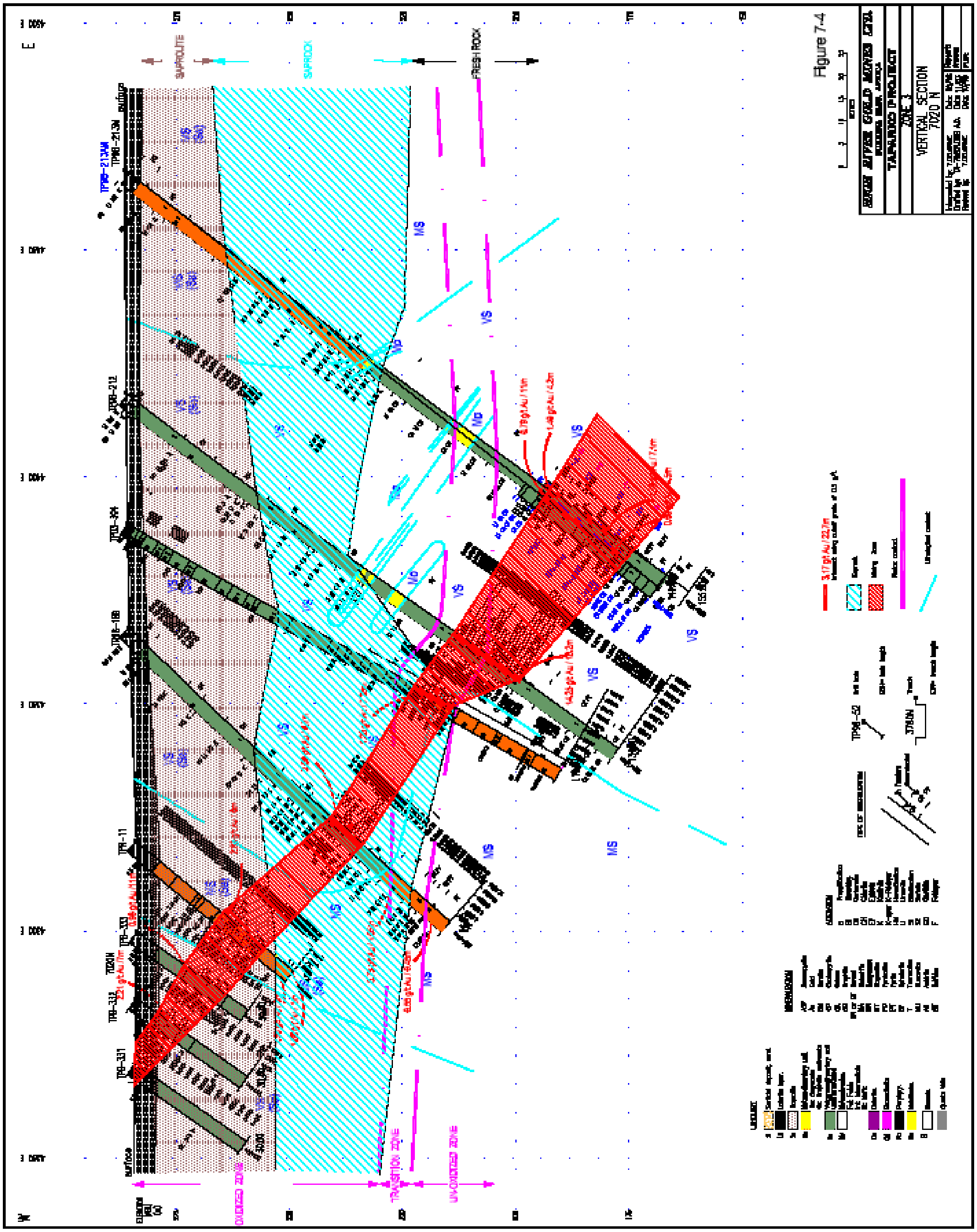


Figure 6-4: Taparko Zone 3 Geology Section 7020 N.

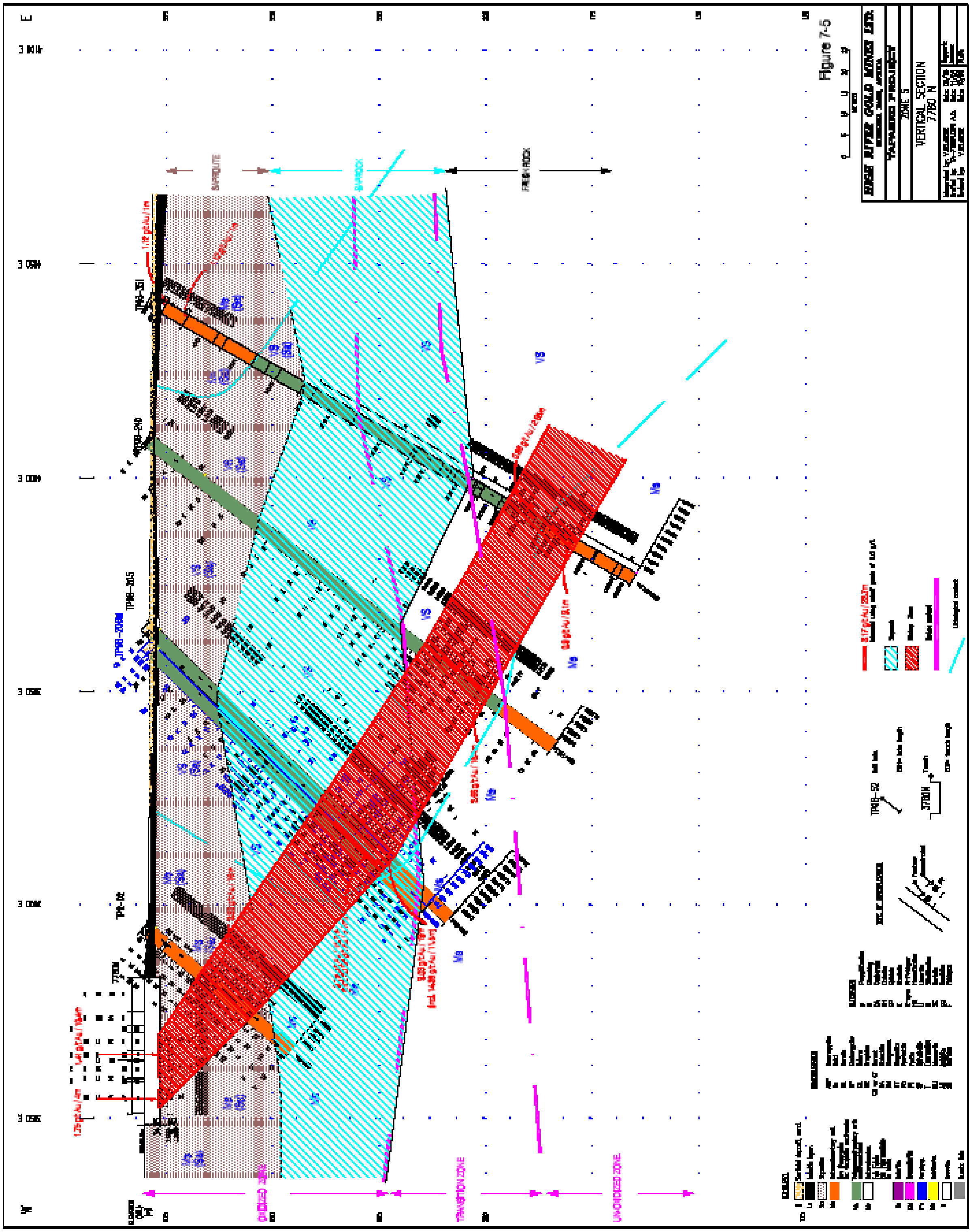


Figure 6-5: Taparko Zone 5 Geology Section 7780 N.

6.2.2 Bouroum

The geology of the Bouroum area is shown in Figure 6-6. The area is characterized 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 (Figure 6-6) in which second order shear zones are locally developed and contain gold-bearing quartz veins. All of the gold deposits of economic importance and most of the gold-in-soil anomalies and artisanal workings are located within this corridor.

Three main gold deposits have been investigated by drilling. The Bissinga Zone, consists of the North and South Prospects some 500 metres apart, situated in the south-eastern part of the Bouroum permit (Figure 6-6). It occurs along a south-trending shear zone dipping to the west at 65 to 70 degrees along the contact between a magnetite-rich gabbro to the west (hanging wall) and mafic volcanic rock to the east (footwall). There are extensive artisanal workings on the South Prospect, but drilling has generally failed to return economic gold grades at depth. The North Prospect (Figure 6-7) comprises a relatively short shoot of quartz-carbonate veining hosting pyrite and gold mineralization. It measures about 80 metres long, is up to 20 metres wide and extends to a depth of 60 metres.

The F-12 Zone (Figure 6-6) is by far the most important of the three auriferous zones on the Bouroum property. It has been the site of artisanal activity for a number of years, exposing the geology of this gold deposit. The F-12 Zone consists of a southern south-trending “tail” dipping steeply west. It curves around to form an east-west-trending oriented central part that reaches widths of about 70 metres on the surface. 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 500 metres. Figure 6-8 is a composite level plan of the zone, and Figure 6-9 is a geologic cross section through the central, part of the deposit.

The central part of the F-12 Zone is also characterized by two massive, white “buck reef” quartz vein splays with little to no sulphide. They are referred to as the “Hanging wall” and “Footwall” veins. Both quartz veins are associated with zones of intensely silica and carbonate-altered basalt, often containing moderate pyrite (>2%) and gold mineralization. The two splays are often separated by a zone of folded siliceous basalt containing minor pyrite and low-grade gold mineralization that is better developed in the footwall rocks of the “Footwall” splay where brecciation is also evident.

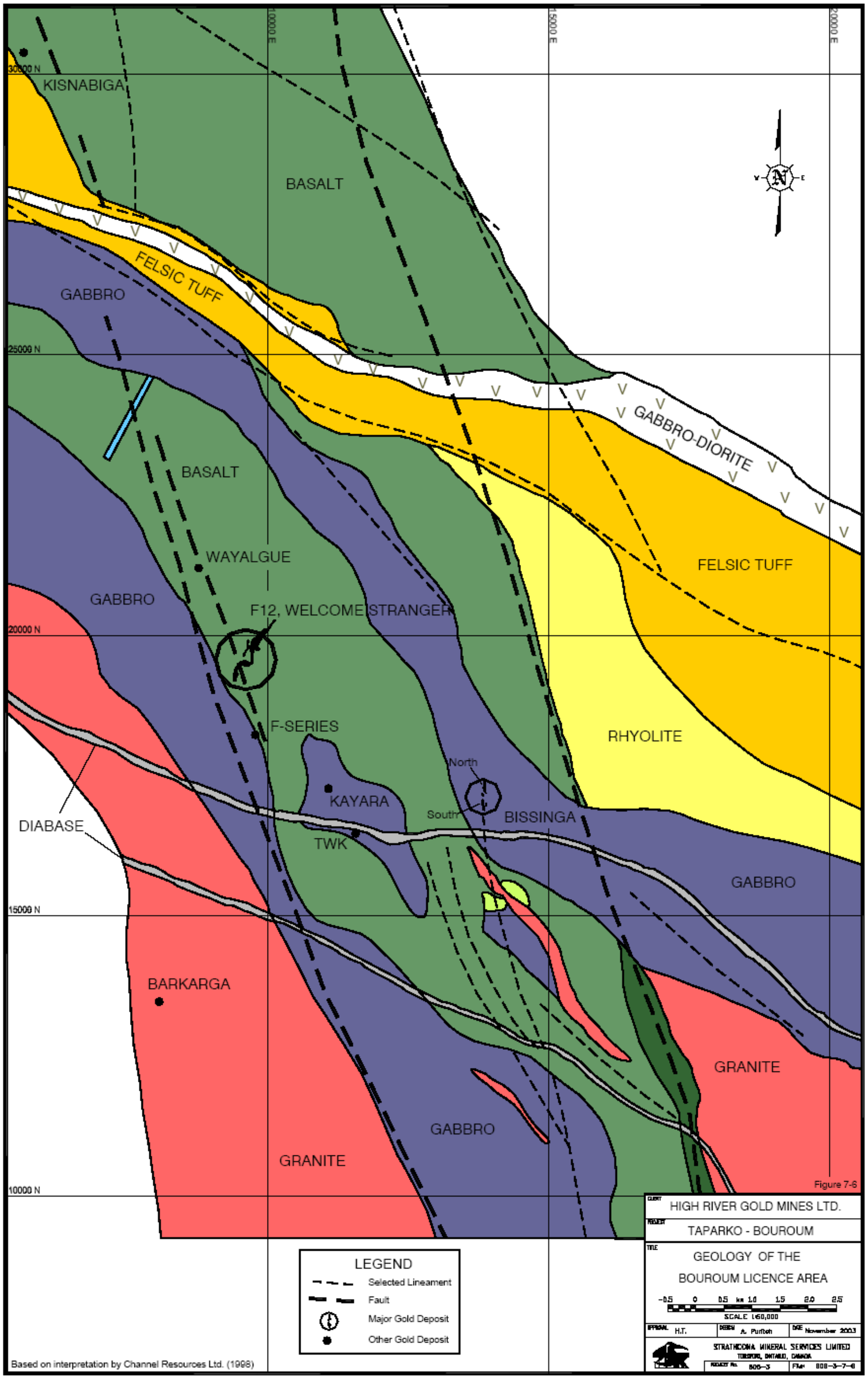


Figure 6-6: Geology of the Bouroum Licence Area

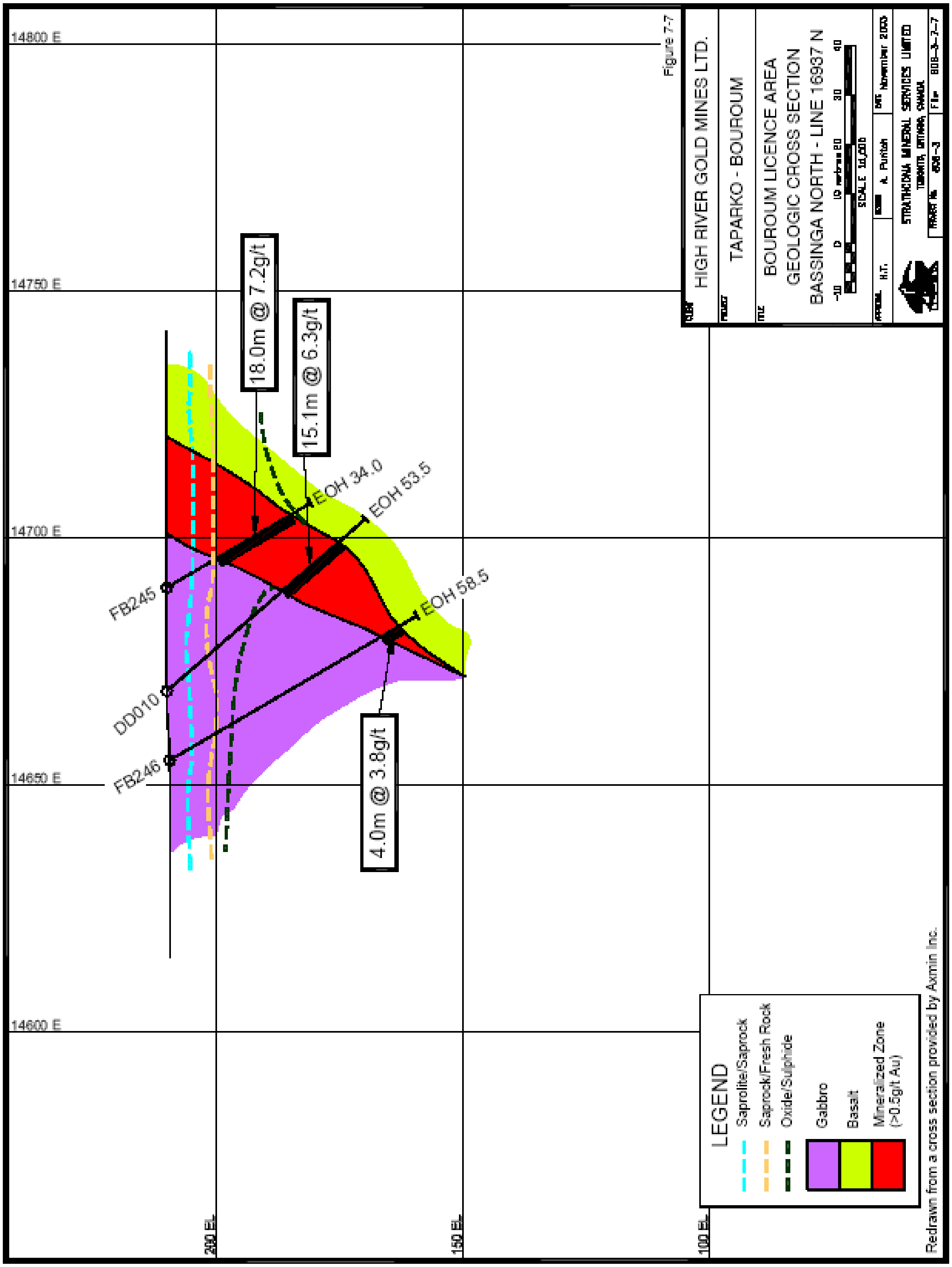


Figure 6-7: Geologic Cross Section Bissinga North, Line 16937 N

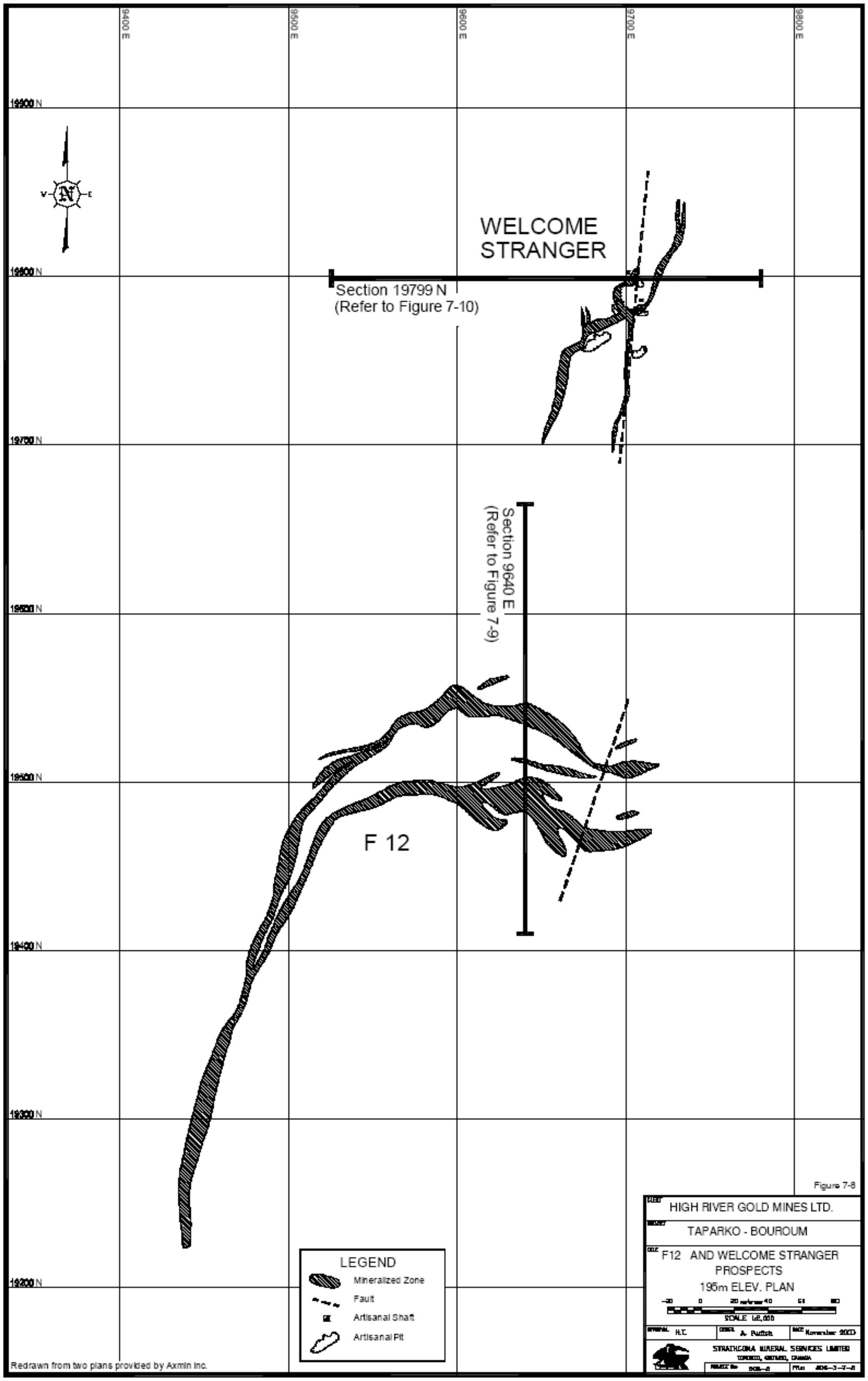


Figure 6-8: Plan of F 12 and Welcome Stranger Zones

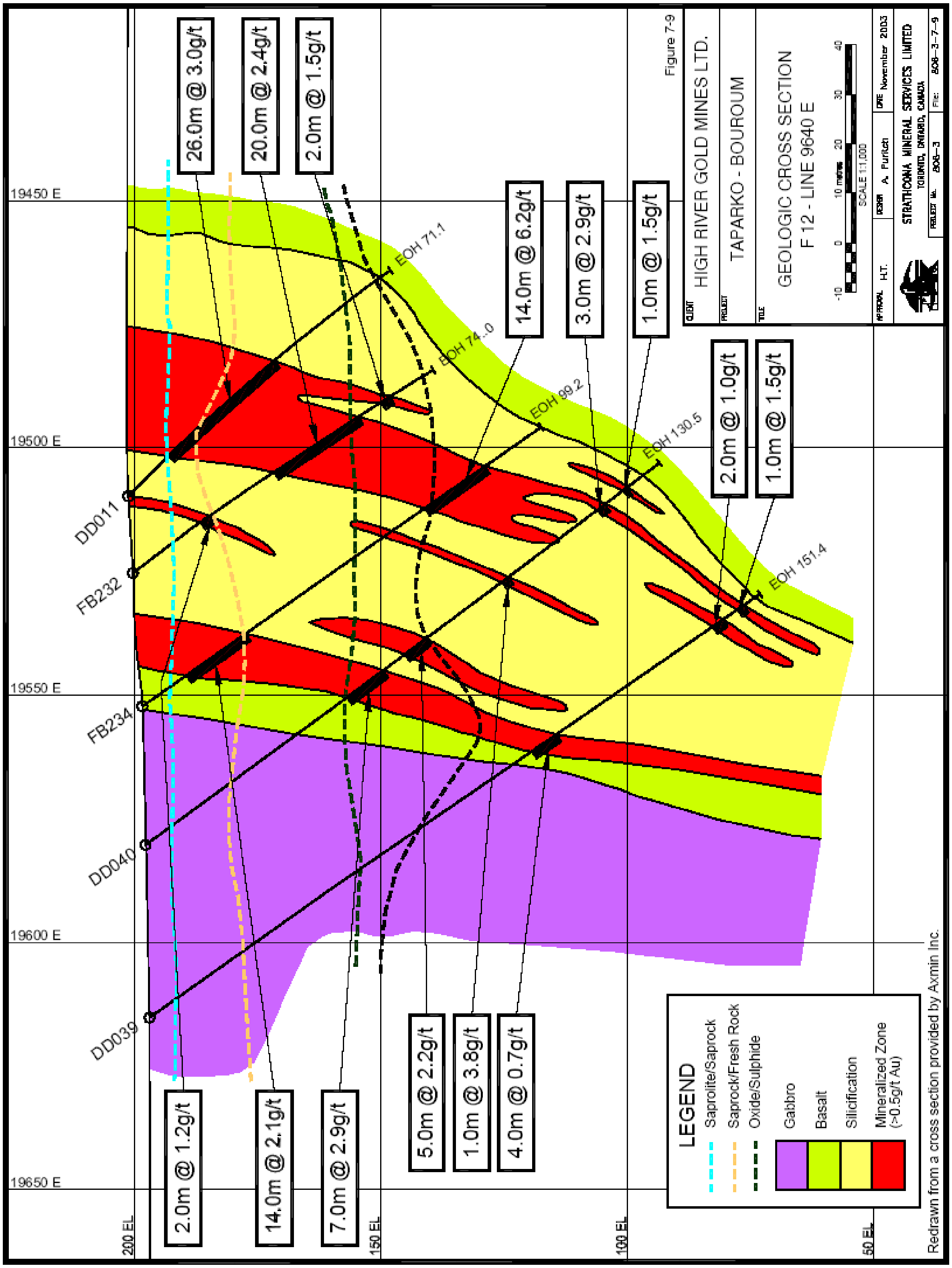


Figure 6-9: Geologic Cross Section F 12, Line 9640 E

The Welcome Stranger Zone is situated some 150 metres to the north of the F-12 Zone (Figure 6-8) close to the contact between relatively undeformed layered clastic metasedimentary rocks (hanging wall) and similarly unaltered mafic volcanic rocks (footwall). The auriferous zone has been partly exposed by artisanal mining.

The Welcome Stranger Zone is interpreted as a “sigmoidal tension gash” in which the “tails” of the structure and the central zone trend south-southwest and northeast, respectively. The core of this zone is white quartz vein extending over a strike length of 180 metres (unfolded) and is up to ten metres wide on the surface. This vein obliquely crosscuts the regional north-south foliation and is isoclinally folded. Fold hinges are sub-horizontal to moderately north plunging. Figure 6-10 is a geologic section through the zone.

A zone of shearing sympathetic to the regional foliation with a surface width of 35 metres 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 70 metres.

Alteration and gold mineralization are restricted to the quartz veins and their immediate wall rocks. However, at the intersection of the two vein structures, the alteration and gold mineralization is much stronger, creating an ore shoot with increased gold grade that plunges moderately to the north forming the is the economic heart of the Welcome Stranger Zone.

6.3 The Weathering Profile

Much of the gold mineralization at Taparko and Bouroum available for mining is developed within the weathered zone. The soil profile starts with a generally thin, discontinuous layer of residual laterite. The saprolite profile at Taparko is approximately 20 metres thick in the GT Zone and averages approximately 30 metres in the 3/5 and 2N/2K Zones. At Bouroum the typical saprolite reaches depths of between 10 and 20 metres. Except where the auriferous zones is located in quartz veins, drilling and blasting will generally not be required in the saprolite. However, the saprolite at Bouroum tends to be more solid than at Taparko. The depth of the saprolite will often increase above the auriferous zone in response to increased permeability.

The saprolite is separated from the unweathered rocks by a gradational intermediate zone of “saprock” that is difficult to define from available drilling data. In the saprock, the kaolinization has not been as effective and thorough as in the saprolite, and drilling and blasting will generally be required. The saprock has a varying thickness but is generally thinner than the saprolite, typically from five to ten metres.

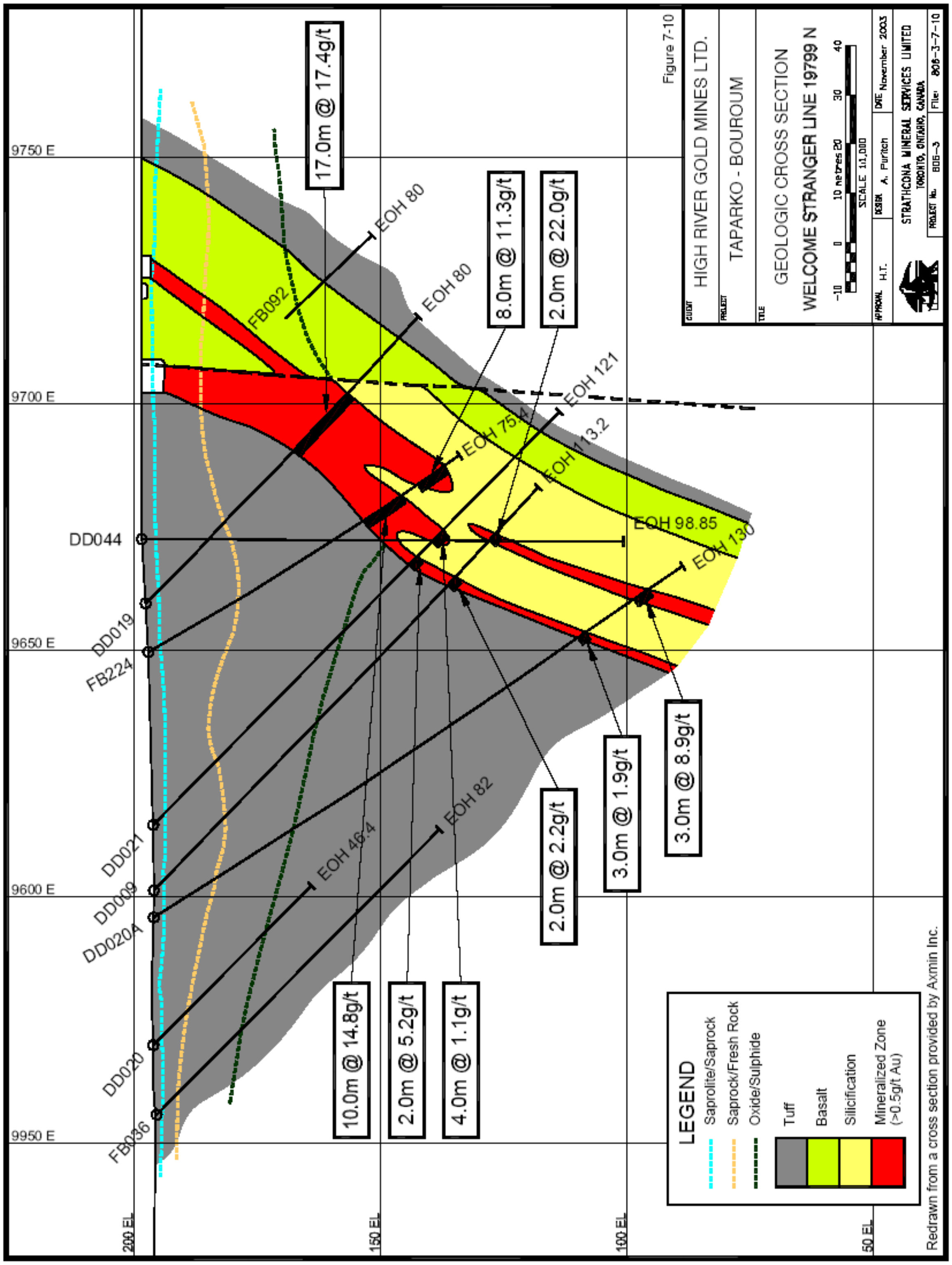


Figure 6-10: Geologic Cross Section Welcome Stranger, Line 19799 N.

The saprolite at Taparko and Bouroum is completely oxidized, and the graphite and sulphide content of the original rocks in the saprolite zone has completely disappeared. Oxidation also generally affects the saprock which, however, may have remnants of original graphite and sulphides, and in the "transition zone" extends into the underlying fresh rock along fractures and shears. The depth of oxidation, as of the saprolite above, is enhanced along the mineralized zones where it can reach twice the depth of oxidation in the surrounding host rocks.

At Bouroum, the water table has influenced the depth of oxidation and has been recorded in some boreholes to occur at an average depth of between 40 and 60 metres. Strong water flows were intersected in boreholes drilled along the north-eastern end of the central part of the F 12 zone. The water table at Taparko is around 35 to 45 metres in the GT and 2N/2K Zone, and between 40 and 50 metres in the 3/5 Zone.

7 Deposit Types

Bourges et al (1998) and Gilbertson (2002) have described the tectonic setting for the Taparko and Bouroum gold mineralization, respectively. In a general way, the gold mineralization found at Taparko and Bouroum may be characterized as formed in a classic mesothermal setting during the later stages of orogenetic events, with a strong structural control. As such, these deposits are not expected to show a strong grade or mineralogical zoning that is so typical for the epithermal gold deposits. At Taparko, segments of an extended shear zone host quartz veins that carry gold mineralization, as well as the surrounding rocks within the shear zone, over significant widths. At Bouroum, a structurally complex setting has produced several smaller deposits that are characterized by strong gold enrichment in structurally-controlled shoots.

Gilbertson (2002, page 84) further compares the two areas, as follows:

"There are many similarities between the results produced from the author's study of the Bouroum concession and those from Bourges et al. (1998) on the nearby Taparko deposit. The two deposits are located [on] either side of the Y-shaped Bouroum-Yalogo greenstone belt (Figure 7.1). Both are found within the Birimian volcano-sedimentary series and have undergone high strain to ... greenschist facies. Taparko also has a regional schistosity trending between 160 to 170 degrees that is axial planar to steeply plunging ptygmatic folds, which could correspond to the first deformation phase seen on the Bouroum concession, especially at F 12.

Similarities are again seen under microscopic inspection; quartz aggregates wrap around feldspar porphyroclasts in an augen structure and gold is again associated with pressure shadows around pyrite crystals.

Bourges et al. (1998) concluded that the various degrees of deformation, ranging from strained quartz to undeformed quartz, and the presence of breccia texture, corresponds to widespread heterogeneity of strain caused by progressive reopening and vein quartz infilling in a transpressive deformation system, evolving from a ductile to a brittle-ductile regime. It is also possible to conclude this for areas of the Bouroum concession as the same textures are identified; also one deposit (Welcome Stranger) has possibly undergone a similar transpressive deformation.

The emplacement model produced by Bourges et al. (1998) suggests that the Taparko deposit formed during sinistral transcurrent shearing that evolved to sinistral reverse shearing, while the evidence from geological mapping of the Bouroum deposits suggests that the deformation is controlled by dextral movement. These two observations from either side of the Bouroum-Yalogo area fit with an overall N-S shortening of the Y-shaped greenstone belt."

Gilbertson (2002) then proceeds to describe the intimate interplay between tectonic events and vein formation, that he interprets to have taken place in three main phases and explains the formation of local ore shoots that show both increased vein width and gold grade that are so important at Bouroum.

With respect to the mineralizing fluids active at Bouroum, Gilbertson (2002, page 89), concludes:

"Mineralising fluids ... were probably low salinity and low temperature (between 255-310 degrees C), with high compositions of H_2O and CO_2 as seen by the presence of reduced carbon (graphite) in the mapped deposits and by microthermometry studies on the Taparko deposit (Bourges et al., 1998). In this study, large CO_2 density variations were experienced diagnostic of gas effervescence (Robert and Kelly, 1987), which is important, as phase separation of coexisting CO_2 and H_2O rich fluids is considered necessary in generating ore shoots rich in free milling gold (Groves and Foster, 1991)."

Gilbertson continues (page 89):

"These deep hydrothermal fluids led to the characteristic alteration assemblages seen at Bouroum. The influx of CO_2 reacting with Ca, after albitization, resulted in widespread pervasive calcite alteration. Ankerite, with biotite and white mica rims, forms the central core of the deposit."

8 Mineralization

8.1 Types of Mineralization

The Taparko and Bouroum gold deposits have but one type of mineralization, 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 found in the shear zone itself where gold grades similar to the quartz vein mineralization occur. Graphite is spatially associated with the gold mineralization.

Figure 8-1 shows two photographs from diamond drill holes No. 98-212 and 98-210 M to illustrate the character of the mineralization at Taparko. Similarly, Figure 8-2 shows pictures of surface exposure of quartz veining at the F 12 deposit at Bouroum (Figures 26 and 27 in Gilbertson, 2002).

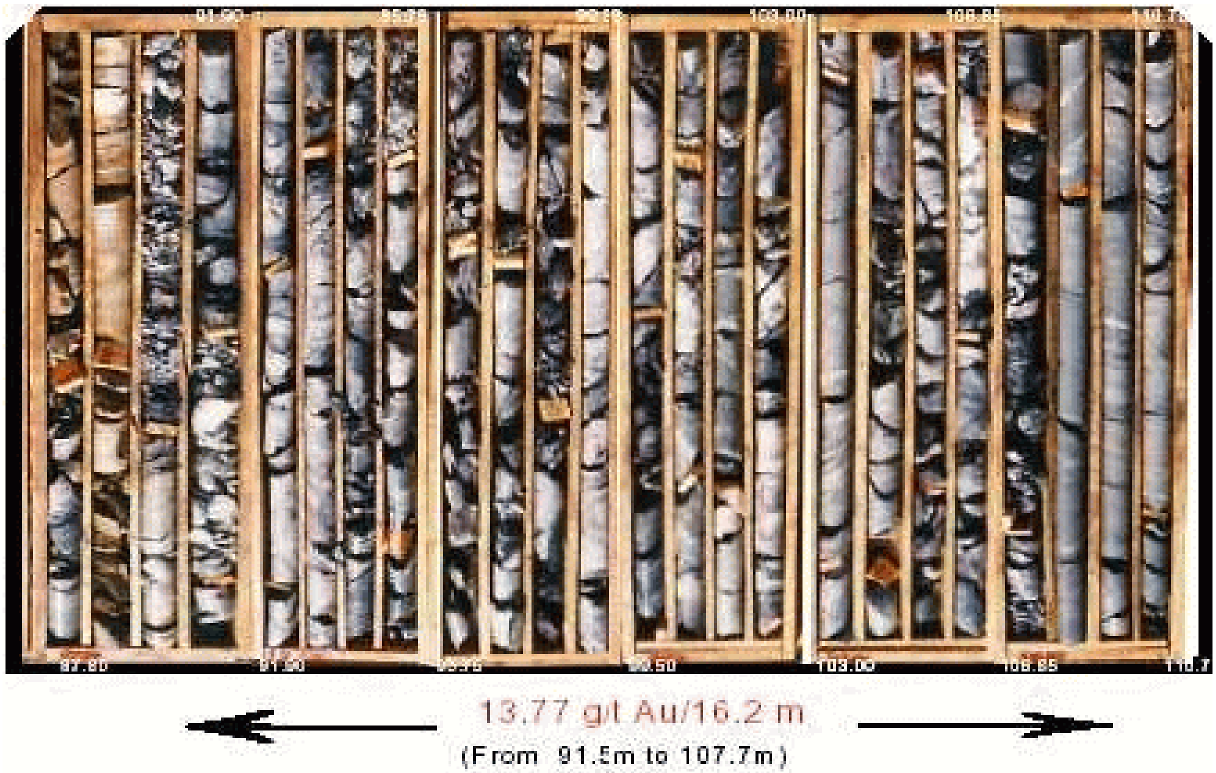
8.2 Mineralogical Studies

Both Taparko and Bouroum have fairly simple mineralogy, with gold associated partly with sulphides, and partly being free. Both deposits have a slight base metal association (e.g., Bourges et al., 1998, Gilbertson, 2002), although values of zinc, lead or copper are expected to be low (there are no actual analyses for base metals).

At Bouroum this association is reflected in the soil geochemistry, with a low anomalous arsenic response (up to 24 ppb) closely associated with the auriferous zones, and a strong copper-zinc response, broadly associated with the western arm of the “deformation corridor” encompassing and to the south of the F 12 and Welcome Stranger areas.

Geller (1998) has described the mode of gold occurring at Taparko. Fifty percent of the gold is free as inclusions in quartz, 45 percent occurs as inclusions in, or on, pyrite, and five percent is in the form of the gold-silver telluride petzite (Ag_3AuTe_2). The major opaque phase is pyrite, making up a few percent of the samples, with another twenty-one minor opaque minerals identified such as base metal sulphides (chalcopyrite, galena, sphalerite) and various tellurides. In the unoxidized parts of the deposits, graphite forms an important part of the mineralization, and the metallurgical testwork has addressed the question of whether or not this could present a problem during processing due to gold being adsorbed on the naturally occurring carbon in the form of graphite.

DDH 98-212



DDH 08-210 M

Figure 8-1: Drill Core Through Taparko Gold Mineralization, Fresh (top) and Saprolite (bottom).

Figure 8-2: Quartz Veins at F 12 Deposit, Bouroum

Bourges et al. (1998) have documented that the silver content of the gold at Taparko reaches 14 percent and suggested that the content varied with isolated gold grains having higher Ag content than those associated with pyrite. Bourges et al (1993) report the occurrence of primary and (in the oxide zone) secondary copper minerals such as chalcopyrite, chalcocite and covellite in addition to pyrite and sphalerite to occur in association with the gold in the GT Zone mineralization. Pyrite is deformed, with native old occurring in fractures and tension gashes within the pyrite.

Gilbertson has observed the ore mineralogy at Bouroum. The main ore minerals include pyrite and chalcopyrite, with minor accessory minerals of rutile, zircon, monazite, graphite, xenotime, bismuth and gold (rare). Gold is found in areas of strong silicification and calcite/chlorite alteration in wall rocks as well as in quartz veins.

"Gold mineralisation is strongly associated with local pressure shadows produced by deformation of pyrite clusters and is superseded by a second phase of pyrite precipitation." (Gilbertson 2002, page 84)

The massive white quartz veins that occur within the "hanging wall" and "footwall" zones at F 12 are mostly devoid of mineralisation although grains of gold are infrequently present particularly along fractures. Much of the visible gold present at Welcome Stranger occurs in fractures, often in association with pyrite, within and close to the edge of the quartz vein. At F 12 and Welcome Stranger Prospects, chalcopyrite, as with gold mineralisation, is often found nucleated or enclosed within pyrite. Where the pyrite has been fractured, chalcopyrite and gold are often present. At Bissinga, very fine crystalline pyrite is noted to occur within shear zones. Gold mineralisation, as noted from examples observed from the other prospects, tends to be intimately associated with pyrite. The gold grains analysed by scanning electron microscope contained silver contents from seven to eight percent, and showed small graphite inclusions.

9 Exploration

The exploration performed on the Taparko and Bouroum properties relevant to the estimation of mineral resources consisted predominantly of reverse circulation and diamond drilling, and, in the case of Taparko, a substantial amount of surface trenching. The information derived from this work was used to establish the geologic models for the auriferous zones on the two properties, and the assay data was used to estimate the gold grade. The specific gravity database established from the core samples was utilized to translate the volumes determined from the geologic interpretation into tonnages.

9.1 Taparko

HRG acquired the property in 1995 and started field work soon afterwards, being carried out by High River expatriate and local personnel. The results of this work have flowed into the resource estimate described in a later section. The work consisted of extensive surface trenching, diamond drilling and, to a lesser extent, of reverse circulation ("RC") drilling, as summarized by year in Table 9-1.

The diamond drill program included a total of 26 holes drilled to obtain material for metallurgical testwork of which eight were drilled as "twins" to earlier holes, and an additional four holes for the purpose of obtaining geotechnical information. Table 9-2 shows the distribution of the work completed for areas for which mineral resources have been estimated.

Nine rotary-air-blast holes ("RAB") in Zone 3 are not included in the two tables, nor were their assay data used in the resource estimate. Thirteen diamond drill holes (TS 1 to 10) with poor recovery and suspect locations drilled by Minorex in 1987 were ignored for the resource estimate.

The diamond drill contractor in the years before 2003 was mainly Boart-Longyear, with a small amount of core drilling also done by Ausdrill. RC drilling was exclusively by St Lambert Drilling, which in 2003 also performed the diamond drilling. Core drilling typically started with HQ-sized rods (producing a core with a diameter of 6.35 centimetres), reducing to NQ-sized rods (core size of 4.76 centimetres) whenever hole conditions required. A number of deeper holes were pre-collared to about 20 metres above the target zone by "destructive core drilling" - core drilling without regard to core recovery at the cheaper RC charge rate.

Core recovery in the mineralized zones in all years was reasonable to good, even in the saprolite where triple-tube technology was used, aided by the addition of drilling muds and polymers. The core recoveries experienced in the mineralized zones at Taparko are summarized in Table 9-3.

Table 9-1: Taparko Exploration Data, by Year

	Trenching		Diamond Drilling		RC Drilling	
	Number of Trenches	Length (metres)	Number of Holes	Length (metres)	Number of Holes	Length (metres)
Mineral Resource Areas						
1996	87	4,547	112	12,458		
1997	29	2,577	44	5,577		
1998	26	1,017	100	11,055	42	2,431
1999					21	1,303
2001			3	885		
2002					1	110
2003			115	11,917	37	1,950
Total	142	8,141	374	41,891	101	5,794
Outside Mineral Resource Areas						
Total	40	2,491	38	2,997	88	6,146

Table 9-2: Taparko Exploration Data, by Zone

	Trenching		Diamond Drilling		RC Drilling	
Zone	Number of Trenches	Length (metres	Number of Holes	Length (metres)	Number of Holes	Length (metres
GT	32	910	106	12,712	4	180
2	48	3,325	48	4,663	74	4,441
37684	62	3,906	220	24,516	23	1,173
Total	142	8,141	374	41,891	101	5,794

Table 9-3: Core Recovery Data, Taparko Gold Zones

	Sampled Length	Core Recovery	
	(metres)	Minimum (%)	Average (%)
1996	5,636	55	73
1997	3,846	80	90
1998	5,819	55	75
2003	4,804	85	93

Because gold is found not only within the quartz veins at Taparko but roughly in equal concentration in the surrounding sheared rocks as well, the somewhat poorer recoveries in 1996 and 1998 are not expected to result in a biased grade from this drilling. No additional drilling was performed on the auriferous zones after 2003.

9.2 Bouroum

After a short confirmation drill program in December 2000, AXMIN optioned the property from Channel in early 2002 and mounted field programs in 2002 and 2003, the latter with the intent of bringing the project database to the feasibility study level. The field work was undertaken by AXMIN personnel and included detailed geologic mapping and geochemical surveys in addition to the drilling. The drilling completed by AXMIN is shown by year and by area in Table 9-4. No additional drilling was performed on the gold zones after 2003.

Table 9-4: Bouroum Exploration Data, (AXMIN Inc).

	Diamond Drilling		RC Drilling	
	Number of Holes	**Length (metres)**	**Number of Holes**	**Length (metres)**
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 by Channel and Viceroy, the data base underlying the resource estimate for the Bouroum project consists of more than 27,000 metres in 241 holes, of which more than 80 percent was reverse circulation drilling. The Channel/Viceroy drilling amounts to 169 holes totalling 21,700 metres or 80 percent of the total. The RC drill holes drilled in 1995/96 constitute more than three-quarters of the total database, an important figure given that there is some question as to possible contamination in some of these holes above the water table as pointed out in Section 13.1.2.

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. Only one hole had to be re-drilled because of several man-made cavities.

To aid in the structural interpretation, core orientation, using the “spear” method, was frequently undertaken on the core. While this met with only partial success in the saprolitic zones, good orientations were preserved in solid core. If no orientation was present on the preceding metres, the orientation line was worked back up the length of the core until broken core did not allow continuation, or to previously orientated core.

10 Drilling

The pertinent technical details with respect to the drill programs at Taparko and Bouroum have been described in the previous section. The auriferous zones at Taparko dip moderately to the east. The drilling strategy was to use incline boreholes to intersect the auriferous structures as close as possible to a right angle (Figures 6.3, 6.4 and 6.5). Because of the more complex structural setting, some of the drill holes at Bouroum intersected the gold mineralization at a more acute angle, and thus the drilled intersection is somewhat larger than its true width. However, this was taken into consideration for interpreting the boundaries of the gold mineralization and for resource estimation.

10.1 Drill Hole Surveys

10.1.1 Taparko

In 1996, HRG established a local grid covering the Taparko deposit area to reference the trenching and drilling data. This grid is oriented north-south and east-west, with twenty-metre spaced cross-section lines oriented east-west and has been used for all borehole collars and trench coordinates. All trenches locations and drill hole collars have been surveyed on completion of the different field campaigns. The survey was performed by GECT-MTH, a subsidiary of Descarreaux - Dubé, a Quebec firm based in Val-d’Or, using a Wild Leica model T 1600 or T 1000 theodolite. In 2003, two permanent bench marks were set up by GECTH:MTH in the Taparko area and tied into the UTM grid using a differential GPS (±0.1 metre error). Subsequently, all drill hole collar and trench local grid coordinates were transformed to UTM coordinates using the WGS-84 and Clarke 1880 datum.

Boreholes were drilled parallel to the local grid. A Brunton compass was used to measure the azimuth and inclination at the top of each hole. Down-the-hole survey data was collected using, using a Sperry Sun survey tool and a digital reflex instrument in all reverse circulation and core boreholes. For short holes, readings were taken at the bottom of the hole. For deeper holes, readings were taken approximately half-way and at the bottom of the hole. In 1996, the acid test method was used to measure the dip in seven holes due to a malfunction of the Sperry Sun tool. In 2003, an additional survey was taken at around a 8-metre depth along reverse circulation holes to better monitor the deflection in these particular holes. With most holes at Taparko being of limited length, the location of the intersections in space is well known.

10.1.2 Bouroum

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 using a Wild T2 theodolite and tied to the UTM grid using the Garmin GPS system.

From the grid map, all identifiable Channel and Viceroy borehole collars were mapped in the field at 1:500 scale. This map was then compared with the computer plot of the borehole collar map as drawn from the co-ordinates reported by Channel and Viceroy.

The 2002 survey in the F 12 and Welcome Stranger areas used a benchmark on a nearby hill. Elevation discrepancies were noted with Channel and Viceroy data. The elevation of the historical boreholes was adjusted using a factor of +98.9 metres, corresponding to regression of 75 boreholes showing good correlation.

At Bissinga North, a similar procedure was applied to tie the Channel/Viceroy and AXMIN drill hole collars into one common grid. However, the elevations found for the older holes were used as a bench mark to determine the elevation of the new holes.

Down-the-hole survey data is only available for the holes drilled in 2002 and 2003 by AXMIN. On completion of both reverse circulation and diamond drill holes, down-the-hole survey were carried out using a digital reflex instrument a Sperry Sun survey tool in 2002 and 2003, respectively. With both instruments, the dip/azimuth of the borehole was taken at the bottom of the hole and half-way up the hole or every forty metres down-hole. An additional survey was taken at the top of the hole when the borehole was noted to have deflected from its planned position. The majority of borehole surveys were within 5 degrees of the planned azimuth and 2 degrees of the planned dip.

11 Sampling Methods and Approach

11.1 Logging Procedures

11.1.1 Taparko

Over the years, the majority of the geologic data at Taparko has been collected by just a few geologists, thereby minimizing the potential for introducing inconsistencies in the geological output of the logging process.

Core description includes information about core recovery, rock quality determination, oxidation level, core hardness, clay content, lithology, alteration, geological structures and mineralization. In 1998, SRK reviewed approximately 10 percent 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 using soil log reference charts provided by SRK, and the detailed measurements of angles of all fractures on oriented core. Additional measurements included solid core recovery and the recording of solid core cylinder >10 centimetres.

Core was photographed before sampling using a digital camera. The core from all mineralized intersections is stored in well-organized racks at the Taparko mine.

Reverse circulation chips were logged from a 1 kilogram sub-sample of the original field sample. Recorded information is similar to that for core description, to the extent allowed by the nature of the sample. Rock chips were recovered from the fines with a sieve and the quantities of coarse and fine fractions were estimated. Care was taken to record the percentages of the various rock types for each interval. The reverse circulation drilling chips are stored in well-marked chip boxes in the field office.

11.1.2 Bouroum

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. The logs are difficult to read because the logging system was strictly numerical, with few descriptive entries.

AXMIN's boreholes were logged and samples 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, mineralization. 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. The washed chips were collected in plastic chip trays, numbered according the borehole number and sample interval and stored for possible future reference.

11.2 Sampling Method

11.2.1 Taparko

Samples used for the resource estimation at Taparko were taken from three sources: surface trenches, core boreholes and reverse circulation boreholes. The sampling methods employed in each circumstance are described in turn.

The surface trenches were sampled using sawed horizontal channels. Considering the large competency differences between saprolite and quartz veins, there are gaps in the sample coverage, 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 near-surface infill drilling program was completed in 2003.

Prior to 2003, one-quarter of the HQ-sized drill core and one-half of the NQ-sized drill core was used for assaying to keep the sample masses relatively constant. This procedure was changed in 2003, when half core samples were sent irrespective of core diameter. In 1996 and 1997, the samples were up to four metres in length (rarely), and the average sample length was 1.6 to 1.7 metres. In 1998, and again in 2003, the core sample length was generally shorter, averaging 1.2 metres in 1998 and 1.0 metres in 2003. The geologic contacts were, however, observed in all field campaigns.

The core samples were cut lengthwise in half using a diamond saw wherever possible. However, in the saprolite or where the core was broken, hand sampling with a machete, or pneumatic splitters was used. After cutting, one-half of the core constituted the sample while the other half was replaced into the original core boxes and stored for future reference.

Sampling of the reverse circulation drilling was completed over regular one-metre intervals during 1998, 1999 and 2003. Approximately 20 kilograms of cuttings were recovered for each interval. The chips were bagged at the drill site and transported to the camp for splitting and logging. From each original sample a 2-kilogram sub-sample was produced using a single-stage Jones riffle splitter and repeated passes with the final sub-sample being systematically obtained from the right side of the splitter. The reverse circulation rejects were stored at the camp for future reference.

Samples obtained from trenches, core and reverse circulation boreholes were placed in individual plastic bags, together with a sample tag number. The sample number was also written on the outside of the bag with a felt marker. All sampling tools were cleaned between samples. Sample number, location and sample description were recorded on a form used for this purpose.

In the opinion of SRK the sampling method used by HRG at Taparko meet industry best practices.

11.2.2 Bouroum

The sampling procedures and methods used by Channel and Viceroy during their 1995 and 1996 reverse circulation drilling programs are not well documented. According to records examined by SRK UK (2002) the reverse circulation boreholes were drilled with a 51/4 inch bit and were sampled every 2 metres down the hole. The cuttings were split at the rig to yield approximately 2 kilograms for assaying. Core assay samples were collected on half HQ-size core sawed lengthwise with a diamond saw. Samples were similarly taken every 2 metres.

SRK UK concluded that (2002, page 6) *"... 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."*

King (2003) reports that the rejects and pulps of many of the pre-AXMIN reverse circulation drilling samples are stored in containers in Ouagadougou.

The sampling procedures maintained by AXMIN in 2000, 2002 and 2003 are described in King (2003), from which the following excerpts are taken.

All diamond drill core was cut in half with diamond saw over the designated sample intersections as determined by the geologist. The sludge was later panned to assess the relative quantity of sulphides and visible gold derived from each 3 metre run. On orientated core, the core was cut along the orientation line, whereas in non-orientated core, the cut-line was normal to the foliation. In saprolite or crumbly zones, the core was cut by knife, remaining in the box during the process. In 2002, the initial half core was in most cases halved again, 3 quarters were replaced in their original space in the core boxes and the one-quarter bagged and sent for assay. The sample interval was an even two metres, without regard for geological boundaries. In 2003, in contrast, the sample interval was reduced to one metre, and geological boundaries were generally honoured.

For the reverse circulation samples collected in 2002, 2 metre samples were collected in large plastic bags from below the cyclone. Little to no dust was allowed to escape. At the end of every 6 metre run, a new drill rod was attached and the bottom of the hole was blown out with compressed air. As soon as the hammer started to “chatter”, a new sample bag was placed below the cyclone and the sample collection procedure continued. The samples were packed a short distance from the rig, where they were split into smaller samples once logging had been completed. Logging determined whether a four-metre composite sample or a two-metre sample was to be collected.

A three-way Jones splitter was used to reduce the size of the sample. Usually the sample had to be fed through the splitter twice (6 way split) to obtain a sample weighing between 2 and 3 kilograms. The riffle was cleaned after every split. The reject portion of the sample was returned to the bag. The sample was given a sample ticket, stapled in the top left hand corner of the bag and then it was sealed and stapled closed. All samples were then packed in large plastic sample bags and stored at the camp until being arranged and checked prior to being transported to Transworld Laboratories. The reject portion of the sample in the plastic bag was taken and stored at the camp under cover.

The assay samples obtained drilling were organised into batches of 20 samples (2002), and 44 samples (2003). Within each batch, a duplicate of every 10th sample was collected from the remaining quartered core (not repeated in 2003), a RockLab Laboratory Standard and an OMAC Laboratory blank added. In 2002, an AXMIN blank was substituted for the Omac blank in every alternate batch. In 2003, Taparko blanks were used instead of the AXMIN blanks, inserted after core sections suspected to be mineralized. All sample numbers were carefully checked by two geologists and a field assistant prior to packing and transportation to Transworld Laboratory.

SRK is of the opinion that the sampling methodology used by AXMIN generally meets industry best practices.

11.3 Specific Gravity and Bulk Density Determination

11.3.1 Taparko

Specific gravity was measured on a large number of core specimens representing all rock types in the Taparko gold deposits. Speficif gravity was determined on uniform core cylinders preferably longer than 20 centimetres of “wet” and “dry” saprolite and solid rock, at regularly three-metre intervals for every diamond drill hole. The core was weighed on a scale having an accuracy of ± 50 grams (±4% for a 20-centimetre piece of saprolite core). The core was left for two days in the sun to dry out before its dry weight was measured. The core volume was determined by measuring the core length and using the drill bit diameter. The scale precision is obviously of greater importance for shorter core pieces. At Taparko, 85 and 50 percent of the core pieces used for the density measurements were longer than 20 centimetres in length for solid rock and saprolite respectively.

A review of the 2003 specific gravity measurements indicated a number of inconsistencies that were investigated. This older database, which reflects what was used for the estimation of mineral resources reported in Section 16, is summarized in Table 11-1.

Table 11-1: Summary of Taparko Specific Gravity Data (pre-2003)

	Fresh Rock		Saprock		Saprolite	
	N	Mean	N	Mean	N	Mean
Granodiorite	60	2.84	10	2.27	15	2.13
Volcano-sed. rock	589	2.63	248	2.32	273	2.01
Dolerite	28	2.87				
Laterite					6	2.11
Gold Mineralization	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. Moreover, the figures in Table 11-1 are corroborated by specific gravity determinations undertaken independently during metallurgical testwork by Kappes Cassidy and Associates (“KCA”) in 1998.

With little in the way of inherent rock porosity, the specific gravity data in Table 11-1 may be directly translated into bulk density estimates.

The density of the gold mineralization 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 mineralization are. For resource estimate 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. 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, respectively, the latter two being based on the specific gravity data for the saprolized volcano-sedimentary rock in Table 11-1. The resultant average figures for the quartz-dominated and halo zones of the mineralized zone at Taparko are shown in bolded italics and are in good agreement with the specific gravity determinations done by KCA on whole core.

11.3.2 Bouroum

Specific gravity in the saprolite was measured at regular 3 metres intervals on a piece of core 10 centimetres in length wrapped in clear plastic (sandwich wrap) using a water immersion method. Dry and wet core was weighted on a digital scale (accuracy of ± 1 gram). The core was left for 2 days in the sun to dry out before its dry weight was measured. The volume of the core was calculated from its measured length (3 determinations) and the theoretical core diameter of the bit size used. The results are summarized in Table 11-2.

Table 11-2: Summary of Bouroum Specific Gravity Data

	Fresh Rock		Saprock		Saprolite	
	N	Mean	N	Mean	N	Mean
Gabbro	60	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		
Mineralization	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 mineralization within the saprolite zone was determined within GEMCOM by interpolating the relatively few available data. The result at 2.13 tonnes per cubic metre would appear to be slightly low, given the important percentage of quartz present.

A review of the actual specific gravity data shows that many samples were not fully dried, in part perhaps due to the onset of the rainy season. It is therefore probable that the saprolite figures are slightly high. However, this small bias mainly affects the waste tonnage.

The available results on mass determinations on wet and dry core in saprolite indicate an average moisture content of the saprolite of five or six percent.

11.3.3 Comments on Specific Gravity Database

While the Taparko and Bouroum specific gravity data are reasonable, and therefore the bulk density figures used for resource estimation, there is very little independent confirmation on the data that have been produced by company staff in the field. In addition, the data for the Bouroum gold mineralization in general is insufficient.

Any inaccuracies would mainly impact on the waste tonnages at Taparko. In light of the remaining uncertainties, specific gravity tests were done.

12 Sample Preparation, Analyses and Security

12.1 Sample Security

Sample security has two aspects: (a) maintaining the chain of custody and the physical integrity of the samples, including the prevention of inadvertent contamination and of sample mixing; and, (b) minimizing any possible active tampering.

12.1.1 Taparko

Throughout the drill campaigns, HRG staff has taken an active role to prevent inadvertent contamination and sample mixing. Sampling tools were cleaned between samples. The core saw was washed thoroughly after each sample, including the tray and the receiving pan. Likewise, the core splitter and the reverse circulation riffle splitter were cleaned thoroughly after each sample, including the receiving pans.

The chain of custody and security of the samples dispatched for assaying was maintained at all time by ensuring that samples remained in the custody of HRG personnel, were stored in secured facilities under the control of HRG personnel and delivered to the assaying laboratory by appropriate personnel. 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).

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.

12.1.2 Bouroum

There is no description available with respect to the security and chain of custody measures taken by Channel and Viceroy during the 1995 and 1996 drill campaigns. SRK has no evidence of active or involuntary contamination of samples dispatched for assaying.

In 2000 and 2002, AXMIN used industry best practices to ensure the security and integrity of assay samples collected from reverse circulation drilling. Sampling tools and equipment were regularly cleaned to minimize cross sample contamination.

The chain of custody and security of the samples dispatched for assaying was maintained by ensuring that samples remained in the custody of AXMIN personnel, were stored in secured facilities and delivered to the assaying laboratory by appropriate personnel. In 2000, the reverse circulation assay samples were transported by the project geologist and delivered to Performance Laboratories at Prestea, Ghana. A similar procedure was adopted in 2002, with two trips being made to Navarongo in northern Ghana from where the Transworld Laboratory pick-up lorry transported the sample to the laboratory in Tarkwa, Ghana. At the end of the 2003 drilling campaign, Transworld Laboratories sent their lorry through to Burkina Faso to assist in transporting the samples back to Ghana.

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).

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

12.2 Sample Preparation and Analysis Methods

The sample preparation methods over time in the two projects are summarized in Table 12-1. Table 12-2 summarizes the assay protocol used in the two projects over the years. The assaying procedures were the same for all types of samples submitted for assaying.

At the time the samples were assayed none of the laboratories were accredited.

Table 12-1: Summary of Sample Preparation Protocols

Sample Type	Year	Mean Field Sample Mass (grams)	Crush to 100% Passing (millimetres)	Split for Pulverization (grams)	Pulverize to 95% Passing (microns)
Taparko					
Trench	1996	2,300	2	2,000	75
	1997	2,300	2	2,000	75
	1998	2,300	2	2,000	75
Core	1996	2,300	2	2,000	75
	1997	3,000	2	2,000	75
	1998	2,300	2	2,000	75
	2001	2,300	2	1,000	75
	2003	3,000	2	3,000	75
RC Chips	1998/99	2,000	2	2,000	75
	2003	2,000	2	500	75
Bouroum					
Core	2002	2,000 (NQ) 3,500 (HQ)	2	1,000	75
	2003	2,000 (NQ) 3,500 (HQ)	2	1,000	75
RC Chips	1995	No Information			
	1996	No Information			
	2000	2,000	2	1,000	75
	2002	2,500	2	1,000	75

Table 12-2: Gold Assay Protocols Used

Year	Laboratory	Aliquot size (grams)	Assay Method	Finish
Taparko				
1996	Analabs, Ouagadougou	50	Fire Assay	AAS*
1997	Analabs, Ouagadougou	50	Fire Assay	AAS
1998	Analabs, Ouagadougou	50	Fire Assay	AAS
1999	Analabs, Ouagadougou	50	Fire Assay	AAS
2001	SGS, Ghana	50	Fire Assay	AAS
2003	Abilab, Bamako	50	Fire Assay	AAS Gravimetric (>5 g/t)
Bouroum				
1995	Analabs, Ghana		No Information	
1996	Analabs, Ouagadougou		No Information	
2000	Performance Laboratory, Ghana	50	Fire Assay	AAS
2002	Transworld Laboratory, Ghana	50	Fire Assay	AAS
2003	Transworld Laboratory, Ghana	50	Fire Assay	AAS

*Note: AAS = atomic absorptions spectroscopy

13 Data Verification

13.1 Database Verification and Validation

13.1.1 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.

Care was taken during the 1998-99 and 2003 reverse circulation drill campaigns to prevent down-hole contamination which can be a problem below the water table. No reverse circulation intersections of mineralized material were obtained from below the water table, and visual inspection of the assay and lithology logs for the reverse circulation holes demonstrates generally sharp down-hole assay cut-offs below the auriferous zones. This indicates that any down-hole contamination is very limited.

SRK reviewed approximately 10 percent of the original drill logs from 1996 to 1999 to confirm the accuracy and completeness of the core logging and the correctness of the database.

Routine verifications were completed in Gemcom to identify missing intervals, sample overlaps and other inconsistencies. Any identified inconsistencies were fixed.

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

13.1.2 Bouroum

The database used for the resource estimation at Bouroum includes the drilling data collected by Channel, Viceroy and AXMIN. Collar survey, assay and geological data for the earlier data set (Channel and Viceroy) was used in conjunction with the collar survey, assay, down-hole survey, geological and geotechnical data for the more recent AXMIN data. Accurate surface topography, based on Viceroy surface elevations, was used for all subsequent drill programs. The database is up-do-date, including all drilling information unavailable to the end of 2003. No additional drilling tested the Bouroum gold zones since 2003.

From the commencement of the 2002 reverse circulation drill program, strict monitoring of all boreholes was undertaken to minimize down-hole contamination. As soon as moisture was encountered in the reverse circulation sample, drilling was stopped and the “tail” of the hole was then deepened using the diamond drill.

The geological data collected by Channel and Viceroy was assembled by various geologists under the supervision of a project geologist. Although inconsistencies in rock identification do occur, geological continuity between boreholes is maintained.

Assay results were received both by laboratory assay certificates as well as digitally. The results were transferred manually from the assay certificates to the descriptive logs. The digital data was entered into the appropriate files for processing using Iterdex software to create sections. No errors in sample numbering or errors related to laboratory handling occurred during AXMIN involvement.

In 2003, SRK completed certain validation tests using the GEMCOM software to identify any inconsistencies in the borehole database. Any inconsistencies identified during that process were corrected.

There is general agreement that at least some of the pre-AXMIN reverse circulation boreholes show evidence down-hole contamination. In 2002, SRK noted:

“There are numerous comments in the documentation reviewed by SRK that allude to problems with down-the-hole contamination in the reverse circulation drilling. SRK has inspected the database and has removed either the suspect intersections or the entire hole depending on the apparent severity of the contamination. These decisions were made using the observations in the drill logs, comparisons with the lithological logs, and also comparisons with adjacent drill holes.”

All “questionable” intersections identified by SRK (2002) are below the interpreted auriferous mineralization, and below the water table. In all instances, that information was removed from the database considered for resource estimation.

The question then arises whether contamination has also taken place in reverse circulation holes above the water table, and within or between auriferous zones. There is some visual evidence that this may have occurred, with a number of examples where a reverse circulation intersection carries on with elevated gold values well below the interpreted gold zone as clearly indicated by nearby diamond drill holes. 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. Assay results for twin holes no more than about five metres apart in space are summarized in Table 13-1.

Table 13-1: Comparison of Bouroum Twin Hole Results

	Original RC Intersection			Twin DDH Hole Intersection		
Area	Hole No.	Length (metres)	Gold Grade (g/t)	Hole No.	Length (metres)	Gold Grade (g/t
Comparison with Channel RC Holes						
F 12	FB 150 upper	2	3	DDH 32 upper	3	1.6
	lower	10	2.6	lower	9	0.7
F 12	FB 50	6	1.6	DDH 7	10	1.5
F 12	FB 40	10	2.3	DDH 8	6	5.6
F 12	FB 40	20	8.2	DDH 8	16	4.7
F 12	FB 132 upper	16	10	DDH 37 upper	13.5	4.2
	lower	14	4.7	lower	15	4.3
F 12	FB 126 upper	6	0.5	DDH 43 upper	6	1.7
	lower	8	5.4	lower	7	0.8
Bissinga	FB 60	8	2.7	DDH 15	8	1.1
Bissinga	FB 107	20	15.6	DDH 1	20	13.4
		120	6.9		113.5	4.8
Comparison with AXMIN RC Holes						
F 12	FB 222	6	6.7	DDH 2	10	7.5
F 12	FB 223	14	4.6	DDH 37	13.5	4.2
		16	4.3		15	4.3
		36	4.8		38.5	5.1

Note: individual assays were capped before calculating the length weighted averages (capping levels presented in section 17.5).

Although the available pairs are limited, the core twin hole assay data suggests that the Channel and Viceroy reverse circulation assay results are biased. The Channel and Viceroy reverse circulation assay results appear to overestimate the grade of the gold mineralization. In earlier reports, SRK recommended additional core drilling to test the possible grade bias introduced by the use of the pre-AXMIN drilling data. Alternatively, all Channel and Viceroy assay data could be removed for grade estimation.

13.2 Verification of Analytical Quality Control Data

The analysis of analytical quality control data available for the Taparko and Bouroum project has been discussed in details elsewhere (SRK, 2002, 2003) and is not repeated here. Only the salient findings are summarized below to attest of the reliability of the assaying data for resource estimation.

The analytical quality control data produced by Channel and Viceroy at Bouroum are deficient, but in line with industry best practices for the period when the exploration data was accumulated.

In contrast, the analytical quality control data produced by HRG and AXMIN at Taparko and Bouroum generally meet current industry best practices. The analysis of these data suggest that the assays delivered by the primary laboratory used by HRG and AXMIN are reliable for the purpose of resource estimation.

13.2.1 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. The internal and external quality control measures are summarized Table 13-2.

Table 13-2: Summary of Internal and External Quality Control Measures, Taparko.

	1996	1997	1998/99	2003
Laboratory-Internal QA/QC	X (D/U)	X (D/U)	X (D/U)	X
External Blanks	X	X	X	X
External Standards	–	–	X	X
Pulp Repeats, Original Laboratory	–	–	–	X
Reject Repeats, Original Laboratory	X	X	X	X
Pulp Repeats, Outside Laboratory				X
Reject Repeats, Outside Laboratory	X	X	–	–
D/U = Data unavailable				

Internal quality control measures (blanks, standards and pulp replicate) were taken by all laboratories used for assaying Taparko samples. However, only the Abilab internal quality control data produced during the 2003 program is available for analysis. The Analab quality control data is summarized in Figure 13-1. The analytical results on the standards show no apparent drift and are all within five percent of the certified values.

In addition to the laboratory internal control measures, HRG inserted its own control samples with all samples submitted for assaying. Blanks were inserted at a rate of 2.5 percent between 1996 and 1999 and at a rate of 5 percent in 2003. Barren granodiorite drill core and saprolite was used as blank for the core and reverse circulation samples, respectively. Assay results consistently are less than 0.01 g/t gold for both materials

The assay results are summarized in Table 13-3, reporting as probably contaminated those results that exceed 0.075 g/t gold, the mean of all blank results plus two standard deviations. For those sample batches of the 2003 drill campaign that returned blanks with gold values higher than 0.1 g/t, the ore zone was re-sampled (the second half of the core, a new split from the original reverse circulation sample) and new blanks were inserted. Additional supervision was posted at the preparation laboratory. All new blanks returned negligible gold value and the new assay data were used for the GEMCOM database.

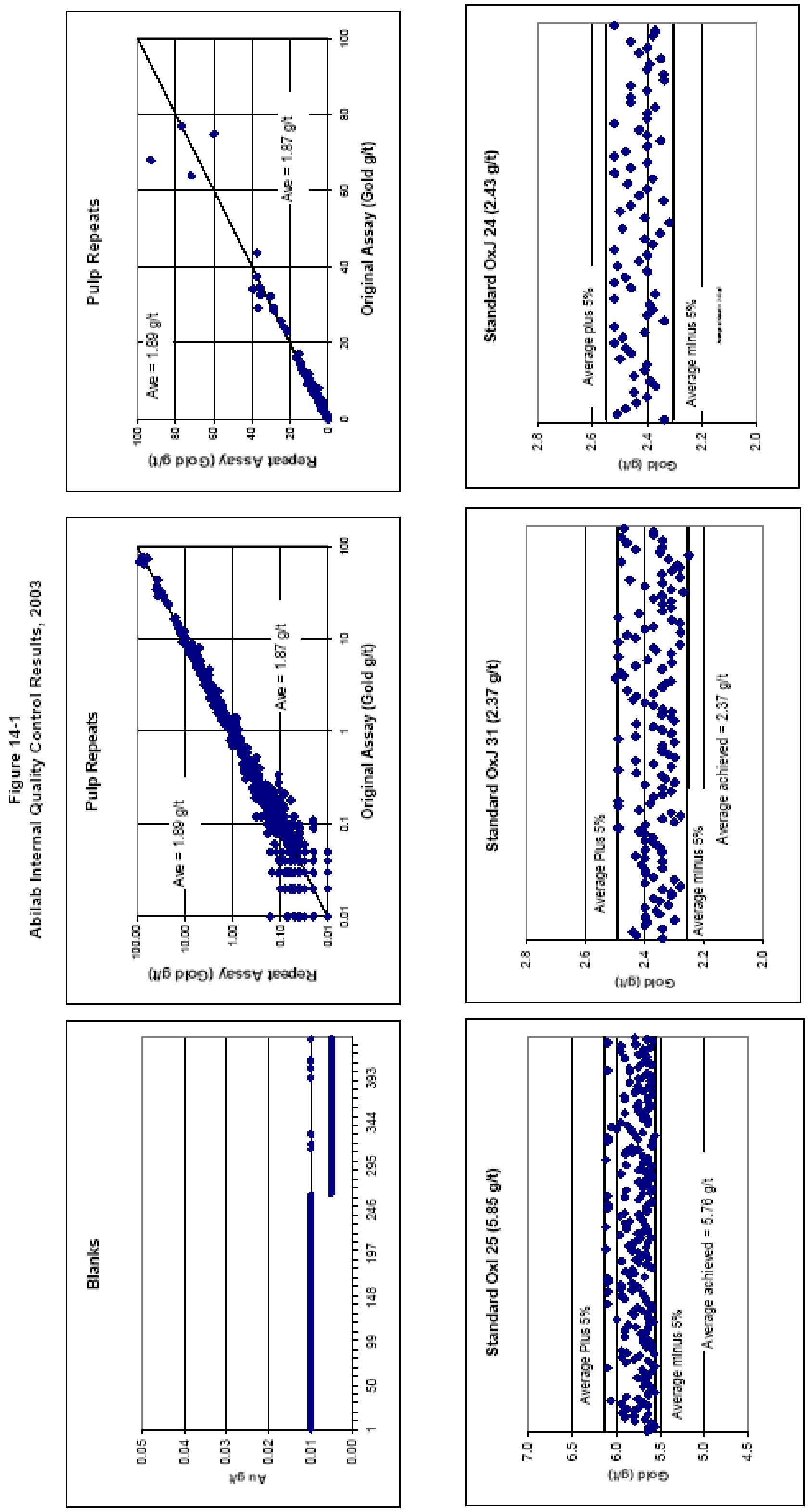


Figure 13-1: Assay Results for Abilab Internal Control Samples Used in 2003, Taparko.

Table 13-3: Summary of External Blank Samples Gold Assay Results, Taparko

	1996	1997	1998/99	2003	Totals
Number of blanks added	88	75	263	425	851
Number above 0.075 g/t	3	1	8	27	39
Percentage above 0.075 g/t	3%	1%	3%	6%	5%

There is a certain degree of low-level contamination in all years, affecting from one to six percent of the blanks. The absolute level of contamination is low, with the highest “blank” assay recorded at Taparko being 0.28 g/t gold in 1998/99. Given the low incidence and the low level of contamination, 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 programs. The field standards were prepared for HRG from assay rejects of earlier drill programs at the BUMIGEB laboratory in Ouagadougou. An initial set of samples in 2003 was too large and proved impossible to homogenize, therefore, a second set was created. The basic statistics of the 6 standards used in 1998/99 and 2003 are compiled in Table 13-4. The laboratory performance on the field control samples is graphically shown in Figure 13-2.

Table 13-4: Summary Statistics for Field Standards Assay Results, Taparko

	98-A	98-B	98-C	2003-A1	2003-B1	2003-C1
	Bondar Clegg (Ouaga.)			Abilab (Bamako)		
Number	135	81	202	207	274	133
Mean (g/t)	1.94	4.85	0.61	1.79	4.86	0.63
Standard Deviation	0.18	0.44	0.12	0.1	0.24	0.05
Coeff. of Variation	9%	9%	19%	5%	5%	8%
Upper Limit	2.3	5.73	0.85	1.98	5.34	0.73
Lower Limit	1.58	3.97	0.38	1.6	4.38	0.53
				ALS Chemex (Vancouver)		
Number	No outside lab results			8	12	7
Mean (g/t)				2.06	5.08	0.66

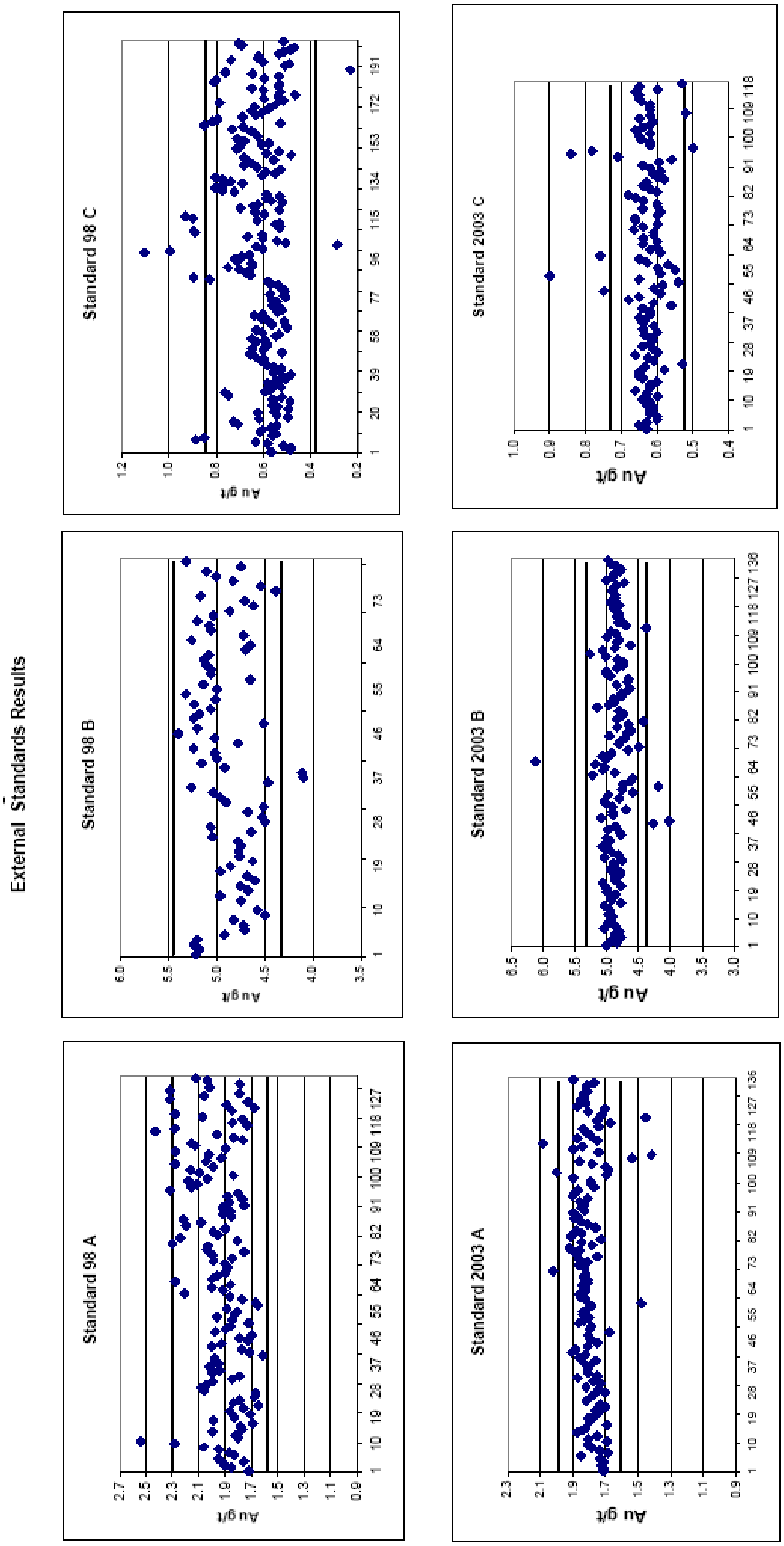


Figure 13-2: Assay Results for External Field Standards Used by HRG at Taparko.

During the 1996 to 1999 drilling programs 5 percent of the coarse core and reverse circulation rejects were re-assayed into subsequent batches. Similarly, in 2003, 110 coarse rejects from 31 reverse circulation holes were re-submitted to Abilab for re-assaying, together with 8 blanks and 9 field standards. In 2003, 183 renumbered pulps (above 0.5 g/t gold) were re-submitted to Abilab for re-assaying. The assay results for the control samples used by HRG on the Taparko project are summarized in Figure 13-3 and in Table 13-5. The precision at Abilab is excellent.

Table 13-5: Summary of Assay Results for External Control Samples used by HRG on the Taparko Project.

	1996 & 1997		2003	2003
Laboratory	Analab	Analab	Abilab	Abilab
Number of Pairs	690	680	110	181
Type	Coarse Rejects	Coarse Rejects	Coarse Rejects	Pulps
Mean Gold Grade (g/t), Original	1.66	0.78	5.64	8.38
Mean Gold Grade (g/t), Repeat	1.32	0.77	6.26	9.12

The coarse reject repeats are “noisier” than the pulp repeats. For the 1996 to 1999 data, the difference of the mean gold grades between the two sets is caused by large pair differences of the samples with the top ten highest grades. Their removal eliminates the difference of the mean grade between the two groups.

The 2003 data shows a small but persistent high bias in the repeat assays that is not reflected in the standards. This occurs for every grade range and can thus not be explained by the erratic behaviour of a few samples with coarse gold. As the bottom row in Figure 13-3 shows, the correlation between the two assay sets is good, but the high bias of the second set by about 10 percent remains unexplained.

In 1998, 1,349 crushed core reject samples from 166 boreholes drilled in 1996 and 1997 were submitted to the XRAL Laboratories, Toronto in 1998, Canada, for check assaying using a metallic screen assaying procedure (screening at 150 mesh). Also, 183 pulp samples from the 2003 drilling program (value exceeding 0.5 g/t gold) were submitted to ALS Chemex laboratory of North Vancouver, B.C. for check assaying. The results are compiled in Figure 13-4 and Table 13-6 . In both cases, the check assay results were somewhat higher than the original assays.

Table 13-6: Summary of Assay Results for Check Samples at Umpire Laboratory, Taparko Project.

	1996-97	2003
Umpire Laboratory	XRAL	Chemex
Number of Pairs	1,349	181
Type	Coarse Rejects	Pulp
Mean Gold Grade (g/t), Original	3.02	8.38
Mean Gold Grade (g/t), Repeat	3.37	9.12

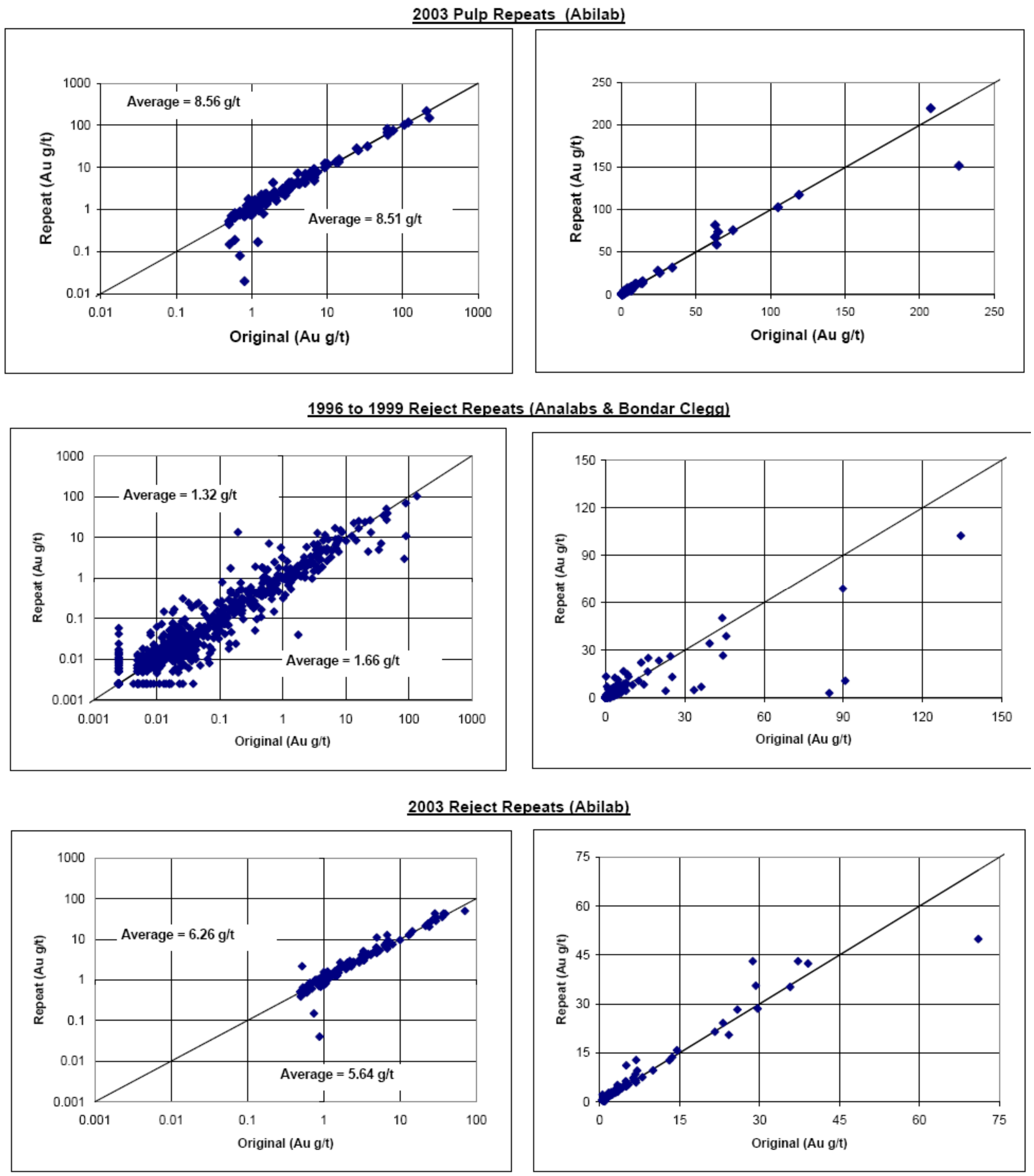


Figure 13-3: Assay Results for Re-Numbered Pulp and Reject Replicate Assays, Taparko.

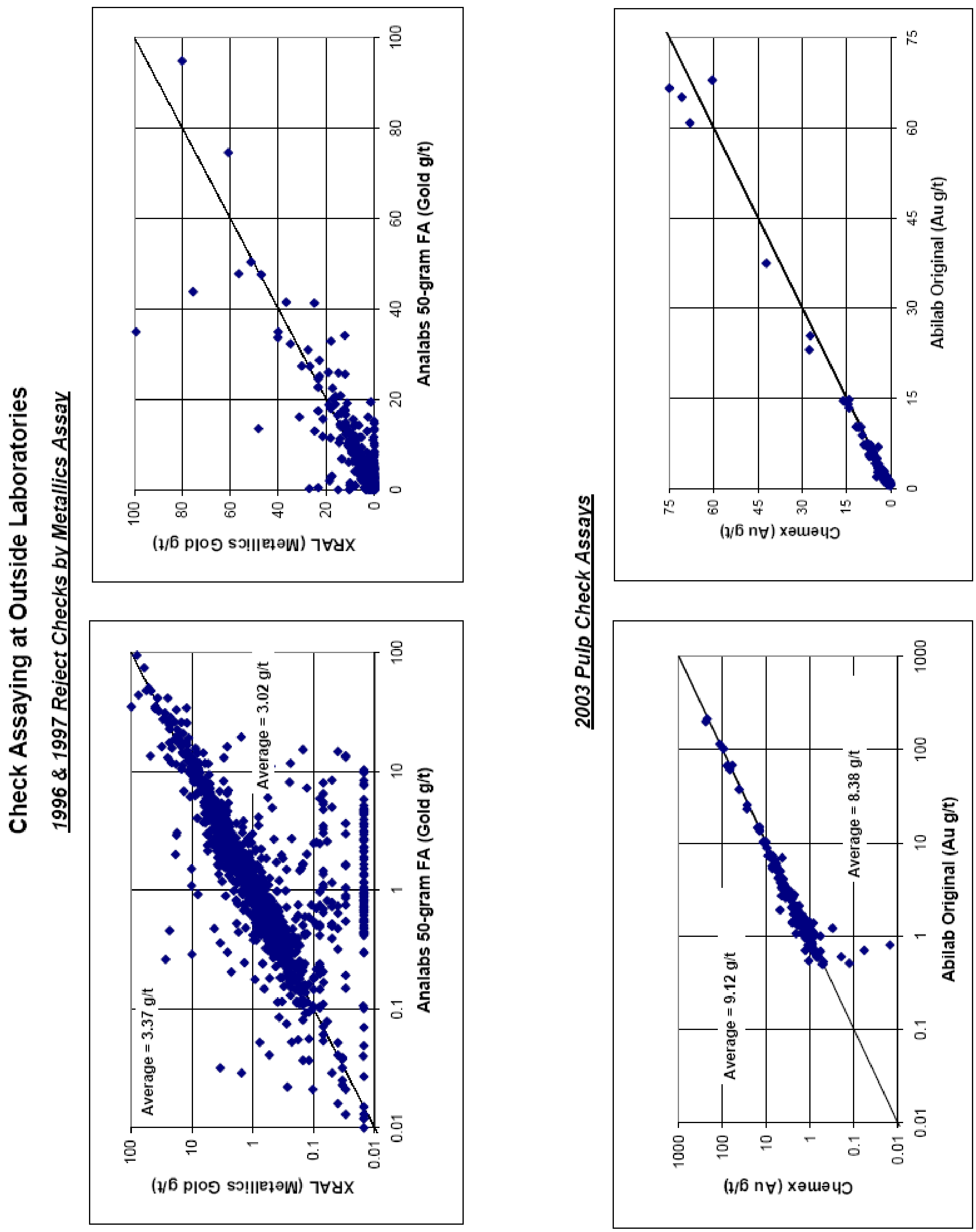


Figure 13-4: Assay Results for Check Samples Assayed at an Umpire Laboratory, Taparko Project.

In 1998, eight holes were drilled to obtain material for metallurgical testwork. These boreholes were designed to twin existing 1996 and 1998 boreholes. The results are compared in Table 13-7.

Table 13-7: Comparison of Twin Core Borehole Assay Results, Taparko Project.

Original Borehole				Twin (Metallurgical) Hole		
Hole ID DDH	Length (metre)	Gold Grade (g/t) Uncapped	Gold Grade (g/t) Capped	Hole ID DDH	Length (metre)	Grade Gold (g/t)
96-102	35.8	2.9	2.9	98-207M	37.8	1.0
96-106	25.3	1.2	1.2	98-208M	24.6	1.9
96-002	13.6	5.2	5.2	98-221M	10.9	2.7
96-046	37.0	2.1	2.1	98-220M	37.0	4.2
96-020	21.2	0.5	0.5	98-217M	22.6	1.2
96-044	22.2	0.6	0.6	98-218M	22.1	0.8
96-112	18.3	10.2	5.6	98-209M	22.9	3.6
98-205	19.0	8.5	5.2	98-206M	20.7	7.5
Average	**192.4**	**3.4**	**2.6**		**198.6**	**2.8**

The paired holes assay data shows that the gold varies over short distances. From a sampling point of view, the grade of the metallurgical holes that were “assayed” in their entirety during the testwork, are more reliable than the original holes where splitting into halves introduced a sampling error. It is interesting to note, however, that capping of one hole (96-112) brings the overall, length-weighted averages fairly in line with that of the metallurgical holes. The 2003 metallurgical holes were not drilled as twins.

Conclusions

High River Gold collected comprehensive quality control data during all drilling programs to validate the reliability assay results delivered by the primary laboratory. Analysis of these data shows a low-level of contamination for all programs, with 2003 being the worst, relatively speaking. However, the absolute level of contamination is low, and the assay database is not significantly compromised. Blind repeat assaying at the original laboratory shows good precision of the results, while check assaying at outside laboratories in general give results that are somewhat higher than the original data. The assay database for the Taparko deposits is reliable.

13.2.2 Bouroum

The exploration data from the Bouroum project was acquired over ten years by three distinct 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. The internal and external quality control measures are summarized in Table 13-8.

Table 13-8: Summary of Internal and External Quality Control Measures, Bouroum.

	1995/96	2000	2002	2003
Laboratory-Internal QA/QC	X (D/U)	X (D/U)	X	X
External Blanks	–	–	X	X
External Standards	–	–	X	X
Pulp Repeats, Original Laboratory	X	–	–	X
Reject Repeats, Original Laboratory	X	X	X	X
Pulp Repeats, Outside Laboratory	X	X	X	X
Reject Repeats, Outside Laboratory	–	X	–	–
D/U = Data unavailable for review				

SRK reviewed the Channel and Viceroy internal quality control data in 1999 (SRK, 1999) noting on page 8:

"SRK were also able to review a number of assay certificates prepared by Analabs' laboratory in Ouagadougou. These detailed the internal quality control checks performed by the laboratory. These checks indicate that the analytical precision at the laboratory appears good with no evidence of any analytical bias."

It appears that Channel and Viceroy did not take external analytical quality control measures. However, a number of pulp and reject samples were submitted to Analabs for check assaying. In 2002, SRK reported check assaying of a limited group of Channel and Viceroy samples at the Bondar Clegg Ghana laboratory. The assay results are summarized in Table 13-9, omitting samples assaying less than 0.1 g/t gold.

Table 13-9: Summary of Assay Results for Check Samples at Analabs Laboratory, Bouroum Project.

	1995-96	1995-96	2002
Umpire Laboratory	Analabs	Analabs	Bondar Clegg
Number of Pairs	430	119	23
Type	Pulp	Coarse Rejects	Pulp
Mean Gold Grade (g/t), Original	2.47	2.41	9.6
Mean Gold Grade (g/t), Repeat	2.49	2.47	8.9

The documentation of quality control data for the older and larger part of the Bouroum database is incomplete. It appears that no external control samples were inserted within the sample submitted for assaying.

The check assaying performed at Analabs, the original laboratory, gives comfort with respect to the accuracy of the Channel and Viceroy assay data, but the number of samples submitted to an outside laboratory is too small to draw any conclusions. While Analabs is a well-known Australian assay laboratory of good reputation, incomplete quality control data prevent definitive conclusion 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 following analysis of quality control data is summarized from a detail report by King (2003).

The internal laboratory quality control data produced by the Performance Laboratory in 2000 was not submitted to AXMIN and therefore is not available for analysis. The laboratory closed in 2001.

The internal quality control data produced by the Transworld Laboratories for the 2002 and 2003 samples was reviewed by King (2003). The analysis suggests that assay results are both precise and accurate.

In addition to the internal laboratory quality control measures, AXMIN inserted its own control samples within samples submitted for assaying in 2002 and 2003. This includes sample blanks, and certified commercial reference material samples. No external analytical control measures were taken by AXMIN in 2000

King reported no particular problem with the assaying of sample blanks with 96 and 95 percent of all blank assaying less than 0.05 g/t gold in 2002 and 2003, respectively. Two identified failures in 2003 followed immediately very high grade samples, suggesting minor cross sample contamination during preparation.

Three commercial reference material samples were used in 2002 and 2003 (Table 13-10) representing three gold grade levels. Each certified control samples was also assayed at an umpire laboratory (OMAC, Ireland). The assay results are summarized in Table 13-10 as presented by King (2003).

Table 13-10: Summary of Assay Results for External Control Samples used by AXMIN in 2002 and 2003 on the Bouroum Project

	Certified Value		Transworld 2002			Transworld 2003			OMAC 2003		
	Mean (g/t)	StdDev (g/t)	N	Mean (g/t)	StdDev (g/t)	N	Mean (g/t)	StdDev (g/t)	N	Mean (g/t)	StdDev (g/t)
OxM 16	15.15	0.29	8	14.8	0.53	5	15.19	0.49	2	15.39	
OxG 18	3.46	0.13	10	3.51	0.09	4	3.55	0.1	2	3.48	
OxG 22	1.04	0.03	9	1.02	0.04	5	1.06	0.16	3	1.01	0.08

The average values obtained by Transworld and OMAC are very close to the certified value of each control sample.

In 2002, AXMIN inserted within their samples a suite of 25 field duplicate taken from core and reverse circulation samples. The mean gold grades of the two batches were 1.16 g/t and 1.03 g/t, respectively, a very reasonable result given the presence of free gold at Bouroum.

A suite of 25 and 70 pulp samples from the 2000 and 2003 programs were re-submitted to the primary laboratory and a second split of the same sample was also submitted to the OMAC Laboratory in Ireland for check assaying. In 2002, 29 pulps were also submitted to the OMAC Laboratory in Ireland for check assaying. Both batches included controls samples. The assay results are summarized in Table 13-11.

Table 13-11: Summary* of Check Assay Data Acquired by AXMIN between 2000 and 2003, Bouroum Project.

	Performance / Transworld			OMAC
	N	Original Mean (g/t)	Repeat Mean (g/t)	Mean (g/t)
2000	24	5.58	5.78	6.94
2002	29	7.86	—	7.47
2003	67	3.52	3.37	3.53

*Outliers removed from.

When three outliers are removed for analysis, the mean gold values of the three batches in 2002 and 2003 are practically indistinguishable. However, The OMAC 2000 check assay data suggest that the Performance Laboratory delivered conservative results.

Conclusions

The analytical quality control measures taken by Channel and Viceroy 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 delivered by the primary laboratories used by AXMIN both precise and accurate.

SRK considers the assay data for the Bouroum project sufficiently reliable for the purpose of resource estimation.

14 Adjacent Properties

There are no adjacent properties that are relevant for the purpose of this report.

HRG holds rights to several exploration permits surrounding the Bouroum and Taparko gold deposits. Exploration work is ongoing.

15 Mineral Processing and Metallurgical Testing

The Taparko-Bouroum Project is a combination of low-grade, medium-volume Taparko orebodies and high-grade, low-volume Bouroum orebodies. A number of metallurgical studies were carried out prior to the feasibility study test work. Results from this previous testwork are summarized as follows:

Taparko

- Low recoveries from heap leaching;
- Milling and cyanidation process recommended;
- Preg-robbing occurs with some ores and Carbon-in-Leach circuit recommended;
- Leaching generally complete in 24 hours. All 3 orebodies respond in the same manner to grinding and carbon-in-leach processing;
- Saprolite gave more varied response for recoveries based on preg-robbing characteristics.

Bouroum

- Ore not amenable to heap leaching;
- No preg-robbing evident;
- Grinding and cyanidation give high recoveries;
- Leaching generally complete in 24 hours;
- Course gravity recoverable gold with recoveries of 35 to 50 percent;
- Milling/gravity/cyanidation favoured process.

Testwork for the feasibility study was carried out by Lakefield Research, South Africa on recently drilled Taparko and Bouroum ores. Metallurgical testwork was confined to main testwork on the Taparko material, with only variability testwork carried out on the smaller Taparko deposits. Also because of extensive previous test work on the Bouroum deposits only variability testwork was performed on Bouroum ore. This variability testwork was carried out to ensure that material peripheral to the proposed Taparko pit was also amenable to processing via the selected flowsheet.

The main feasibility study testwork incorporated the following components:

- Sample preparation and head assays;
- Determination of gravity recoverable gold;
- Determination of any preg-robbing effects;
- Optimization of grind size to maximize gold recovery;
- Optimization of leach residence time;
- Optimization of addition of leach reagents;
- Determination of the viscosity of slurries;

- Optimization of flocculant type and dosage;
- Determination of oxygen requirements of leach slurry;
- Determination of carbon kinetics and equilibrium loading value;
- Determination of Bond crushability Work Index;
- Determination of uniaxial compressive strength;
- Determination of Bond ball and rod work indices;
- Determination of Bond Abrasion index.

Testwork conclusions and resulting design parameters for the processing plant are:

- Ore is free milling with good gravity recovery potential. Reagent consumption is low;
- The presence of preg-robbing material warrants CIL configuration of leach circuit;
- Minimum of 0.65 kg/t of cyanide is required and appears optimum;
- Initial rapid gold dissolution with long slow leaching tail;
- Sulphide materials have relatively high Bond Rod (17.8) and Mill (18.0)Work Indices, as does the Saprock Oxide material (14.7-15.1). The Oxide (saprolite) materials exhibit low comminution Work Indices (Ball Work indices of 9.6 to 12.1);
- All materials are amenable to the proposed plant design.

On the basis of the testwork results, the Taparko Plant was designed on the following basis. The milling circuit will deliver product to the leach circuit at 80 percent minus 75 micron. A component of the milling circuit cyclone underflow will be directed to a gravity concentrator to recover between 15 and 25 percent of gold in a gravity concentrate. The leach circuit will consist of a hybrid CIL configuration with 24 hours of residence time.

16 Mineral Resource and Mineral Reserve Estimates

The Taparko-Bouroum gold project is an operating mine. Several mineral resource estimates have been prepared for those gold deposits as summarized in Section 5.3.

The mineral resource models supporting the mineral reserves estimates presented herein were prepared by SRK in 2003 as part of feasibility studies prepared by HRG and SRK. The mineral resource estimates were documented in a technical report prepared by HRG and SRK in 2003 (June 2004 technical report). Since 2003 no additional exploration was conducted on the Taparko-Bouroum deposits. Hence the mineral resource estimates prepared in 2003 remain current and are the ones in use at the mine.

For reporting purpose SRK tabulated the mineral resources within a pit shell optimized using a gold price of US$1,000 per ounce and mining and recovery assumptions used for reporting mineral reserves. The mineral resources are reported at gold cut-off grades that are consistent with the cut-off grades used for reporting mineral reserves.

The following sections summarize the criteria and assumptions considered by SRK for the construction of the geological and mineral resource models for the Taparko and Bouroum gold deposits. The information is summarized from internal reports prepared by SRK for HRG also summarized in the June 2004 technical report.

16.1 Mineral Resource Estimate

SRK used the same mineral resource estimation strategy for the Taparko and Bouroum gold deposits. A 3-dimensional solid body representing the extent of the gold mineralization/alteration/quartz veining was constructed for each auriferous zone. Gold assay data were composited to 2.0 metre lengths and used to interpolate gold grades into a block model.

Search neighbourhood criteria and interpolation parameters were determined after relative semi-variograms analysis. For the Taparko deposits gold grade were interpolated using ordinary kriging, while for Bouroum, an inverse distance algorithm was used.

The handling of very high gold grades represented the greatest challenges to resource estimation for these deposits. To restrict the negative impact of the high grade values on the local resource estimate, SRK used a combination of grade capping and restricted influence during grade interpolation.

16.1.1 Data

The exploration database for the Taparko project includes 680 core and reverse circulation boreholes and 107 surface trenches, the majority of which have intersected the GT, 2N/2K and 3/5 gold zones. These data were collected by HRG between 1996 and 2003. The exploration database for the Bouroum project consists of 295 core and reverse circulation boreholes that targeted 3 auriferous zones Bissinga, Welcome Stranger and F-12. The bulk of these data was acquired by Channel and Viceroy in 1995-96, validated by AXMIN between 2000 and 2003.

The Taparko specific gravity database contains approximately 2,000 determinations on gold mineralization and surrounding country rock and mineralized zones for Taparko. The Bouroum specific gravity database contains approximately 1,000 records.

Given the high variation in quartz content in the weathering profile, SRK considered applying a mean density factor inappropriate for converting volumes into tonnages. Accordingly, for the Taparko project SRK used the logged quartz proportion as a correction factor to assign a bulk density to each saprolite and saprock blocks. For the Bouroum deposits, a bulk mean density by rock type was used to convert volumes into tonnages because analysis of available specific gravity data shows no distinct correlation with mineralogy.

16.1.2 Construction of Three-dimensional Geological Models

Based on geological interpretations provided by HRG and AXMIN, SRK constructed 3-dimensional solid body models to represent the extent of alteration, quartz veining and gold mineralization. The spacing of the available drilling is sufficiently dense to interpret the boundaries of the auriferous zones with confidence between boreholes. Post mineralization dikes and intrusive rocks were also incorporated into the geologic models.

From the logging information, SRK created a number of sub-domain surfaces to subdivide the gold mineralization based on density, mining and properties of each of the rock types. Two sets of surfaces were modelled: three surfaces defining the oxidation levels of the sulphide minerals (oxidized, transition and fresh) and three surfaces defining the intensity of the clay (saprolite, saprock and fresh rock). Occasionally, sulphides are oxidized to the limits of the clay alteration, primarily along fractures. In general, the depth of sulphide oxidation and clay alteration is greatest in the vicinity of the auriferous zone.

16.1.3 Assay Compositing

Trench and borehole assay data were composited to equal 2.0 metre lengths based on the geology model. Assay composites for Taparko were calculated based on length-density weighting and by length only for the Bouroum data. Core intervals inside the auriferous solids with no assay values were assigned zero grade prior to compositing. Down hole and up hole compositing returned no statistical differences.

16.1.4 Geostatistics

Composited data were extracted for each auriferous zone and basic statistics were analyzed. The composited data have identical mean gold grade when compared to the raw assay data. The coefficient of variation of the composite data is significantly lower.

Relative 3-dimensional semi-variograms were generated for composited gold grades. In general, variography is controlled primarily by the strike and dip of the auriferous structure. The GT and 3/5 zones show the greatest anisotropy along strike and down plunge, while the majority of the Bouroum deposits do not define well developed trends. These results correlate well with the grade, true thickness and grade-thickness plots on longitudinal section for each of the gold zones. Also, the relative nugget values interpreted from the semi-variogram models are greater than 40 percent of the total sill value. This indicates that the local variability in gold grade is high, in agreement with the observed grade variation in closely spaced boreholes (twin holes).

16.1.5 Grade Capping

Capping levels were adjusted by SRK after analysis of frequency distribution plots of the composited data as well as the spatial distribution of the high grade outliers. Capping levels are presented in Table 16-1. The impact of capping was assessed by comparing capped and uncapped estimates.

Table 16-1: Summary of Grade Capping Parameters

Zone	Capping Level (g/t)	Percentile (%)	Impact on Gold Content (%)
GT Zone	30.0	99.4%	-11.0
2N/2K Zone	15.0	99.4%	-1.3
3/5 Zone [1]	40.0	99.6%	-4.0
Bissinga Zone	32.0	98.0%	-6.0
F12 Zone (tail/central)	15.0/20.0	99.3/99.0%	-5.0/-7.0
Welcome Stranger Zone	33.0	96.3%	-15.0

For the 3/5 and Welcome Stranger Zones, in addition to the capping, a search radius restriction was applied to high grade composites (exceeding 20 g/t gold) to limit their influence.

16.1.6 Block Model and Estimation Parameters

The block dimensions were set at 5 metres along strike, 5 metres vertically and 4 metres across strike for Taparko and cubic blocks 5 metres in size were used for Bouroum.

The estimation parameters were derived from variography. Variogram models were used to determine search directions and distances. Three estimation passes were completed to assign a grade in all the blocks. The first pass used full variogram ranges. For the second and third passes, ranges were inflated by 50 percent, successively. Blocks interpolated during the third pass were classified as Inferred. The estimation parameters are summarized in Table 16-2 and Table 16-3.

Table 16-2: Summary Estimation Parameters, Taparko

	GT Zone	2N/2K Zone	3/5 Zone
First Distance	45	30	50
Second Distance	30	30	30
Third Distance	6	6	8
Min / Max No. samples Pass 1	4 / 20	4 / 20	4 / 20
Multiplier for Pass 2	1.5	1.5	1.5
Min / Max No. samples Pass 2	4 / 20	4 / 20	4 / 20
Multiplier for Pass 3	1.5	1.5	1.5
Min / Max No. samples Pass 3	3 / 20	3 / 20	3 / 20

Table 16-3: Summary Estimation Parameters, Bouroum

	Bissinga	F-12 (Tail)	F-12 (Central)	Welcome Stranger
First Distance	30	40	30	30
Second Distance	30	40	50	30
Third Distance	20	10	10	10
Min / Max No. samples Pass 1	4 / 20	4 / 20	4 / 20	4 / 20
Multiplier for Pass 2	1.5	1.5	1.5	1.5
Min / Max No. samples Pass 2	4 / 20	4 / 20	4 / 20	4 / 20
Multiplier for Pass 3	1.5	1.5	1.5	1.5
Min / Max No. samples Pass 3	3 / 20	3 / 20	3 / 20	3 / 20

For the Taparko deposits, gold grades were estimated using ordinary kriging, while for Bouroum and inverse distance cubed function was used.

SRK restricted the influence of high grade composites for the 3/5 Zone and the Welcome Stranger Zone. For the 3/5 Zone, the search radius of composites grading higher than 20 g/t gold was restricted to 20 metres in the two major axis and 5 metres across strike. For the Welcome Stranger Zone a search restriction of 15 metres in all directions was applied to composites grading greater than 15 g/t gold.

16.1.7 Mineral Resource Classification

The mineral resources for the Taparko and Bouroum deposits were classified essentially on the density of drill data and the continuity of the geometry and grade in each of the various mineralized zones. The Mineral Resources have been classified according to the “CIM Definition Standards for Mineral Resources and Mineral Reserves (August, 2000)”. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

The mineral resources were reported at a 1.0 g/t gold cut-off (0.75 g/t gold cut-off for the 2N/2K Zone) based on a 2003 gold price of US$350 per ounce, detailed mine costing and metallurgical recoveries by HRG during 2003. Depletion from artisan mining, dikes, faults, and laterite was removed from the mineral resource statement. The 2003 mineral resource statement for the Taparko and Bouroum gold deposits is presented in Table 16-4.

Table 16-4: 2003 Mineral Resource Statement*, Taparko and Bouroum Gold Deposits, Burkina Faso, SRK Consulting, November 2003.

	Quantity (tonnes x1000)	Grade (g/t gold)	Gold Content (ounces)
Taparko Project			
Indicated Resources			
3/5 Zone	6,956	2.7	610,614
2N/2K Zone	2,031	1.7	109,731
GT Zone	1,488	3.8	180,372
Total	**10,475**	**2.7**	**900,717**
Inferred Resources			
3/5 Zone	1,163	2.3	85,995
2N/2K Zone	269	2.0	16,938
GT Zone	973	3.4	105,750
Total	**2,405**	**2.7**	**208,684**
Bouroum Project			
Indicated Resources			
Bissinga	164	5.2	27,520
F12	1,817	2.8	160,688
Welcome Stranger	170	5.3	29,018
Total	**2,151**	**3.1**	**217,227**
Inferred Resources			
Bissinga	16	2.7	1,406
F12	351	3.4	38,850
Welcome Stranger	6	4.0	756
Total	**373**	**3.4**	**41,012**

*Note: Reported at cut-off grade of 1.0g/t gold (0.75 g/t gold for 2N/2K Zone) assuming 2003 gold price of US$350 per ounce, and metallurgical recoveries between 90 and 97 percent depending on the type of gold mineralization. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures rounded to reflect the relative accuracy of the estimates. Mineral resources include mineral reserves.

The Inferred Mineral Resources are located primarily beneath the optimized open pits using a gold price of US$350 per ounce. For Bouroum, however, a minor amount of inferred mineral resources occur at the southern extremity of the F12 tail and the Bissinga deposits near surface.

16.1.8 Mineral Resource Statement

Since 2003, HRG has not completed any new sampling of the Taparko and Bouroum gold deposits that would justify re-estimating the mineral resources. SRK therefore considers the 2003 mineral resource model to be current.

In 2004 the mineral resources for the Taparko-Bouroum gold project were reported a two cut-off grades based on metal prices and mining recovery assumptions of 2003. The mineral resources were reported to the depth of the model.

CIM Definition Standards for Mineral Resources and Mineral Reserves (December 2005) defines a mineral resource as:

"a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge".

The "reasonable prospects for economic extraction" requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries.

In order to meet this requirement, SRK tabulated the mineral resources within pit shells optimized using a gold price of US$1,000 per ounce and mining and recovery assumptions used for reporting mineral reserves. The mineral resources are reported at various cut-off grades used for reporting mineral reserves. The Mineral Resource Statement for the Taparko-Bouroum gold project is presented in Table 16-5.

The mineral resources categorized by material type are presented in Table 16-6 for the Taparko project and in Table 16-7 for the Bouroum project.

Table 16-5: Mineral Resource Statement*, Taparko and Bouroum Gold Deposits, Burkina Faso, SRK Consulting, December 31, 2007

Zone	Quantity (tonnes x1000)	Grade (g/t gold)	Gold Content (ounces)
	Taparko Project		
Indicated Resources			
3/5	6,562	2.72	574,800
2N/2K	1,493	1.91	91,500
GT	1,288	3.70	153,400
Total Indicated	**9,344**	**2.73**	**819,700**
Inferred Resources			
3/5	598	2.41	46,400
2N/2K	108	2.68	9,300
GT	328	3.55	37,400
Total inferred	**1,034**	**2.80**	**93,100**
	Bouroum Project		
Indicated Resources			
Bissinga	94	6.53	19,700
F12	1,363	2.88	126,200
WS	140	5.17	23,200
Total Indicated	**1,596**	**3.30**	**169,200**
Inferred Resources			
Bissinga	6	3.26	600
F12	62	3.62	7,200
WS	8	3.16	800
Total Inferred	**75**	**3.54**	**8,600**

*Note: Reported at cut-off grades varying between 0.97 and 1.27 g/t gold within pit shells optimized using a gold price of US$1,000 per ounce and mining reserving assumptions. Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures rounded to reflect the relative accuracy of the estimates. Mineral resources include mineral reserves.

Table 16-6: Mineral Resources for the Taparko Gold Project by Material Type.

Zone		Cut-off (g/t gold)	Quantity (tonnes x1000)	Grade (g/t gold)	Gold Content (ounces)
			Taparko		
Indicated					
Saprolite					
	3/5	0.97	1,596	2.69	138,200
	2N/2K	0.98	697	1.78	39,800
	GT	0.98	121	3.38	13,100
Saprock					
	3/5	0.98	941	2.85	86,200
	2N/2K	1.00	211	2.01	13,600
	GT	1.00	87	3.76	10,500
Fresh					
	3/5	0.98	959	2.71	83,500
	2N/2K	1.00	226	1.96	14,300
	GT	1.00	230	4.07	30,200
Transition					
	3/5	1.00	691	2.72	60,400
	2N/2K	1.02	134	2.11	9,100
	GT	1.02	205	3.54	23,300
Sulphide					
	3/5	1.02	2,375	2.71	206,500
	2N/2K	1.03	226	2.03	14,800
	GT	1.03	646	3.68	76,300
Total Indicated			**9,344**	**2.73**	**819,700**
Inferred					
Saprolite					
	3/5	0.97	14	2.46	1,100
	2N/2K	0.98	11	2.79	1,000
	GT	0.98	1	1.34	0
Saprock					
	3/5	0.98	11	2.79	1,000
	2N/2K	1.00	1	1.54	100
	GT	1.00	3	2.57	200
Fresh					
	3/5	0.98	1	1.70	100
	2N/2K	1.00	1	2.65	100
	GT	1.00	1	2.05	100
Transition					
	3/5	1.00	1	1.34	0
	2N/2K	1.02	6	3.02	600
	GT	1.02	4	2.40	300
Sulphide					
	3/5	1.02	571	2.40	44,100
	2N/2K	1.03	88	2.66	7,500
	GT	1.03	319	3.59	36,800
Total Inferred			**1,034**	**2.80**	**93,100**

Table 16-7: Mineral Resources for the Bouroum Gold Project by Material Type.

Zone	Cut-off (g/t gold)	Quantity (tonnes x1000)	Grade (g/t gold)	Gold Content (ounces)
Bouroum				
Indicated				
Saprolite				
Bissinga	1.18	11	9.27	3,100
F12	1.19	194	2.85	17,700
WS	1.19	26	3.42	2,800
Oxide				
Bissinga	1.19	71	6.60	15,000
F12	1.21	234	2.94	22,100
WS	1.21	105	5.66	19,200
Transition				
Bissinga				
F12	1.26	102	3.07	10,100
WS	1.26	4	4.54	600
Sulphide				
Bissinga	1.27	13	3.89	1,600
F12	1.27	833	2.85	76,300
WS	1.27	5	4.25	700
Total Indicated		**1,596**	**3.30**	**169,200**
Inferred				
Saprolite				
Bissinga	1.18	0	2.65	0
F12	1.19	4	3.98	500
WS	1.19	6	3.24	600
Oxide				
Bissinga	1.19	3	3.44	400
F12	1.21	3	5.24	500
WS	1.21	2	2.96	200
Transition				
Bissinga				
F12	1.26	1	4.86	100
WS				
Sulphide				
Bissinga	1.27	3	3.06	300
F12	1.27	54	3.49	6,100
WS				
Total Inferred		**75**	**3.54**	**8,600**

16.2 Mineral Reserve Estimate

16.2.1 Mining Method

All ore deposits at Taparko and Bouroum are near surface and amenable to open pit mining. The size of the zones and mineral resources indicate a maximum annual production rate of approximately 1.5 million tonnes.

16.2.2 Open Pit Optimization

The Taparko and Bouroum open pits have been optimized by SRK using Whittle software. The history of pit optimization work by SRK includes:

- October 2003 using a gold price of US$350/ounce;
- May 2005 using a gold price of US$400/ounce;
- March 2008 using a gold price of US$800/ounce.

SRK also performed open pit designs and calculated pit quantities for SOMITA. Since the start up of production at the site, SOMITA technical staff have become involved in this work, with the aim of taking over from SRK.

Pit Optimization Inputs

In October 2003 and May 2005, there were no actual operating costs from operations so the costs used in the optimizations were a combination of modeled costs and estimates provided by High River Gold Mines Ltd.

It is SRK's observation that operating cost estimates have been increasing while at the same time the price of gold has been increasing. In May 2005, SRK made the following comments on the optimization results at US$400/ounce:

"*The increase in ore reserves by using the higher gold price of $400/oz was tempered by the fact that cost estimates for some of the operating cost components have increased since SRK's previous mining study in 2003*."

In February and March 2008, SRK worked with SOMITA to re-evaluate the Taparko and Bouroum pit optimizations at a gold price of US$800/ounce using current 2008 estimates of operating costs and metallurgical recoveries.

The pit optimizations were based on LoM average mining costs of $2.47/t for Taparko and $1.80/t for Bouroum.

The 2008 optimization was based on plant gold recoveries ranging from 92 percent to 96 percent depending on plant feed ore type. Ore mined at Bouroum was subject to an additional $5.31/tonne cost to cover truck haulage costs to the Taparko mill site.

Previous feasibility study open pit slope angle recommendations, provided by Golder Associates Ltd. ("Golder") were used in the 2008 optimization work. The slopes were modified in the Whittle model as required to account for haulage ramps.

16.2.3 External Mining Dilution

2005 Dilution Estimate

The 2005 approach to estimating external dilution used the same methodology as SRK's original 2003 work. The following is an excerpt from SRK's 2003 mining study describing the diluted block model that was prepared.

"*Waste dilution was carefully assessed because of the variable geometry, even with the selective mining envisioned for the open pit. SRK decided that a diluted grade model would provide a more realistic estimate of the recoverable tonnage and grade of a selective open pit mining operation. This would provide an improved mineral resource estimate for the planned open pit optimization study. SRK considered a number of different methods to dilute the mineral resource estimate, including a global dilution factor, diluting the gold grades to model blocks assuming that these blocks represent a minimum mining selectivity, and solid expansion. Considering the variable thicknesses for the mineralized zones and the relatively sharp grade contacts, SRK believes that the most suitable method for dilution estimation is by expanding the solid body model.*

SRK expanded the various zones (both hanging wall and footwall) by 0.5 metres. The resulting change of vein percentage in the model block from the undiluted, original solid body model, to the expanded, diluted model was used to calculate the diluted gold grade."

Dilution tonnage was added to the resource models at zero grade at an average of 6.7 percent, ranging from 3.7 percent for 2N/2K pit to 16.0 percent for Bissinga pit.

2008 Dilution Estimate

The 2003 diluted block model was used with an additional 5 percent external dilution added with an assumed grade of 0.5 g/t gold. SOMITA has found that the external dilution estimate in the feasibility study was insufficient.

A mining ore recovery factor of 97 percent was also introduced.

16.2.4 2008 Cut off Grades

The December 31, 2007 cut off grades estimated by SRK were 1.0 g/t gold for Taparko pits and range from 1.1 to 1.3 g/t gold for Bouroum pits.

One reason that the Bouroum cut off grades are higher is the additional ore haulage cost from Bouroum to the Taparko mill site.

16.2.5 2008 Pit Optimization Results

The 2008 pit optimization results were not significantly different than the previous work by SRK reported in May 2005, and did not warrant changes to pit designs.

Consistent with previous pit optimization work by SRK, potential for limited expansion of Taparko pits was noted. Follow up drilling is necessary to upgrade the Inferred Mineral Resources in these areas. SRK understands that SOMITA is currently preparing a plan to further evaluate the Taparko ore zones during 2008.

16.2.6 Mineral Reserve Estimate – December 31, 2007

The December 31, 2007 Mineral Reserve estimate was prepared by SRK based on the pit optimization results, including cut off grades. Table 16-7 shows the estimated Probable Mineral Reserves contained in the designed open pits at Taparko and Bouroum. A gold price of $US800/ounce, provided by SOMITA, was used in the estimate.

The ore in the RoM stockpile as of December 31, 2007 represents an additional Proven Mineral Reserve of 194,000 tonnes at an estimated grade of 2.89 g/t gold.

Total Proven and Probable Mineral Reserves at December 31, 2007 are estimated at 8.85 megatonnes at an average grade of 2.81 g/t gold, containing 800 thousand ounces of gold (Table 16-8).

Table 16-8: Mineral Reserve Statement*, Taparko-Bouroum Gold Deposits, SRK Consulting, December 31, 2007.

Deposit / Source	Ore (kt)	Grade (g/t Au)	Contained Gold (000's oz)
Probable Mineral Reserves			
3/5	5,510	2.73	483
GT	1,060	3.68	125
2N/2K	1,180	1.83	70
Taparko Sub-Total	7,750	2.72	677
Bissinga	83	6.77	18
Welcome Stranger	117	5.17	19
F12	711	2.95	68
Bouroum Sub-Total	911	3.58	105
Probable Mineral Reserves - Pits	**8,660**	**2.81**	**782**
Proven Mineral Reserves			
RoM Stockpile - Proven Reserve	194	2.89	18
Total Proven & Probable Mineral Reserves	**8,850**	**2.81**	**800**

*Based on a gold price of US$800 per ounce and cut-off grades varying between 1.0 and 1.3 g/t gold depending on the deposit. Mineral reserves included in mineral resources.

17 Additional Requirements for Production Properties

17.1 Site Manpower, Safety and Training

17.1.1 SOMITA Employees and Contractors

In general, SOMITA has been successful in staffing the project for planned operations. Equipment operators have been available, as have mechanics that are experienced in maintaining heavy equipment. Finding experienced geologists was reported as difficult. At the time of the site visit, the position of General Manager was vacant.

The manpower complement for the project is summarized in Table 17-1. SOMITA employees are generally responsible for mining, processing maintenance and general and administration services. Contractors are utilized for the functions of accommodation and catering, security and power plant operation and maintenance, explosives loading, employee transportation, and for mill laboratory staff. Refer to Table 17-2.

The operation is managed by a Senior Management team led by the General Manager. All supervision, employees and contractors report to or through these positions. The other Senior Management positions are:

- Mine Superintendent;
- Processing Plant Superintendent;
- Maintenance Superintendent;
- Administration Superintendent;
- Chief Engineer;
- Chief Geologist.

Table 17-1: SOMITA Employees December 31, 2007

Department	Number
General Manager	0
Administration & Finance	44
Human Resources	22
Mining	134
Maintenance	91
Mineral Processing	119
Total SOMITA employees	**410**
Nationality	**Number**
Burkinabe	386
Canadian	23
Malian	1
Total SOMITA employees	**410**

Table 17-2: Contractor Manpower December 31, 2007

Company	Function	Number
ATS	Camp and Catering	42
BSP/SGS	Site Security	92
PSS	Generator Maintenance	16
BECOHA	Tailings Dam Construction	16
AEL	Explosives Loading	5
OA	Employee Transportation	8
EERI	Process Plant Modifications	6
AZYM	Process Plant Modifications	1
ABILAB	Mill Laboratory	13
CGE	Compactor Operators	5
SIDIBE	Water Tanker Operation	4
OUEDRAOGO Madi	Water Tanker Operation	4
RALPH NEGOCE	Water Tanker Operation	4
Total Contractors		**216**

Approximately 25 percent of the workforce lives in the nearby villages of Taparko and Yalgo. The level of basic education in the population is low in the area, making it difficult for SOMITA to source more of the workforce locally. These employees are bussed on a daily basis to the mine site by company arranged transport. Approximately 75 percent of the workforce resides in the city of Ouadadougou and surrounding area. Most of these employees are responsible for arranging their own transportation to Taparko. SOMITA pays employees allowances to help offset the costs of transportation and housing.

In Table 17-2, the contractors that are highlighted are the ones that support the ongoing operations. The other contractors shown are project related. Not shown on the table is the contractor that will haul ore from Bouroum to the Taparko site, beginning in 2008.

17.1.2 Safety Practices and Statistics

SRK reviewed the safety statistics tabulated in the SOMITA SA Month End reports, focusing on lost time injuries and the lost time injury frequency rate ("LTIFR"). The LTIFR is defined as the number of lost time claims per million hours worked.

As of December 2007, the year-to-date LTIFR (1 million hour basis) for SOMITA employees was 9.9 and for SOMITA contractors it was 1.8.

The SOMITA employees are unionized. A Health and Safety Committee has been established with the first meeting held in November 2007 with a focus on prevention and discussion on an action plan for 2008.

SOMITA regularly conducts safety training for employees, conducts daily safety meetings with employees and supervisors, and provides personal protective equipment. A first aid station is attended by a qualified nurse during the day, with "on call" response coverage for other working shifts. An ambulance is available on site for transport of injured workers to the city of Ouagadougou if necessary.

17.1.3 Training Program

Each week on Tuesdays and Wednesdays, approximately 40 to 60 employees are involved in regular training sessions. Sessions are arranged to coincide with crew changes by having a crew come in a day early. This minimizes the impact on operations.

At the beginning of each session, recent safety incidents are reviewed. A wide variety of topics are covered by the training. Some examples are:

- Applicable laws, and collective agreement provisions;
- Specific equipment training – lubrication for example;
- Training provided by mobile equipment suppliers;
- Computer skills;
- Overhead cranes;
- Heavy equipment.

Records are maintained documenting the training. No testing or formal demonstration of skills is included at this time.

17.2 Mining Operations

17.2.4 Mining Since Start Up

Mining Operations Since Start Up

The gold deposits at Taparko and Bouroum are near surface and amenable to open pit mining methods. Plans have been developed for six open pits as listed below:

- Taparko property: GT pit, 2N/2K pit, and 3/5 pit;
- Bouroum property: Bissinga pit, Welcome Stranger pit, and F12 pit.

The largest pits are planned at the Taparko site. The 3/5 pit is planned with nominal dimensions of 1,200 metres long, 250 metres wide and 130 metres deep. The GT pit is planned with nominal dimensions of 700 metres long, 250 metres wide and 115 metres deep.

From the start of mining in 2005 to the end of 2007, mining has advanced in two pits at the Taparko site; 3/5 pit and GT pit. In addition, a small quantity of waste was excavated from pit 2N/2K to be used for site construction purposes. For 2008, open pit mining is planned at the Taparko site pits 3/5 and GT, and at Bouroum site pits Bissinga and F12.

Table 17-3 shows a summary of the reported pit production from the start of the project up to December 31, 2007.

Table 17-3: Pit Production: Start Up to December 31, 2007

		Pit 3/5		Pit GT		Pit 2N/2K	
Year	**Material**	**Quantity (tonne)**	**Grade (g/t Au)**	**Quantity (tonne)**	**Grade (g/t Au)**	**Quantity (tonne)**	**Grade (g/t Au)**
2005	Ore	0	0	0	0		
	Waste	1,110,524		142,240			
2006	Ore	84,481	2.19	48,440	3.56		
	Waste	2,486,095		851,922			
2007	Ore	93,188	1.87	167,821	3.20	0	0
	Waste	2,087,967		1,550,806		53,128	
Totals	Ore	**177,669**	**2.02**	**216,261**	**3.28**	**0**	**0**
	Waste	**5,684,586**		**2,544,968**		**53,128**	

SOMITA advised SRK that some of the extracted ore shown in Table 17-3 was mined from "outside of mineral reserves". At the end of 2007, the run-of-mine ("ROM") stockpile, located next to the plant feed hoppers, contained 194kt of ore.

To the end of 2007, 28 kilotonnes of low grade mineralization (less than 1 g/t gold) has been extracted from these pits and stockpiled. In Table 17-3, the low grade material is included as waste since it is below the economic cut off grade. This material is presently marginal or uneconomic plant feed. It may be possible to use this material to supplement plant feed in the future under certain economic conditions.

A significant portion of open pit waste saprolite mined to date has been directed to site construction projects such as tailings facility dam construction. The saprolite has been very difficult to wet (needed for maximum compaction). It has been necessary to wet the excavated saprolite in the pit by spraying on water and working it in with a track dozer. The wetted saprolite has then been re-handled by the hydraulic excavator into haul trucks for delivery to the tailings dam.

As at December 31, 2007, the main pit floor in GT is at 270 metres elevation. The south end has been excavated down into the next benches (elevation 255 metres) to create a sump for the rainy season, July and August having the heaviest rain. This sump does not have to be moved until well after the rainy season.

In pit 3/5 the main pit floor is at bench elevations 272.5 metres and 270.0 metres. Pit crest elevation is 280.0 metres (Figure 17-1)

GT pit was idle at the time of the site visit. The short term mine plan called for all mining activity to be in pit 3/5 for a 3 week period. The 3/5 pit is very large, and there is no problem accommodating all of the mining work.

Mining operations are being conducted on three 8-hour shifts per day, 7 days per week. Four mining crews work on a rotation schedule.

Figure 17-1: Mining in 3/5 Pit – January 2007

2007 Mining Achievements

The 2007 mining budget plan include extraction of 706 kilotonnes of ore at a grade of 3.59 g/t gold, and waste stripping of 5.99 megatonnes for a planned total material of 6.7 megatonnes.

The 2007 actual mining totalled 261 kilotonnes of ore at a reported grade of 2.73 g/t gold, and waste stripping of 3.7 megatonnes for a total material mined of 4.0Mt.

Figure 17-2 compares the actual ore mined per month to the budget plan for the year 2007. It also shows the plant feed tonnes per month following plant start up in June 2007.

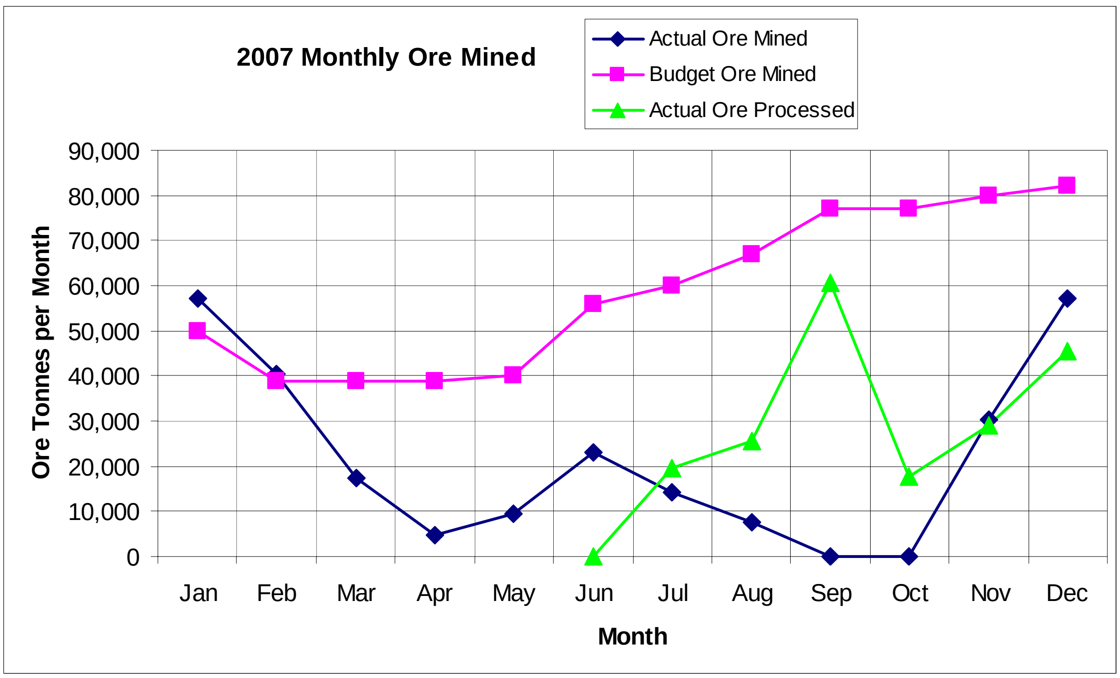


Figure 17-2: 2007 Monthly Ore Mined versus Budget

Figure 17-3 compares the 2007 monthly mined grade to the 2007 budget plan. It also shows the head grade reported at the mill after start up in June.

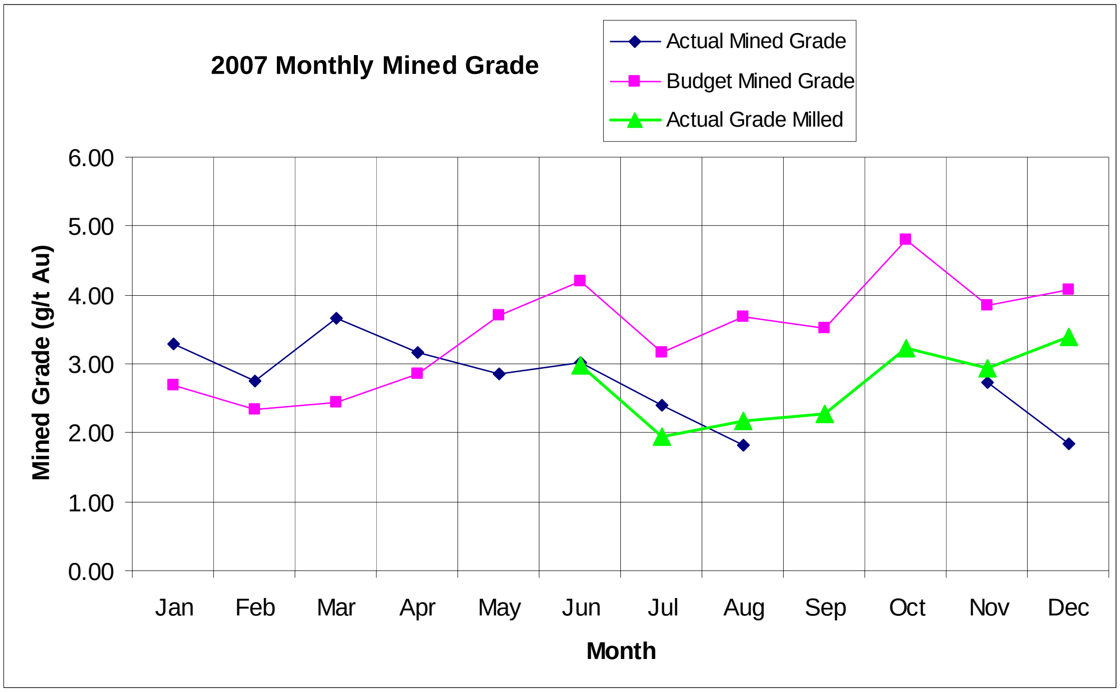


Figure 17-3: 2007 Monthly Mined Grade versus Budget

It should be noted that there is a substantial run-of-mine (“ROM”) stockpile between the mine and the mill feed such that the mined grade will not necessarily match the plant head grade in a given month.

Figure 17-2 and 17-3 also show that there was no ore mining (and reduced waste stripping) during the months of September and October. This was due to a shortage of operating funds caused by the processing plant start up and commissioning being behind schedule, the open pit mining was purposely delayed due to the large volume of ore already accumulated on the RoM stockpile. This comment also applies to Table 17-4.

Figure 17-4 shows the actual 2007 monthly total material mined plotted against the budget plan quantities.

Performance of the mine in 2007 was adversely affected by:

- A shortage of operating funds in September and October. This was resolved when High River Gold closed a financing on November 8, 2007;
- Mechanical availabilities were low on some mobile units during certain periods. The most significant cause was the long delivery time required to obtain certain critical repair parts. Freight through Ghana has been slow. Clearing customs alone can take from one to four weeks.

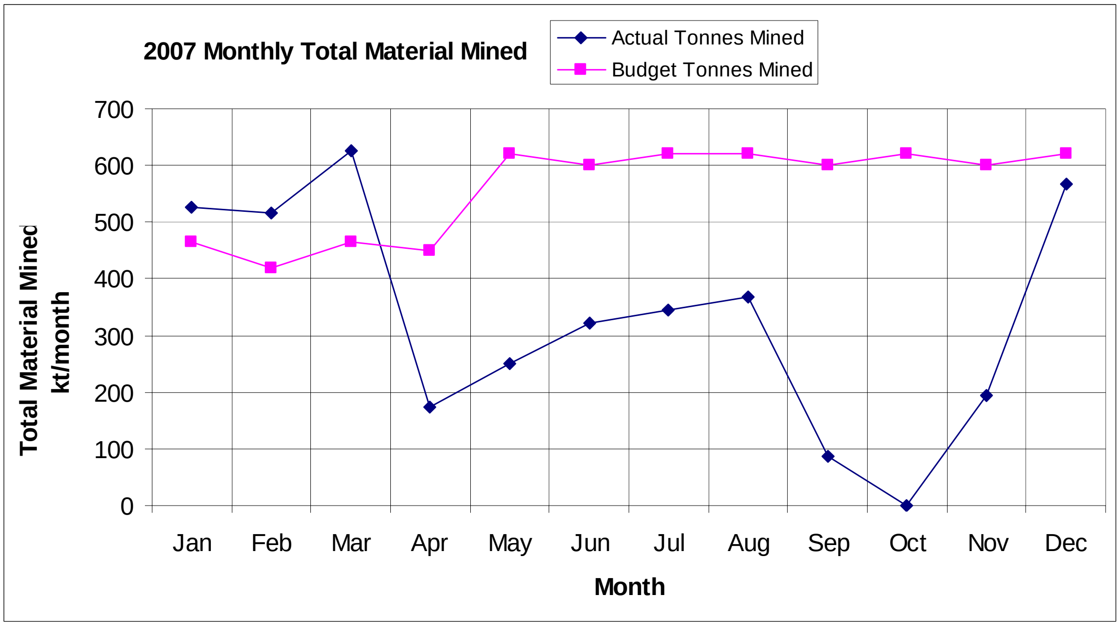


Figure 17-4: 2007 Monthly Total Material Mined: Actual versus Budget

Operating achievements for the first two months of 2008 are shown compared to the 2008 budget plan in Table 17-4.

Table 17-4: January and February 2008 Operating Results

	Waste (tonnes)	Ore (tonnes)	Ore Grade (g/t Au)
January			
Mining - Plan	389,661	46,593	3.01
Mining - Actual	530,851	60,808	3.16
Processing - Plan		46,600	3.01
Processing - Actual		40,193	2.69
February			
Mining - Plan	498,655	8,178	4.46
Mining - Actual	602,150	1,365	2.21
Processing - Plan		23,400	3.95
Processing - Actual		19,078	3.93

The actual mill throughput in late January and well into February was adversely affected by a mill optimization and maintenance shut down related to ball mill lifters as well as the ball mill drive-train alignment.

17.2.5 Description of Current Mining Operations

Mine Geotechnical

The current pit slope designs are based on criteria developed by Golder Associates Ltd. ("Golder") in their September 2003 report, "Draft Report on

Assessment of Pit Wall Stability, Taparko Project, Burkina Faso, West Africa". Using the interramp design angles from Golder, SRK undertook pit optimization and pit slope design work in 2003 and 2005.

The recommended interramp slope angles for weathered material range from 43 to 49 degrees and for fresh bedrock they vary from 46 to 56 degrees. The two active pits have not advanced deep enough yet to permit a meaningful evaluation of pit slope performance.

Piteau Associates Engineering Ltd. ("Piteau") is the site geotechnical stability consultant and visits the operations twice per year. SOMITA arranged for Piteau to visit the Taparko site in October 2006 for a review of pit slope stability aspects. Piteau prepared a report dated January 4, 2007, "Pit Slope Stability – Taparko-Bouroum Gold Project".

SOMITA has constructed perimeter water control ditches around both 3/5 and GT pits to prevent surface runoff water from coming over the pit crests. This was done in response to erosion gullies that had begun to form on the pit walls during the previous rainy season.

The following is a summary of some of the key recommendations included in the Piteau January 2007 report:

- Multi-lift high benches were not incorporated in the pit designs resulting in catch benches that will be too narrow to be effective. Double benching or even triple benching should be employed to increase the width of the planned catch benches;
- Some convex "noses" in the pit wall design should be smoothed out to reduce the likelihood of stability problems;
- Until additional structural data are available for input to slope design, the Golder design criteria should be used;
- Geologic structural mapping was recommended for exposed pit walls and for new wall areas opened up during mining;
- Actual performance of exposed benches should be documented;
- Once a sufficient amount of new data is obtained, analytical stability work should be conducted and the results compared to the Golder slope criteria;
- Pre-splitting techniques may be well suited to blasting up to the final wall in the competent bedrock;
- Visual monitoring of excavated slopes should be maintained and survey monitoring of prisms should be implemented in the larger pits as they become deeper.

Mining Equipment

Table 17-5 provides the list of open pit mining equipment employed for Taparko site mining as of early January 2008. Service vehicles and light duty vehicles are not included in Table 17-5.

Table 17-5: Mobile Mining Equipment – January 2008

Type	Model	Capacity
Production Drill	TAMROCK Pantera 1500	
Production Drill	TAMROCK Pantera 1500	
Excavator	CAT 385 BL ME	5.5 m3
Excavator	CAT 385 CL ME	5.5 m3
Wheel Loader	CAT 988G	6.7 m3
Wheel Loader	CAT 988H	6.7 m3
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Haul Truck	CAT 773D	54 t
Water Truck	CAT 773B	
Track Dozer	CAT D9R	
Track Dozer	CAT D9R	
Wheel Dozer	CAT 824H	
Motor Grader	CAT 14G	

Mine Manpower

Table 17-6 shows a listing of mine department manpower as of year end 2007.

Table 17-6: Mine Department Manpower

Mine Function	Number
Mine Manager	1
Supervision & Training	12
Drilling & Blasting	19
Excavation	19
Trucking	25
Track & Wheel Dozer	9
Grading & Water Truck	9
Labourers	10
Mine Clerks	2
Engineering	15
Geology	13
Total SOMITA employees	**134**

Drilling and Blasting

Due to the deep weathering profile, the feasibility study had assumed that Saprolite would be excavated freely without drilling and blasting, that only 30 percent of the Saprock would require drilling and blasting, and that 100 percent of the Fresh rock would require blasting.

In practice, most of the upper benches have been excavated as free digging material. Some drilling and blasting was done during 2007 as follows:

- Ore blasted was 35 kilotonnes representing 13 percent of ore tonnes excavated;
- Waste blasted was 123 kilotonnes representing 3 percent of waste tonnes excavated.

Open pit drilling utilizes surface top hammer drill rigs equipped with hydraulic rock drills. They are diesel-powered, self-propelled and equipped with onboard compressors and dust collectors. The hole size utilized is 114 millimetres (4.5 inch) diameter, drilled on a 5 metre bench height. Patterns drilled in ore have been 3.8 by 3.8 metres while in waste a pattern of 4.2 by 4.2 metres has been used. For Taparko saprolite with a density of 2.22 t/m3, this result in drill factors close to 30 tonnes per meter drilled.

Grade control samples are collected from some of the blast holes and assayed for grade control purposes.

Bulk emulsion explosive, delivered by a contractor's truck, has been used exclusively for blasting. The explosives are supplied by African Explosives Ghana Limited ("AEL"). The emulsion is shipped before it is sensitized by "gassing" and it is therefore not classified as an explosive during transport.

An explosives storage site has been established next to the Taparko pits. It is comprised of emulsion storage tanks, two magazines, and an office/maintenance building.

Loading and Hauling

Ore is mined on a split bench height of 2.5 metres for good control in identifying ore and separating it from waste. Cat 385 hydraulic (backhoe) excavators are used to load Cat 773 trucks of 54 tonne capacity. Waste is normally mined on 2.5 metre benches in soft waste and on 5 metre benches in hard rock.

Caterpillar model 988 wheel loaders are utilized for back up loading and utility units, and to provide increased operational flexibility.

Ore is hauled to the stockpile/plant feed area and either dumped into the plant feed bin or onto the run-of-mine ("RoM") stockpile. Waste is hauled to the individual dumps that are designed near each pit. Currently, a significant portion of waste is being diverted to the tailings facility for dam construction.

Waste Dumps

Waste dumps are located/ planned near each open pit to minimize haulage distances for waste mining. Waste dumps range in planned size at Taparko from 4 to 20 megatonnes and at Bouroum from 0.45 to 3.9 megatonnes. The location of the waste dumps was selected to facilitate mine closure by having most of them designed on higher, drier ground and generally on hard laterite plateaus.

Two waste dumps were being used at the time of the site visit, for 3/5 and GT pit waste rock.

Stockpiles and Plant Feed

Two separate ore feed bins/grizzlies have been constructed to feed the mill. In the soft ore circuit, ore is sized by a toothed roll crusher, and in the hard ore circuit a primary jaw crusher is used. Both feed bins are located next to the large RoM ore stockpile.

The jaw crusher is required for the hard ore, while the roll crusher was designed to handle softer ore that was expected to be sticky during the rainy season due to its clay content.

Oversize is removed from the grizzlies by a wheel loader and placed nearby. Oversize ore is broken by a quick attach hydraulic impact hammer mounted on Cat 325 excavator.

Grade Control Practice

Ore delineation to date has been based on 2-dimensional ore sampling within 10 metre spaced trenches on each bench. A limited amount of blast hole sampling has occurred at the 3/5 pit. Arithmetic mean gold grades are assigned to large grade control blocks (up to 70 metres in long axis), which are demarcated by means of colour coded flagging tape on the mining bench. A Caterpillar model 385 excavator is used in ore, equipped with a 4.8 m3 bucket with a bite width of 2.2 metres. As ore cannot normally be easily visually distinguished from waste rock, mining operations will in future be directed by mine geology personnel based on a structured mine grade control program.

SOMITA reports that improvements are underway to reduce dilution and improve the mineral reserve recovery including:

- Implementation of a new grade control management system with an accompanying grade control staff training program;
- Variations of the mining method are currently being tested for reducing dilution;
- Technicians are being hired for in the field 24 hours a day grade control, and when possible, ore is mined only on day and afternoon shifts for better visibility;
- Better tracking of ore mined, and of ore storage (stockpile) destination;
- Mill to mine reconciliation and analysis to identify and validate planning parameters.

Reconciliations

As of the end of 2007, a project total of 394kt of ore had been extracted from pits 3/5 and GT, and a total of 198kt of ore had been processed.

At the time of SRK's site visit, no rigorous reconciliations had been completed on site to assess the validity of feasibility study assumptions concerning the resource block model, or mining dilution and mining recovery parameters. It is normally expected that reconciliations would be performed between:

- The resource block model and a grade control model representing the tonnage and grade of ore mined from the pit;

- The ore mined from the pit (as determined by a grade control program) and the process plant feed.

The grade control methods that have been implemented to January 2008 for the movement of ore between the open pit extraction and the ROM stockpile and/or the plant feed have not been adequate to permit a reconciliation. Also, the mill operation has not yet achieved a steady state of operation due to various problems, and metal accounting in the mill is subject to gold lock up within the ball mill and pump boxes during start up.

The mine technical staff believes; however, that actual external mining dilution is more than allowed for in the feasibility study. Therefore the allowance for external dilution has been increased by 5 percent in the mine plans developed for 2008.

Mining Challenges

The main operational challenges experienced in the open pit mining were discussed with the Mine Manager. They included:

- Low equipment availability at times, caused mainly by delays in parts delivered to site. To help improve the situation, the parts supplier has involved more expatriates in the supply logistics;
- Dust was noted to be present everywhere equipment was working. It reportedly gets heavy when the wind is strong. Problems have been plugged air filters and radiators, and low visibility impacting on truck speeds. An additional water truck has been purchased, and the mine will experiment with a dust control water additive;
- The requirement for pre-wetting the tailings dam construction saprolite has been an unforeseen component of the open pit mining equipment operating time. Approximately 1.5 megatonnes of saprolite is required for this purpose;
- The supply and quality of mine operations manpower has been sufficient. It has not been a problem recruiting good open pit supervisors or equipment operators. The challenge has been in training the workers to understand the mining method;
- The lack of formalized grade control management procedures and the relative inexperience of grade control staff (geology and mining).

17.2.6 2008 Mine Operating Plan

The 2008 mine production plan shown in Table 17-7 is the combined results of Taparko plus Bouroum. The bottom section of the table also shows the scheduled plant feed for 2008.

The mining plan is comprised of:

- Total ore mining of 853 kilotonnes at a grade of 3.33g/t gold;
- Waste mining of 5,170 kilotonnes for a strip ratio of 6.1;
- Total material mining of 6,023 kilotonnes.

For comparison, in 2007 the actual mining quantities were 261 kilotonnes of ore at a reported grade of 2.73 g/t gold and 3,720 kilotonnes of waste.

Mining is scheduled to start at the Bouroum site in March 2008 at Bissinga pit and in November 2008 at Zone F12 pit.

Table 17-7: SOMITA 2008 Open Pit Production Plan

Taparko	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Total 2008**
Pit 3/5													
Ore (tonne)	46,593			60,400	40,851	36,690	40,594	41,241	52,107	53,439	55,714	18,896	446,525
Grade (g/t Au)	3.01			2.75	2.72	2.77	2.11	2.47	2.64	2.67	2.31	2.27	2.59
Waste (tonne)	389,661	152,026	0	130,599	137,349	122,201	222,826	234,102	253,583	201,178	95,141	65,850	2,004,516
Pit GT													
Ore (tonne)	0	8,178	10,541	22,897	27,699	28,414	28,204	26,299	33,135	34,932	23,646	43,294	287,239
Grade (g/t Au)	0.00	4.46	1.65	3.90	3.78	3.78	3.57	3.49	3.28	3.23	3.82	4.12	3.61
Waste (tonne)	0	346,629	299,801	87,100	104,415	187,497	253,783	239,822	189,581	257,921	129,190	184,601	2,280,339
Taparko - Total Mined													
Ore (tonne)	46,593	8,178	10,541	83,297	68,550	65,104	68,798	67,540	85,242	88,370	79,360	62,190	733,764
Grade (g/t Au)	3.01	4.46	1.65	3.06	3.14	3.21	2.71	2.87	2.89	2.89	2.76	3.56	2.99
Waste (tonne)	389,661	498,655	299,801	217,699	241,764	309,697	476,609	473,925	443,164	459,099	224,331	250,451	4,284,855
Total Material	436,254	506,834	310,342	300,996	310,314	374,801	545,407	541,465	528,406	547,469	303,691	312,641	5,018,619
Bouroum													
Bissinga													
Ore (tonne)			5,223	15,723	27,492	31,837							80,275
Grade (g/t Au)			6.82	9.69	8.07	4.51							6.89
Waste (tonne)			150,101	133,660	126,743	57,953							468,457
Pit F12													
Ore (tonne)											19,853	20,400	40,253
Grade (g/t Au)											2.96	2.90	2.93
Waste (tonne)											204,167	212,301	416,468
Bouroum - Total Mined													
Ore (tonne)			5,223	15,723	27,492	31,837					19,853	20,400	120,528
Grade (g/t Au)			6.82	9.69	8.07	4.51					2.96	2.90	5.57
Waste (tonne)			150,101	133,660	126,743	57,953					204,167	212,301	884,926
Total Material			155,325	149,383	154,234	89,791					224,020	232,701	1,005,454
Project - Total Mined													
Ore (tonne)	46,593	8,178	15,765	99,020	96,042	96,941	68,798	67,540	85,242	88,370	99,213	82,590	854,292
Grade (g/t Au)	3.01	4.46	3.37	4.12	4.55	3.64	2.71	2.87	2.89	2.89	2.80	3.39	3.36
Waste (tonne)	389,661	498,655	449,902	351,359	368,507	367,651	476,609	473,925	443,164	459,099	428,498	462,752	5,169,780
Total Material	436,254	506,834	465,667	450,378	464,549	464,592	545,407	541,465	528,406	547,469	527,711	545,342	6,024,073
Ore Processed	46,593	23,400	88,623	85,765	88,623	85,765	88,623	88,623	85,765	88,623	85,765	88,623	944,793
Grade (g/t Au)	3.01	3.95	2.50	3.28	4.26	3.52	3.00	3.14	2.90	2.89	2.88	3.42	3.19

2008 plant feed is scheduled at 944.8kt at an average grade of 3.19g/t gold. The longer term mine plan calls for an increase in plant feed to 1.5Mt/a.

The planned 2008 site operating costs total $38.80/t of plant feed.

17.2.7 Mine Infrastructure

Explosives Storage and Supply

An explosives storage site has been established next to the Taparko pits within sight of the main entrance security gate. It is comprised of emulsion storage tanks, two magazines, and an office/maintenance building.

Bulk emulsion explosive, delivered by a contractor truck, has been used exclusively for blasting. The explosives are supplied by African Explosives Ghana Limited (“AEL”). The emulsion is shipped before it is sensitized by “gassing” and it is therefore not classified as an explosive during transport.

Maintenance Shop

A maintenance shop with a truck maintenance bay equipped with an overhead hoist supports the mobile equipment. The building includes a machine shop and an electrical shop. Due to the open construction of the shop, dust can be a problem at times.

SOMITA uses the Caterpillar MCS program (Maintenance Control System) that tracks all the repairs, parts, labour hours, costs, operating hours and availability of each piece of equipment. Equipment operators report any problems encountered with the equipment. Using this information, the preventative maintenance program is scheduled.

At every oil change, a sample is taken and sent to the on site laboratory for an analysis in order to check for any contamination and to record other parameters.

The official representative of Caterpillar in the country is Burkina Equipment. They provide parts and service, and technical assistance whenever it’s needed. SOMITA’s strategy in 2008 is to develop closer relationships with North American suppliers to take advantage of the lower US dollar.

17.3 Recoverability

17.3.1 Metallurgical Testwork Results

Metallurgical test work to date on samples from the Taparko-Bouroum gold deposits in NE Burkina Faso showed the following:

- Ores are free milling (i.e. non refractory) with good gravity recovery potential. Reagent requirements are low;

- A high proportion of the contained gold (15 to 20 percent) is directly recoverable by gravity. There is no significant difference in the gold recovery from the sulphide and oxide composites using the Falcon test unit;
- Including carbon during leach tests has some effect on gold recovery. The oxide and sulphide samples do not contain significant levels of preg-robbing components, however there is certainly enough preg-robbing material present to warrant the CIL configuration of the leach circuit;
- Bottle roll leach extraction improves with finer grind. A grind size of 80 percent -75 microns is optimum;
- Cyanide addition to leach of 0.65 kg/t is required. A satisfactory residual cyanide concentration was achieved in all tests. Increasing the cyanide addition up to 3 kg/t does not significantly change recovery but dramatically increases operating cost;
- Leach kinetics for gold dissolution is initially rapid with a long slow leaching tail for all three ore types. A slight improvement in recovery is experienced when carbon is included in the leach;
- Oxygen demand for Saprolite, Saprock and Sulphide ores is relatively low;
- No significant difference in viscosity between sulphide and oxide ores. Increasing pH or the slurry percent solids in the material increased the slurry viscosity. The slurry viscosities are within the normal range for milled gold ores of this type and are not expected to cause problems during normal processing;
- Carbon adsorption equilibrium and kinetics tests indicate that no components of the materials adversely affect either the kinetics of gold adsorption onto carbon or the adsorbed gold loading. All assays for leach products reconciled well. Assayed and calculated head values were found to be very close (100 percent +-1 percent) providing strong accountability for the testwork data;
- The recommended flocculant and dosages for ore types at elevated pH is Magnafloc 10. Consumption was optimized at 30g/t. If processed unblended, Saprock material may require the addition of a coagulant if clarities greater than index 27 are required on the return process water stream;
- Sulphide material has moderately high Bond Rod and Ball work indices, as does the Saprock Oxide material, while the Saprolite material exhibits low comminution WI's;
- The Quartz material is quite hard with a high resistance to static breakage (UCS), while the Sulphide material is relatively soft under static load relative to the Saprock material;
- From the Bond Ball work index determinations, the quartz and sulphide materials have a higher energy demand during ball milling, while the Saprock material has an average energy demand during ball milling. The balance of the oxide (Saprolite) materials all have relatively low energy demands during ball milling, with the exception of the Saprolite GT material which demonstrates energy demands on a par with the Saprock material and higher than some of the Bouroum material tested in the pre-feasibility stage of the project;

- From the Bond Rod work index determinations, the sulphide composite is relatively tough to grind at a coarse size, while the Saprock composite is easier to grind at the coarser size;
- Quartz material is very abrasive, while the Saprock material demonstrates much lower abrasiveness at an index almost half that of quartz and on average 0.2 Ai lower than the sulphide material. In the event of undiluted sulphide being processed through the plant, grinding media and liner consumptions can be expected to be higher than when oxide ore is being fed. Previous test work on Bouroum ore indicated an average abrasion index of 0.24, which is significantly lower than that resulting from the Main Taparko test work;
- Taparko Variability composites demonstrated a lower amenability to gravity recovery than the Main composites. Average recoveries were 12.1 percent compared to an average of 22.7 percent recovery for the Main composites;
- Bouroum Variability composites demonstrated amenability to gravity recovery with an average recovery of 18.2 percent. Recoveries did however vary considerably with the zone that the composite was drawn from. WS Oxide (32.4 percent) and Bissinga (Sulphide (35.9 percent) gave the best results while the WS Sulphide (1.0 percent) and the Bissinga Oxide (2.0 percent) gave the poorest results;
- Taparko Variability leach tests averaged 90.8 percent with a total recovery of 91.9 percent;
- Bouroum Variability leach tests averaged 94.3 percent with a recovery of 95.6 percent in total;
- Variability viscosities for both the Taparko and Bouroum material rendered typical results with highest viscosities evident for the Bouroum Oxide material. Values of 20 Mpa were recorded for Saprolite ore at 50 percent solids (w/w) and an elevated pH of 10.5;
- Bouroum Variability comminution work presented typical results with BWI's for both Rod and Ball mill tests lower than the Taparko material (Main and Variable test work).

Test work has shown some variability in results from the satellite ore material. These variances are relatively low and all of the material is amenable to the proposed plant design.

17.3.2 Ore Characterization

The Taparko Bouroum Project is a combination of a lower-grade/medium volume (Taparko) ore body and a high grade/low volume (Bouroum) ore body. The ore does not exhibit refractory characteristics. Visible gold occurs statistically in all lithologies, and gold analytical grades range occasionally owing to a strong nugget effect. The historical testwork has shown the Taparko and Bouroum ore to be free milling (i.e. non refractory) and have high gravity recovery potential. Reagent requirements are typical. The plant design is based on the metallurgical testwork summarized below:

- Head assays are reasonably constant, despite the presence of considerable coarse gold particles
- Gravity gold recovery tests show a reasonable proportion of the contained gold (15 to 25 percent) is directly recoverable as concentrate by gravity processes. Higher recovery to gravity concentrate is feasible depending on the degree of concentrate cleaning
- Carbon preg-robbing tests show that some of the oxide (Saprock) and Sulphide samples contain some graphitic preg-robbing components. These test results emphasize the requirement for a Carbon-In-Leach (CIL) configuration in the leach section of the plant
- Grind sensitivity tests show that leach extraction improves with finer grind; to a grind size of 80 percent -75 microns;
- Average cyanide addition to leach of 0.65 kg/t (as 100 percent NaCN) is required;
- Lime addition to leach of <1.5 kg/t (as 100 percent CaO) is required;
- Leach kinetics show gold dissolution is initially rapid with time. Leaching tail for Saprolite, Saprock and Sulphide ores demonstrates a diminishing return for installed residence capacity exceeding 24 hrs.
- •A slight improvement (1 to 2 percent) in recovery is experienced when carbon is included in the leach;
- Oxygen demand is moderate;
- The slurry viscosities are low to moderate at a shear rate of 130 m/s. Results are well within the normal range for milled gold ores of this type;
- Carbon adsorption equilibrium and kinetics tests indicate that no components of the ores adversely affect either the kinetics of gold adsorption onto carbon or the adsorbed gold loading to any significant extent;
- Flocculants were screened for settlement testing. Magnafloc 10 was selected for optimization tests. At a feed percentage of solids by weight of 15 percent this flocculant rendered high settlement rates (+20m/hr). Based on this testwork consumption is expected to be approximately 30g/t for the oxide composites tested and 20g/t for

sulphide. Good overflow clarities were achieved at moderate flocculant doses;

- Comminution characterization 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 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.
-

17.3.3 Plant Flowsheet

The processing plant flowsheet comprises 9 main circuits: Three stage crushing and stockpiling for hard saprock and oxides ores, breaker crushing for soft saprolite oxide ores, ball mill grinding, gravity, CIL, acid wash and elution, carbon regeneration and gold recovery. The tailings are thickened and sent to the tailings storage facility for disposal.

Ore from the mine is stockpiled on a large pad high above the crushing equipment. A gabian wall separates the stockpile from the crushing equipment and the feed is added to the crushing circuit feed bins from this upper level.

Two ore receiving and crushing modules operate in parallel for hard and soft ores as noted above. For the soft ore system, saprolite oxide ore is delivered by truck or wheel loader to a feed/surge bin. An apron feeder delivers the soft ore to a tooth roll breaker and from there it falls directly onto the ball mill feed belt. This belt passes underneath the hard ore stockpile and 3 vibrating feeders are available to add hard ore to the belt, on top of the soft ore already there.

Hard saprock and sulphide ore is delivered by truck or wheel loader to a second receiving bin equipped with a grizzly and rockbreaker to handle this hard ore. An apron feeder withdraws the ore from the receiving bin and discharges it to a second grizzly with 100 millimetre bar spacing. Oversize material then discharges to the primary jaw crusher, where it is reduced to approximately 80 percent minus 130 millimetres by setting the jaw crusher closed side setting at 125 millimetres.

Crushed ore, grizzly fines and cleanup from the hard ore apron feeder are conveyed to a double deck vibrating screen equipped with 40 and 12 millimetre wire mesh decks. The +40 millimetre ore is conveyed to a secondary standard cone crusher feed bin while the +12 millimetre fraction is conveyed to a tertiary shorthead cone crusher feed bin. Minus 12 millimetres ore from the double deck screen falls as finished product onto the stockpile feed conveyor.

The secondary and tertiary crusher feed bins are provided with vibrating discharge feeders to feed the ore directly to the secondary and tertiary crushers respectively. These crushers are set at closed side settings of 19 and 12 millimetres respectively for the secondary and tertiary crushers. Crushed ore from both cone crushers is collected on a crushed product belt conveyor and delivered to a single stage vibrating screen for final classification. Screen oversize is conveyed (with the +12 millimetre material from the double deck screen) to the tertiary crusher feed bin while minus 12 millimetre material is added to the stockpile feed conveyor as final product for ball mill feed.

Ore reclaimed from the crushed ore stockpile (and soft ore) is delivered to the primary ball mill by the ball mill feed conveyor. Dry hydrated lime is added to this conveyor from a lime storage silo equipped with a vibrating cone discharger and a rotary metering valve. The lime silo is replenished with lime from big bags that are added to a receiving hopper equipped with a pneumatic conveyor, which is located near the lime silo for convenience.

Ball mill inlet dilution water is added to the mill feed chute to control mill slurry density. The fixed speed ball mill discharges the resultant slurry via a trommel screen into a splitter box. Oversize from the trommel, drops into a bunker for removal by a Caterpillar 966 wheeled front end loader. From the mill sump, slurry is pumped by two variable speed pumps (one operating and one spare via a Tech Taylor valve) to the mill cyclone cluster for size classification.

At the cyclone cluster, coarse particles pass through the cyclone underflow spigots as dense slurry and gravitate to a 2-way splitter. The primary outlet of the splitter diverts cyclone underflow slurry to the ball mill for further grinding. The secondary outlet of the splitter delivers slurry to the gravity circuit. Fine solids pass through the cyclone overflow as a diluted slurry. The mill product slurry passes through a sample box, to allow a reliable manually taken representative slurry sample to be taken, and then flows by gravity to a linear trash screen on its way to the first CIL leach tank.

The secondary bleed stream flows by gravity from the cyclone underflow splitter to the gravity circuit adjacent to the gold room for gravity gold recovery. This secondary bleed stream feeds a gravity-scalping screen to remove coarse particles (+2 millimetres) that are returned to the ball mill feed chute. The fine slurry from the screen underflow then flows by gravity to a Knelson centrifugal concentrator for recovery of free gold. Concentrate from the Knelson concentrator is discharged to a concentrate tank and is fed in batches to a shaking table to remove barren guange particles to produce the final gravity gold concentrate. Dilute gravity concentrator tails from the Knelson and table return to the mill discharge pump box by gravity.

The overflow from the mill cyclone cluster passes over a linear trash screen and the underflow is sent to the leach section for cyanidation. Slurry enters the first leach tank where cyanide and oxygen (as compressed air) are added. Slurry overflows from the first agitated leach tank and flows through 5 subsequent agitated CIL tanks. Compressed air is added to the leach tank and also the first two CIL tanks.

Slurry outflow from the last CIL tank is sent to the tailings two stage safety screen for removal of fine abraded carbon (or coarse carbon that has passed through a worn hole in the last CIL in-tank screen) and the slurry sent to the tailings thickener tank. Carbon recovered from the linear safety screen is re-screened to recover any liquid to reduce soluble losses, and then collected in big burlap bags (to promote good drainage) for further treatment at a smelter to recover residual gold and silver values. A tower crane is located over the CIL area for maintenance purposes.

Carbon in the CIL circuit is moved counter current to the slurry flow in the CIL tanks and is removed at the first stage CIL tank and pumped to the loaded carbon screen for removal of slurry. Loaded carbon reports to the elution plant. The loaded carbon is first stored in an acid wash tank and when a batch has accumulated it is washed with dilute hydrochloric acid to remove scale.

Acid washed carbon is rinsed and dropped into the elution column and eluted by pumping hot caustic cyanide solution through the column at 130^{o}C under pressure (300 to 350 kPa). Gold is stripped from the carbon and collected in the eluate solution which is sent to the gold electrowinning recovery circuit in the gold room. Stripped carbon is sent for regeneration in a diesel fired rotary kiln and subsequently back to the CIL circuit for reuse.

Gold is removed from the pregnant eluate in electrowinning cells by plating the gold on stainless steel cathodes. The cathodes when removed, are washed, and along with the gravity concentrate, placed in a diesel fired furnace for drying and calcining at 800^{o}C. The calcine is then smelted into gold doré in a diesel fired furnace. The molten furnace charge is poured into moulds and allowed to cool. Doré bars are placed in a secure gold storage room. Slag from this smelting operation is returned manually to the ball mill feed. The gold storage room has restricted access and is adjacent to a separate clean and dirty dry facility.

A smaller maintenance shop and plant warehouse is located inside the processing plant area to service the plant. The processing plant facilities are configured to minimize the personnel travel into and out of the facility.

17.3.4 Process Plant Manpower

The processing plant operating, assay laboratory and maintenance manpower complement totals 119 employees. This includes expatriates, supervision, operators, and labourers.

17.3.5 Metallurgical Recovery

Forecast gold recoveries used in LoM plan for both Taparko and Bouroum ores are shown in Table 17-8.

Taparko and Bouroum have the same planned recoveries in the LoM plan.

Table 17-8: Processing Plant Gold Recoveries (%).

Material	2008	2009 and Forward
Oxide (soft)	95.1	97.0
Transition	95.1	97.0
Sulphide (hard)	92.4	93.8

SRK has reviewed the planned recoveries in the table and compared the data given with original data from leaching test work in the MDM Feasibility Study Report, with recovery forecasts presented in the June 2004 43-101 F1 Technical Report, and with the current LoM plan. It is noted that the previous forecast table in the June 2004 Technical Report did fairly represent the test work results.

Bouroum ore on average yields about 3 percent lower recoveries than Taparko ore and it appears that this difference may not be accounted for in the LoM plan. Since Bouroum ore is less than 10 percent of mill feed overall, the impact on overall recovery would be less than 0.3 percent.

SRK concludes that the present LoM plan recovery of 94.9 percent could be slightly over estimated. LoM plan recoveries are predicated on achieving a grind of 80 percent passing 75 microns (or 200 mesh) to the leach circuit.

17.3.6 Plant Facilities

The processing plant area is surrounded by a high security double fence with access to the area controlled through a security building.

A plant workshop provides all mechanical, electrical and instrumentation needs of the processing plant. The building is located such that employees do not leave the high security area to perform any of their daily duties.

The assay laboratory is used to analyse samples from the exploration group, mine and processing plant. The laboratory employs all standard gold analysis methods with atomic adsorption spectography (AAS) finishing and fire assaying. Other areas of the laboratory include: sample prep area, wet chemical facilities and fire assay room, storeroom and offices.

17.3.7 Tailings Storage Facility

The Taparko tailings facility was designed by Environmental, Civil and Mining Projects (Pty) Ltd. (“ECMP”). The design is described in their October 2005 report, “Final Design Report for Taparko Tailings Storage”.

ECMP has also prepared a manual for the facility, “SOMITA Tailings Dam Operating and Maintenance Manual”, dated July 2007. Refer to the References section.

The following report section is based on information obtained from these two documents.

The tailings storage facility was based on the following criteria:

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

The ECMP study did not include site selection or the consideration of potential contaminant leakage, which was excluded from the brief by High River Gold.

The geotechnical investigation was carried out by B.E.M. of Ouagadougou. In general, the founding conditions are competent, with a surface layer of lateritic soils or laterite overlying residual saprolite.

The tailings containment area, 200 metres south of the plant area, has a total area of 90 hectares ("ha") including embankments, and the maximum final height of the outer embankment will be 20.0 metres. Tailings deposition is from pipes at ±150 metre centres around the perimeter of the facility, and water is being decanted by a vertical penstock discharging to a return water dam for recycling to the plant.

The area will be developed in two phases. Initially, the western area of approximately 43 ha is being utilized in Phase 1 and, after 1.5 years, the facility will be extended to the full deposition area of 72 ha during Phase 2.

At the time of SRK's site visit (January 2008), Phase I of the tailings management facility was operational and expected to provide about 1.5 years of storage. Construction work was taking place on Phase II of the tailings facility which is expected to come on line during 2009.

It is planned that the outer embankment will be raised in three stages. In Phase 1, for the 43 ha area, the maximum embankment height is7.5 metres. In the subsequent two raises, when the facility is extended to an area of 90 ha for Phase 2, the height will be raised by a further 5 metres after 1.5 years, and a further 7m after 4.0 years, to a final height of 19.5 metres (305 metre elevation).

It is intended that the first raise at year 1.5 will be a downstream raise formed by mechanical means using suitable material obtained from an active open pit or other borrow area. If there has been sufficient consolidation of the tailings, the final raise will be upstream, with a considerable saving in earthworks volumes.

The containment is lined with a 1.0 millimetre HDPE membrane, and this liner is being extended during the construction of the Phase 2 extension. It will not be extended further up the embankments for the final raise.

An underdrainage system consisting of composite slope drains and blanket drains has been placed on the membrane to reduce pore pressures within the tailings and to encourage settlement. These drains have been covered with a layer of washed river sand, and they discharge to outlet pipes through the outer embankment. In addition, a vertical penstock that can be raised by adding circular rings is used to decant off the pooled water in the facility.

A return water pond adjacent to the tailings deposition area collects the operation and rainwater decanted off the surface of the tailings dam as well as the seepage water from the underdrainage system. The water within the pond is then returned to the plant for re-use. The tailings storage facility has been designed for zero discharge to the surrounding environment and the return water pond has sufficient capacity to prevent spillage after a 1 in 100 year storm. Clean surface run-off from the surrounding area is prevented from entering the tailings area by diversion trenches.

Thickened plant tailings are delivered to the tailings dam by a 200 millimetre HDPE pipeline from the process plant thickener underflow pumps. Tailings deposition is carried out from the perimeter of the facility such that the beach grades towards the penstock intake. The main objective is to ensure that the pool area is maintained around the penstock intake with a depth just sufficient to ensure adequate clarity of the penstock discharge water.

Five levels of inspections are planned and being conducted; daily, weekly, monthly, quarterly, annually. For the annual inspection, a Professional Tailings Engineer will conduct a thorough inspection of the facility. In addition, the Mine Manager may appoint an independent competent person to undertake an audit of the facility if and when required.

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.

17.4 Taparko Site Infrastructure

The Taparko site support facilities and buildings are centrally located adjacent to the processing plant site (including assay laboratory) but outside of the high security fenced area. All operations and support staff are located in a single administration building with other support facilities located in the same general area. Infrastructure and support facilities are described below.

17.4.1 Site Access and Security

A 5 kilometre main access road runs from the National Road to the plant site. From the Taparko site to Bouroum, a 45 kilometre public road exists.

A main gate at the security building controls the entry and exit of personnel and vehicle traffic at the site. All visitors to the mine complex must report to this security gate for authorization before entry. Personal protective equipment is issued at the security building.

The security group is headed by a SOMITA SA employee supervising contracted security personnel from an Ouagadougou security firm.

17.4.2 General and Administration

G&A Building

The administration building is located on the north western side of the processing plant, outside of the processing plant high security area. Office areas are provided for engineering, geology, safety and administration personnel.

G&A Services

General services provide managerial, accounting, procurement, warehousing and personnel related functions for the mine. They also oversee permits, licences and insurance related matters.

17.4.3 Water Supply

The processing plant water is supplied by a floating pump station in a water storage dam (maximum capacity of 1.3 million cubic metres), located four kilometres east of the processing plant. A 400 millimetre pipeline from a pump station located at the Yalogo reservoir, approximately nine kilometres away, supplies this storage dam.

The designated pumping period from the Yalogo Reservoir extends for six months from June until mid-October each year, corresponding to the rainy season.

Approximately 70 to 80 percent of the fresh water needs of the processing plant are covered by the dam capacity with the remaining amount is reclaimed from the tailings storage facility return water pond.

17.4.4 Electrical Power Supply

The Taparko and Bouroum property power supplies are based on diesel generated power with generators located at each property.

At the Taparko site, the power plant is comprised of two power houses, an office, fuel depot and heavy fuel treatment plant. Two types of diesel generators are installed providing a nominal 10MVA of power. Normal operations require 4,400kW, while standby time when the mill is not operating requires 1,000kW. The two types of diesel generators are:

- Three each Cat 3516 diesel generators rated at 1,500kW each using diesel fuel. These units are quickly responsive to changes in power load;
- Two each Cat 6CM32C diesel & HFO (Heavy fuel oils) generators rated at 2,760kW .

Fuels are purchased at market prices, there are no long term contracts. During normal operations the two 6CM32C's will carry the load. They are more economic to operate. At the time of the site visit, these units had not yet been commissioned on the heavy fuel oil. This is planned early in 2008.

At Bouroum a 300 kW diesel generator will meet all power requirements (offices, camp, pumping etc.) on the property. Power will be distributed on the site using 11 kV/50Hz overhead power cables. Secondary power distribution will use 415 V/50Hz or 220 V systems.

17.4.5 Fuel Storage

The fuel and lubrication storage and distribution facility consists of two six hundred thousand litre tanks, one for the generators and one for mining equipment. One of these tanks transfers HFO to a 5,500 litre day tank which supplies fuel to the power plant.

A 20,000 litre waste oil storage tank is located near the maintenance facility. New lubricants are stored in drums.

17.4.6 Warehouse

The warehouse, located next to the maintenance shop, receives all mine supplies for distribution or storage in inventory. The building provides office space for warehouse, purchasing and customs personnel as well as maintenance and workshop staff.

17.4.7 Camp Facility

The camp is located 2.5 kilometres east of the processing plant area. It includes accommodations, catering, dining, recreational facilities, laundry facilities and telephone and internet communications.

The non labourer personnel are referred to as nationals. All management expatriates and nationals stay in the mine camp while the local area employees are bussed to and from work on a daily basis.

Nationals sleeping quarters consist of single rooms of 6 square metres, grouped into blocks of 10 rooms each with 13 units total. A total of 10 units for staff sleeping quarters are comprised of 2 single rooms, each of 11.2 square metres, connected to a shared washroom facility. Managers and department heads' sleeping quarters (28 units) consist of single room flatlets of 20 square metres each with their own washroom. The General Manager's accommodation consists of a separate 2 bedroom house.

The camp kitchen and catering facilities, operated by a catering contractor, feed all personnel providing three meals per day. The dining facilities can seat 100 people at a time.

Other facilities include offices for camp staff, separate washroom facilities for kitchen staff and a small commissary/shop for employees to buy personal items.

Recreational facilities for use in off shift hours include a bar, games area, open veranda with seating and tables, and washrooms for both men and women.

17.4.8 Telecommunications

Site communications use a microwave link to the ONATEL (Burkina Faso government service) communications tower located near the property and internet is by satellite. On site telephone and computers are located within the administration complex and other office facilities. The camp area is also provided with limited telephone service for Burkina Faso nationals to make telephone calls. The Bouroum site will be connected to the Taparko site with a wireless long distance connection to facilitate telephone and data systems at Bouroum.

17.4.9 Sanitary Landfill

The domestic garbage sanitary landfill site is approximately 400 metres west of the main entrance and adjacent to the tailings storage area. With dimensions of 200 by 100 metres, it has enough storage space for the projected 8 year mine life. Bouroum garbage will be trucked to the Taparko landfill for disposal. The domestic waste is being dumped and compacted in cells to allow continuous closure of the facility.

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 stormwater 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 facility.

17.5 Off-Site Infrastructure

17.5.1 Planned Bouroum Site Infrastructure

Introduction

Located 49 kilometres northwest of the Taparko site, the Bouroum Project consists of three planned open pits: Bissinga, Welcome Stranger and F12. Welcome Stranger and F12 pits are located in the same area, side by side, while Bissinga pit is situated 5.6 kilometres to the southeast.

The total ore reserves at Bouroum are estimated at 800.5 kilotonnes, not justifying construction of a separate process plant. It is planned to process Bouroum ore at the Taparko treatment plant.

The SOMITA SA 2008 budget plan includes the start up of mining at the Bouroum site. Bissinga pit is scheduled to start in March followed by Zone F12 pit in November.

Two ore stockpile sites will be prepared. One for Bissinga pit and one for F12 and Welcome Stranger pits. A contractor will load and haul ore from the ore stockpile sites to the Taparko RoM pad. The contractor will work on a per tonne basis and will be responsible for road maintenance.

Planned Facilities

At the time of the site visit in early January, 2008 work had not yet been started on preparing access roads to the Bouroum site or on construction of the Bouroum mining infrastructure. The following paragraphs describe the planned Bouroum facilities

An operations camp will be built on site, close to the F12 and Welcome Stranger site. The camp will be mainly built with recovered material from the Taparko exploration/temporary camp. The camp, comprised of living quarters, offices and a workshop will be surrounded by a 1.5 metre high fence.

Accommodation for 26 persons will be provided, using the mobile folding units previously used at the Taparko temporary camp. The units will be un-mounted and folded before being transported to Bouroum.

Lavatories and showers will be located in two existing modified containers that are currently located at the Taparko temporary camp, ready for transport to the Bouroum site. A kitchen and a dining room will be built out of cement blocks on a concrete pad.

Power will be provided by a 110 kVA containerized genset that was used at Taparko temporary camp.

A drilled borehole will provide potable water for camp. A borehole pump will fill up a water tower located on a hill beside the camp, which will provide pressurized water.

For treatment of waste water, a sceptic tank and drainfield system will be put in place.

Maintenance facilities from the Taparko temporary camp will be dismantled, transported to Bouroum and reassembled. The facilities consist of three containers under a light plate roof. Two 12 metre containers for parts storage will be installed beside the maintenance shop.

Offices will consist of two customized containers. One existing modified container is located at the Taparko temporary camp, while the second unit requires modifications.

A 50 m^3 diesel tank will be installed just outside camp.

Operating Plan

Bissinga pit will be operated without any site camp in place and only during the dry season. Pit operations will be supported directly from the Taparko facilities, with workers being transported from Taparko to Bouroum at the beginning of every shift. Bissinga pit will essentially be mined only during the dry season

The mining of F12 and Welcome Stranger pits will start only after completion of the operations camp described above. Both pits will be operated at same time. During the dry season, in-pit sumps will be created by benching down below the main working bench elevation. Flyght pumps will be installed in these sumps for the rainy season.

Mining equipment for Bouroum will be moved from the Taparko operations and will consist of 1- Cat 385 excavator, 1- Cat D9 track dozer, 3 - Cat 773 trucks, 1- Pantera 1500 production drill, and 1- maintenance truck.

Manpower will also be relocated from the Taparko site, comprised of 26 personnel covering the functions of mine supervision, mine operations, maintenance and technical support.

Bouroum Capital Budget

The capital budget for setting up the Bouroum operations includes access roads, site earthworks, the operations camp facilities and support services, and construction labour. As discussed above, many components of the planned facilities will simply be moved from the Taparko site. Refer to report section 17.9.7 Capital Budget.

17.5.2 Ouagadougou Office

The Ouagadougou office in the capital city of Burkina Faso is shared with the High River Gold Exploration subsidiary. This office has staff to manage and oversee government affairs, customs, travel, local suppliers.

17.6 Markets

Somita has entered into a refining contract with Metalor of Switzerland. The contract is for a complete pick-up and refining service for the gold. Once the gold leaves the Taparko mine gold room, Metalor becomes fully responsible for the gold. To that effect they have sub-contracted a security company from South Africa, G4S, to carry the gold. In Burkina Faso, G4S uses a local security company called SAGAM.

The gold leaves the Taparko site every 2 weeks. A typical shipment weight of gold bars would be 120 kilograms. Air France carries the gold to Geneva via Paris. Metalor refines the gold bars and confirms the gold content.

The gold is sold to Standard Bank of South Africa. The selling price is determined by the HRG Toronto office and is usually the London Afternoon Gold Fix price of the Geneva arrival day.

17.7 Contracts

Table 17-9 is a summary of the contractors working for SOMITA SA that support the ongoing operations. The table excludes contractors that are involved in final stages of project construction, such as the contractors working on Phase II of the tailings storage facility.

Table 17-9: SOMITA SA Contractors for Operations

Company	Description	Relevant Details
ATS	Camp and Catering	Based on an occupation of 125 persons/day. Includes meals, accommodation and housekeeping.
BSP/SGS	Site Security	Includes 96 security guards for the Taparko and Bouroum sites and the exploration prospect.
PSS	Power Plant Maintenance	Includes a fixed cost per month for contractors and their vehicle.
AEL	Explosives Loading	Includes a fixed charge per month and unit price for explosives and accessories.
OA	Employee Transportation	Includes 4 buses for employee transport.
ABILAB	Mill Laboratory	Includes a fixed charge per month and unit price per sample as per the contract.
GE.CA.U.MINE SA	Bouroum Ore Transport	Includes the ore transport between Bouroum and Taparko including loading, hauling and road maintenance.

SRK did not review the details of these contracts.

17.8 Environmental

17.8.1 Conditions of Obtaining the License of Exploitation

In Burkina Faso, mining activities are governed by a mining code. The code regulates the exploitation of the area's natural resources by enforcing that, prior to their exploitation, a license be obtained from the Burkina Faso Ministry of Mines permitting such activity. In order to obtain an exploitation license, 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 results of the feasibility study are then presented to the population that is local to the affected area. This is done though a series of public announcements after which feedback from the public is gathered. Exploitation licenses are granted by the government to the applicant only after the attainment of favourable feedback from the local population is achieved.

A full environmental feasibility study was completed on the project in October 2003 by Roche Ltee, Quebec, Canada with the assistance of various sub consultants from Burkina Faso. The identification and evaluation of the environmental impacts was done in accordance with the standards of the African Development Bank (Manual # BAD 2001) and those of the World Bank (Manual # BM 1999). The project aimed to meet the highest standards of Canadian, Burkina Faso and World Bank norms.

SOMITA SA (HRG) has been through the stages outlined above and is now a legal holder of the property, Taparko/Bouroum.

17.8.2 Environmental Policy at SOMITA SA

Concern for the environment is of major importance at SOMITA SA and as such, senior management at SOMITA has made environmental protection a priority.

The environmental policy of SOMITA SA is articulated around four principal objectives:

- Sustainable development;
- Prevention of environmental risks;
- Sensitization and dialogue with the local populations;
- The installation of procedures and practices in order to minimize the impacts of mining operations on the environment.

Sustainable Development

SOMITA SA intends to promote the sustainable development of the environmental resources surrounding the Taparko/Bouroum property.

Sustainable development will be achieved by employing mining methods for the short, medium and long-term that will not deteriorate the resources to such an extent that they are ruined for the present local populations or for future generations.

Communication with Local Populations

Understanding the fact that mining has a significant impact on the world around it, both environmental and human in scope, SOMITA SA has chosen a policy of sensitization and dialogue in interacting with populations local to its projects. The objective here is to establish a relationship with those populations in order to promote the open communication between them and SOMITA. It is crucial that SOMITA understands the concerns of local populations and also that they communicate their objectives to those populations. This process makes it possible to develop effective solutions to problems.

Procedures and Practices that Minimize Environmental Impacts of Mining Activities

SOMITA's goal is, in any situation, to leave a site with the least environmental impact possible. In order to achieve this, SOMITA has set up the following procedures and practices to lessen the toll of the mining operations undertaken throughout:

- The completion of a full mine closure plan;
- The strict application of the attenuation measurements suggested at the time of the environmental feasibility study;
- The development of a coherent plan of follow-up and environmental management;
- The initiation of the all personnel involved in the mining operations to the good environmental practices and the primary importance of environment protection throughout;
- The identification, evaluation and management of all environmental risks posed by mining operations identify;
- The proper management of incidents.

The Mine Closure Plan

At the end of the period of exploitation, rehabilitation of the following units will be undertaken:

- Buildings and constructions;
- Waste rock storage areas;
- Open pits;
- Ore stockpile areas;
- Water pumping stations and piping;
- Electrical systems and telephone networks;
- The oil and chemicals products storage depot;
- The tailings storage facility;
- The camp facilities;
- Site roads;
- All temporary installations.

Follow-Up and Environmental Management Plan

SOMITA SA has developed a follow-up plan for the continuing environmental management (PSGE) of the Taparko/Bouroum project in which the attenuation measures of the negative impacts of the project will be managed. The PSGE is a document that guides all of SOMITA's actions with regard to the management of the environment, and its objective is to provide all relevant information to facilitate this. The PSGE is primarily made up of following elements:

- An action plan aiming at setting measurements to attenuate any negative impacts and to optimize any positive impacts, including making a list of the activities to be realized, a charter of the responsibilities, a calendar and a budget;
- A sampling schedule of the quality of air, water, sediments and grounds;
- A collection of the standards and criteria retained for the follow-up and the management of the environment on site.

Within the framework of the above environmental follow-up, 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.

Sampling Water Wells

Water samples taken from four of SOMITA's water wells and those from the village of Taparko will be analyzed every two months by external laboratories. Three wells will be randomly selected from a total of nine (9) at Taparko.

The analysis of the area's water will consist of the measurement of its microbial, physical and chemical contents. The results of this analysis will then be held up to and compared against the standards established and enforced by the l'Organisation Mondiale de la Santé (OMS). Conducting these regular analyses will make it possible to detect, at an early stage, any anomaly in the composition of the water. If the analyzed levels of physical or chemical contents of the water exceed the standard established by the OMS or if the presence of microbial germs is detected, measures will be taken to resolve the problem before the water can be consumed.

During the last year, the results of the water analysis for observed wells revealed that the water was generally in conformity with the standards set by the OMS. This is true for all months except September 2007, where coliforms were identified in five (5) of the wells. The environment service at SOMITA, with the support of agents of the Burkina Faso National Office of Water and Cleansing (ONEA) carried out a decontamination of the affected wells through the injection of chlorine pastilles into the water to neutralize the coliforms. The operation was successful and analyses carried out after the intervention revealed the total absence of coliforms.

As a cautionary measure in preventing the future occurrence of coliforms, it was decided that going forward, all water wells and reservoirs would be routinely treated by the injection of chlorine pastilles. Note that this phenomenon was identified at the feasibility stage.

Acid Mine Drainage

During the environmental feasibility study, 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 potential for acid generation. The sulphide contents are so small here that the phenomenon of acid mining drainage could not be significant.

In the Bouroum sector, the sulphurous waste rock of deposit F12, Bissinga and Welcome Stranger do not show the potential for acid mine drainage. In order to monitor this potential, SOMITA chose to regularly sample the waste rock for the potential of acid generation during the life of mine.

In following, the first analyses were carried out this past year.

With regard to the probability of acid mine drainage, the results showed that it is almost nil. This is illustrated below in Table 17-10.

Table 17-10: Results of Analysis for the Determination of the Potential of Acid Generation.

Sample	S_{total} (%)	$S_{sulfates}$ (%)	$S_{sulfures}$ (%)	PA (%)
ENVI 01	0,004	0,004	0,000	0,000
ENVI 02	0,003	0,004	0,000	0,000
ENVI 03	0,017	0,004	0,013	0,004
ENVI 04	0,003	0,004	0,000	0,000
ENVI 05	0,005	0,003	0,002	0,001
ENVI 06	0,006	0,007	0,000	0,000
ENVI 07	0,007	0,003	0,004	0,001
ENVI 08	0,004	0,004	0,000	0,000
ENVI 09	0,003	0,003	0,000	0,000
ENVI 10	0,004	0,004	0,000	0,000

Note: Pa = potential of acid generation

Emergency Measures Plan

The emergency measures plan identifies all potential major events. For each event, a detailed procedure is outlined stating the different steps to be followed in order to control /correct the situation. In the event of a particular environmental incident, a series of procedures are available in order to manage it. All of the emergency response measures are specified in the emergency measures plan by a responsibilities chart organized by department.

17.8.3 Environmental Studies

The following is a list of available reports, in addition to the feasibility study:

- Program of follow-up and environmental management (PSGE), study undertaken in August 2005 by GENIVAR in which all the activities on the follow-up and the management of the environment are identified;
- Initial characterization of the grounds and the sediments at the site of Taparko, carried out in October 2006 by GENIVAR. The objective of this study was to determinate the initial state of the environment before the start of mining activities at Taparko and Bouroum;
- Inventory of fauna at the mining sites of Taparko and Bouroum, province of Namentenga prepared in May 2007 by the consultants Blaise Bobodo Sawadogo and André Jean de Dieu Ilboudo in order to identify the various species on the sites;
- Investigation of residences and fields affected by the mining project of Taparko/Bouroum carried out in May 2006. This study was carried out by an engineering department, the Council and Realization for the Management of Environment Company (SOCREGE);
- Taparko/Bouroum project Rehabilitation and Closing plan. This study was carried out in November 2007 by SOCREGE and outlines all the facilities which will be rehabilitated at the end of the mining as well as the costs.

17.8.4 Recovery and Disposal of Contaminated Soils

Recovery Process and Disposal of Contaminated Soils

Procedures were carried out for all environmental incidents, namely the following: The disposal of used oil, the disposal of fuel, and the disposal of grease. The disposed of materials are stored in a designated area and are periodically being recovered by our supplier and transported to Ouagadougou for proper disposal or for recycling.

All accidents involving soil contamination are documented. The material is recovered as soon as possible and disposed of according to all environmental regulations within Burkina Faso.

Vegetation Monitoring

A comprehensive count of all trees according to species was performed prior to the initiation of site construction.

A program is set up to replace all trees cut during construction.

Preventative Measures Taken to Prevent Environmental Risk

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 minimize the degradation of the surrounding natural habitat, vegetation and fauna.

The infrastructure developed is as follows:

- Fuel storage tanks are constructed on a concrete floor, the whole structure being surrounded by a concrete wall to contain any possible fuel discharge;
- The solid waste disposal site is built on a clay layer in which an impermeable geotextile membrane has been installed. The water contained in this disposal site is recovered and pumped in the mill tailings pond;
- The tailings pond is built with an impermeable HDPE membrane. All mining effluents and mill rejects are directed into this basin and then contained within it. All the water from this basin is pumped back to the mill for reuse;
- It is expected that the standards applicable to the mining effluents would be used to evaluate the potential degradation of the environment following an accidental discharge on the surface or an infiltration in the ground water.

17.8.5 Mining Convention

The mining convention between High River Gold (SOMITA) and the state of Burkina Faso specifies that, "High River Gold recognizes that any mining activity is subjected to be a well-known activity which can have effects on the environment and commits to providing an impact study on the environment and a rehabilitation plan of the mining sites." High River Gold and SOMITA will also comply with the obligations envisaged by the environment code and any other applicable regulations.

In the case where the investor (High River Gold) or company (SOMITA) fails in fulfilling their duties concerning the protection of the environment, the State has the right to intervene and act in whatever way it deems necessary in order to rectify the situation. The costs of the operation are the responsibility of the investor (High River Gold) or of the company (SOMITA) in this case, without limitation to the sanctions that could be applied by law (article 29 of the mining convention).

In order to exploit the gold deposits of Taparko and Bouroum, almost 280 hectares of lands will be modified for the construction and the development of zones of waste storage, a tailings pond, a disposal site for non industrial solid waste, a site including the water treatment units and the workshops, pits, a camp for residences, and transport or access roads as well as the electrical and telephone networks.

Resources affected by all of these works should be rehabilitated after mine closure according to regulation. For each one of these components a rehabilitation plan was considered according to the following stages:

- Take the facility out of service;
- Dismantling;
- The rehabilitation.

The rehabilitation plan will be systematically revised every two (2) years and will be used according to the current terms and requirements. The estimated costs of closing and rehabilitation of the Taparko/Bouroum project are $2.24 million including $2.07 million for Taparko and $0.17 million for Bouroum.

The Burkina Faso legislation envisages dispositions in case of stoppage of mining activities and rehabilitation of sites. According to the mining legislation: "Activities governed by the mining code must be managed in order to assure the protection and management of the environment and the rehabilitation of the exploited sites according to the standards, conditions and terms established by the current legislation (article 76 of the mining code).

17.8.6 Mine Closure Plan and Bonding Requirements

The Taparko/Bouroum project rehabilitation and closure plan study was prepared in November 2007 by SOCREGE, an environmental consultancy group in Burkina Faso. The cost for closing and rehabilitation of the project was estimated at $2.24 million.

The Government Decree No. 2007-845 issued December 26, 2007 regulates the bonding requirements.

General Clauses

- An account for the preservation and rehabilitation of the mining environment is opened by the holder of the mining license;
- The account is created in the name of the license holder (Somita);
- The annual contribution into the account is equal to the total cost of closure and rehabilitation divided by the mine life (years);
- The closure cost estimates can be reviewed annually;
- Rehabilitation costs incurred during the life of the mine may be withdrawn from this account, but only with prior authorization of the Ministries of Mines and Environment.

17.9 Taparko - Bouroum Life-of-Mine Plan

17.9.1 Introduction

SOMITA provided SRK with a life-of-mine financial model for review.

The SOMITA LoM Plan as provided to SRK in document “LoM Financial plan.xls”, dated March 12, 2008, is described in the following report sections. The duration of the plan is from January 1, 2008 to mid-2014.

The SOMITA LoM Plan was prepared before results were available from the 2008 pit optimization work reported in section 16.2 of this report.

All LoM plan financial figures are presented in US dollars.

17.9.2 Input Parameters and Assumptions

The SOMITA LoM financial plan is based on the following parameters:

- A gold price of US$800 per ounce;
- An exchange rate of CFA/US of 452;
- 2008 constant US dollars;
- Life-of-mine plant feed of 8,842 kilotonnes at an average grade of 2.82 g/t gold with 801,400 contained gold ounces;
- Of the total plant feed, 8,660 kilotonnes at an average grade of 2.81 g/t gold is from open pit mining and 194 kilotonnes at an average grade of 2.89 g/t gold is from the RoM stockpile;
- A maximum plant feed rate of 1.5 Mt/a attained for 4 years;
- LoM recovered gold ounces of 760,500, implying an average metallurgical recovery of 94.9 percent;
- Estimated LoM average operating costs of $36.03/tonne of plant feed;
- Operating costs reflect the latest SOMITA estimate as provided by the mine, and reviewed by SRK;
- Sustaining capital requirements of $23.2 million. Major items included are Bouroum infrastructure and Taparko plant expansion to 1.5 million tonnes per year;
- The Burkina Faso government interest in Somita SA is 10 percent carried and the US $500k is paid to the government in June 2008.

17.9.3 LoM Plan Summary Results

Table 17-11 provides a summary of the LoM plan physical quantities and financial results.

Table 17-11: Summary of LoM Plan Financial Results

Item	Units	Quantity
Mine Life	year	7
Years		2008 to 2014
Waste Rock Stripping	ktonnes	39,820
Strip Ratio		4.6
Open Pit Production	ktonnes	8,660
	Au g/t	2.82
Plant Feed	ktonnes	8,842
	Au g/t	2.82
	contained oz	801,400
Metallurgical Recovery	%	94.9
Recovered gold ounces	ounce	760,500
Gold Price	US$/ounce	800
Net Revenue	$million	600.0
Operating Costs	$million	320.0
Gross Margin	$million	280.0
Less:		
Profit Taxes,Royalties and Capital Expenditures	$million	54.0
Project Cash Flow	$million	226.0

Note: Project financing costs are excluded from the cash flow.

17.9.4 Sensitivity Analyses

This section presents the results of sensitivity analyses performed on changes to the following financial model inputs:

- Gold price;
- Operating costs;
- Capital costs.

Figure 17-5 shows the sensitivity results. Note that changes to mined gold grade (not shown in the chart) are essentially the same as changes to the gold price. The base case (0 percent change) reflects an LoM cash flow of US$ 226 million at a gold price of US$800 per ounce.

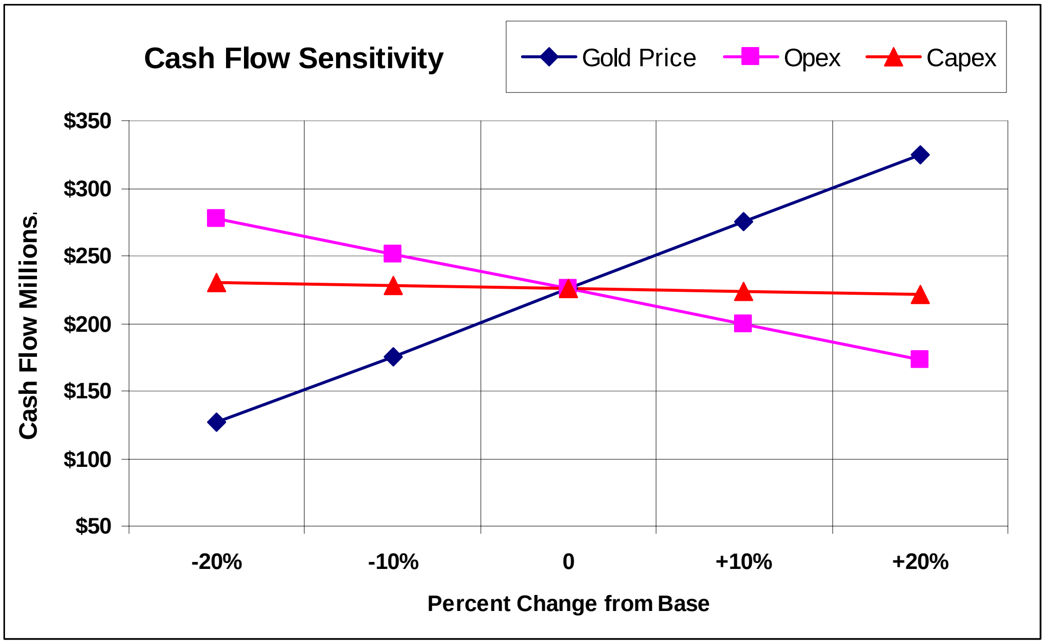


Figure 17-5: Sensitivities – Cash Flow (before loan repayment)

The project results are most sensitive to changes in gold price.

At the time of writing, SRK is using a long term gold price projection of US$650 per ounce for its own in-house technical-economic analyses.

17.9.5 Life of Mine Open Pit Production Plan

Table 17-12 presents a summary of the planned LoM quantities that the financial model is based on, including ore and waste tonnes mined, and ore tonnes and grade mined and processed each year.

Table 17-12: Taparko-Bouroum LoM Production Plan

Year	2008	2009	2010	2011	2012	2013	2014	Total
Taparko - Total Mined								
Ore (ktonne)	733	1,008	1,260	1,279	1,517	1,513	532	7,842
Grade (g/t Au)	2.97	2.75	2.89	3.27	2.24	2.41	2.66	2.71
Waste (tonne)	4,285	5,383	6,035	7,846	5,911	3,796	335	33,591
Total Material (kt)	5,019	6,391	7,295	9,125	7,428	5,309	867	41,434
Bouroum - Total Mined								
Ore (ktonne)	119	238	287	159	0	0	0	804
Grade (g/t Au)	5.60	3.16	3.63	4.08				3.87
Waste (ktonne)	885	2,509	2,401	434	0	0	0	6,229
Total Material (kt)	1,004	2,748	2,688	593	0	0	0	7,033
Project - Total Mined								
Ore (ktonne)	853	1,246	1,547	1,438	1,517	1,513	532	8,647
Grade (g/t Au)	3.33	2.83	3.03	3.36	2.24	2.41	2.66	2.82
Waste (ktonne)	5,170	7,892	8,436	8,279	5,911	3,796	335	39,820
Total Material (kt)	6,023	9,139	9,983	9,718	7,428	5,309	867	48,467
RoM Stockpile								
Ore (ktonne)	91	0	0	0	0	0	103	195
Grade (g/t Au)	1.64	0.00	0.00	0.00	0.00	0.00	3.99	2.89
Ore Milled (kt)	945	1,246	1,547	1,438	1,517	1,513	635	8,842
Grade (g/t Au)	3.19	2.83	3.03	3.35	2.24	2.41	2.88	2.82

The LoM production schedule shows that the grinding mill needed for expansion to 1.5 mtpa of mill capacity must be operating by July 1st 2009. If the required mill (size to be identified by May 1, 2008 from the grinding testwork now in progress) is not available as a used mill, the scheduled increase in tonnage would not be possible until a suitable mill is procured, either used or new. Sourcing of a new mill from non-traditional off-shore manufacturers may need to be looked at in that case.

17.9.6 Operating Costs

Planned Operating Costs

The LoM operating costs are summarized in Table 17-13. These figures are taken from the LoM Financial Plan provided by SOMITA.

Table 17-13: Planned LoM Operating Costs

Area	Cost (US$M)	Unit Costs (US$)	Units
Mining	$120	**$2.47**	per tonne mined
Stockpile	$0.10	$0.51	per tonne handled
Milling	$139	$15.77	per tonne milled
Bouroum Haulage	$4.28	$5.32	per tonne hauled
Mine Admin	$46.20	$5.23	per tonne milled
Management Fee	$8.86	$1.00	per tonne milled
LoM Total	**$320**	**$36.19**	per tonne milled

The milling cost shown includes the site electrical power cost.

The LoM average cash cost per ounce is US$408/recovered ounce. This excludes a management fee shown at $8.9 million included in the planned LoM operating costs.

The Taparko and Bouroum property power supplies are based on diesel generated power with generators located at each property. Diesel fuel and heavy fuel oil are purchased at market prices. Based on prices of $0.90 per litre for diesel fuel and $0.73 per litre for heavy fuel oil, SOMITA estimated a unit power cost of approximately $0.24/kWh. This includes fuels, operating labour, maintenance and some financing costs.

Actual January 2008 Operating Costs

SRK assessed the operating cost achievements of the site for January 2008, based on a review of the SOMITA monthly report. On an operating expense basis, the budget for the month was $3.01 million and the actual was $2.24 million, well below budget, as tabulated in the report.

Actual quantities of ore and waste mined, and the actual quantity of ore processed all varied from budget plan. SRK modelled the expected January operating cost based on physical quantities of material mined/processed, applied against the planned unit costs such as mining, processing, G&A, etc. This suggested an expected January cost of $2.40 million, assuming actual unit costs matched budget unit costs. This analysis indicates that SOMITA's January unit costs were, on average, 7 percent below plan when adjusted to account for actual quantities moved.

17.9.7 Capital Costs

The planned LoM capital requirements are summarized in Table 17-14. These figures are taken from the LoM Financial Plan provided by SOMITA.

Table 17-14: Planned LoM Capital Requirements

Item	Cost (US$ 000's)
Project Capital	
Bouroum Facilities	$513
Plant Expansion to 1.5Mt/a	$7,060
Sub-total	**$7,573**
Sustaining Capital	
Mobile Equipment	$8,781
Tailings Facility	$3,902
Plant (mill drive)	$1,565
Plant (general)	$850
Other	$503
Sub-total	**$15,601**
Total LoM Capital	**$23,174**

17.9.8 Taxes

The HRG Mining Investment Convention was granted by presidential Decree 'Arrête No 96/020 on 19/02/1996. The HRG Mining Investment Convention allows the project to elect either the conditions in the agreement or any new conditions in the mining laws should they be more advantageous to the project (such as the reduction of corporate tax from 35 percent to 25 percent). Refer to Table 3-1.

All taxes (dividend tax not included) and other payment conditions (as presented earlier in Table 3-1) which the project is subject to have been incorporated into the cashflow model.

17.9.9 Mine Life

The mine life is seven years from 2008 through to 2014.

18 Other Relevant Data and Information

SRK is not aware of any other relevant data and information pertaining to the Taparko-Bouroum gold project.

19 Conclusions

Mineral Resources

- In the opinion of SRK, the exploration database for the Taparko and Bouroum projects are reliable for the purpose of resource estimation;
- No additional exploration drilling has been performed on the Taparko or Bouroum gold zones since 2003;
- The mineral resource estimates prepared by SRK in 2003 remain current and are in use at the mine;
- The Mineral Resources have been classified according to the "CIM Definition Standards for Mineral Resources and Mineral Reserves (August, 2000)";
- For reporting, SRK tabulated the mineral resources within pit shells optimized using a gold price of US$1,000 per ounce of gold and other reserve estimation assumptions.

Mining

- Mining started at Taparko in 2005. As of year end 2007, a total of 394 kilotonnes of ore has been extracted and 8.2Mt of waste stripping has been completed. Mining is scheduled to start at the Bouroum site in 2008;
- The 2007 mining budget plan included extraction of 706 kilotonnes of ore at a grade of 3.59 g/t gold, and waste stripping of 5.99 megatonnes. The 2007 actual mining totalled 261kt of ore at a reported grade of 2.73 g/t gold, and waste stripping of 3.72Mt;
- Performance of the mine in 2007 was adversely affected by a shortage of operating funds in the fall, and low mechanical availabilities on some mining equipment due to the long delivery time required to obtain certain critical repair parts;
- SOMITA has found that the external dilution estimate in the feasibility study was insufficient. In 2008, an additional 5 percent external dilution has been assumed in planning, with a grade of 0.5 g/t gold;
- In February and March 2008, SRK worked with SOMITA to re-evaluate the Taparko and Bouroum pit optimizations at a gold price of US$800/ounce using current 2008 estimates of operating costs and metallurgical recoveries;
- The 2008 pit optimization results were not significantly different than the previous work reported in May 2005;
- SRK estimates the Taparko - Bouroum Proven and Probable Mineral Reserves as of December 31, 2007 at 8,850 kilotonnes at an average grade of 2.82 g/t gold;
- Based on early 2008 mining results, it is SRK's opinion that the mine has demonstrated the ability to move the scheduled tonnes of ore (to the plant) and waste;
- The planned 2008 site operating costs totals $38.80/t of plant feed.

Grade Control

- As ore cannot be easily distinguished from waste rock visually, mining operations will in future be directed by mine geology personnel based on a structured mine grade control program. SOMITA reports that improvements are underway to reduce dilution and improve the mineral reserve recovery including the implementation of a new grade control management system with an accompanying grade control staff training program. The new grade control system will include the following:
    - Technicians for in the field 24 hours a day grade control and when possible ore is mined only on day and afternoon shifts for better visibility;
    - Better tracking of ore mined, and of ore storage (stockpile) destination;
    - Mill to mine reconciliation and analysis to identify and validate planning parameters.

Mineral Processing

- Monthly gold recoveries have ranged from over 95 percent in October 2007 to 91.6 percent in March 2008;
- Recoveries in the range of 90 to 97 percent were predicted from the testwork so the plant appears to be capable of achieving design recoveries if the grind is achieved;
- Gravity gold is seen as less than 5% and, as such, the gravity circuit has been bypassed for now;
- Maintaining the design grind will need to be closely monitored to achieve the forecast recoveries;
- Problems with the ball mill gearbox and drive alignment caused significant downtime up to and including February 2008. Repairs were made and this problem has been overcome;
- The plant flowsheet in the feasibility study showed single stage crushing for the hard ore treatment circuit and SAG/ball mill grinding. The crushing/grinding circuit was not built this way. Instead, the hard ore circuit was built using three stage crushing. The grinding circuit was in turn reduced to single stage ball milling;
- The present grinding circuit has not to date allowed full tonnage treatment of harder ores. As a result, plant performance has been less than the expected 124 t/h. In March, the actual tonnage milled was 82 percent of budget. Good operating availability was achieved in March 2008;
- In SRK's opinion, the tonnage versus grind performance function needs to be properly defined, and improved to meet production objectives. The present circuit has not yet achieved the target grind and tonnage at the same time, but since continuous operating data was only available for one month (March 08), it is reasonable to suggest that further optimization work will improve results, during the period prior to the addition of more grinding capacity;
- The original estimate of the ratio of soft to hard ore was about 60:40 but a more reasonable estimate based on the site visit is 90 percent hard and 10 percent soft for all future production. This is thought to be the reason for the tonnage shortfall;

- Plans have been made by SOMITA to get proper grinding design data for the expansion to 1.5 Mt/a. This will be done by adding a properly sized mill (SAG or ball depending on cost and availability) to the circuit that will allow treatment of the hardest ore at the full design tonnage rate of 186 t/h;
- The LoM production schedule shows that the grinding mill needed for expansion to 1.5 Mt/a must be operating by July 1st 2009. If the required mill is not available as a used mill, the scheduled increase in tonnage may be delayed.

Environmental

- SOMITA SA (HRG) has obtained an Exploitation License for the Taparko-Bouroum property from the Burkina Faso Ministry of Mines. Part of the application process involved determining the environmental impacts that the project may have, and presenting attenuation measures;
- During the environmental feasibility study, 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 potential for acid generation. At Bouroum, the sulphurous waste rock of F12, Bissinga and Welcome Stranger do not show the potential for acid mine drainage;
- The Taparko-Bouroum project rehabilitation and closure plan was prepared in November 2007 by SOCREGE, an environmental consultancy group in Burkina Faso. The cost for closing and rehabilitation of the project was estimated at $2.24 million.

SOMITA LoM Financial Plan

- SOMITA has prepared an after tax LoM financial plan from January 2008 through to 2014 based on plant feed of 8.84Mt at an average grade of 2.82 g/t gold;
- A maximum plant feed rate of 1.5Mt/a is planned for 4 years from 2010 to 2013;
- Average gold recovery is 94.9 percent yielding 760,500 recovered ounces;
- The plan is based on a constant gold price of $800/ounce;
- Planned operating costs total $36.03/tonne processed. Cash costs average $408/ounce of recovered gold;
- LoM sustaining capital requirements are estimated at $23.2 million including $7.1 million for plant expansion;
- The plan results in LoM cash flow of $226 million;
- There is risk to the planned financial results due to current throughput limitations in the mill capacity when treating hard ore.

Safety

As of December 2007, the year-to-date lost time injury frequency rate (“LTIFR”) for SOMITA employees was 9.9 and for SOMITA contractors it was 1.8. A Health and Safety Committee has been established and SOMITA is working to reduce these rates.

20 Recommendations

20.1 Recommendations

Grade Control and Reconciliation

- SRK endorses the implementation of SOMITA's new grade control management system that will include mill to mine reconciliation and analysis.

Mining

- Update the LoM plan based on the December 31, 2007 Mineral Reserves;
- SRK endorses SOMITA's intention to undertake further drill evaluation of the Taparko ore zones during 2008.

Mineral Resources

- The mineral resource block models should be updated based on the results of reconciliations and other geologic information gained through exploitation of the deposits.

Mineral Processing

- Monitor the grind size in the leach feed and develop a grind versus recovery function so that the present equipment can be operated at maximum profitability by balancing grind size, throughput and recovery until the additional grinding capacity is available;
- Proceed with the expansion plans for additional grinding capacity. Test work for this expansion is already being done and test results will be available in mid April 2008;
- The best opportunity for improving this project lies in the redesign of the grinding circuit to achieve 1.5 Mt/a while producing a product size of 80 percent passing 75 microns on all of the production. If the required grinding mill or one larger than required is available as a used mill, and is purchased before June 1st 2008, the increased production rate may be achieved several months before the planned deadline of July 2009.

20.2 Budget

Some of the recommendations listed above will involve costs that are in addition to SOMITA's currently established exploration and operating budgets. The estimate of additional costs is shown in Table 20-1.

Table 20-1: Estimated Additional Costs for Recommendations

SRK Recommendation	Comments	Additional LoM Cost $ 000's
Improved grade control system	LoM labour cost increase	$280
Update LoM plan with new reserves	Included in operating budget	
Evaluation drilling for Taparko ore zones	Additional exploration drilling	$300
Update resource block models	Included in operating budget	
Develop grind versus recovery curve	Included in operating budget	
Proceed with mill expansion plans	Existing budget of $7.1 million	
Total for Additional Costs		**$530**

21 References

Environmental, Civil and Mining Projects (Pty) Ltd. ("ECMP"), Final Design Report for Taparko Tailings Storage, (October 2005)

Environmental, Civil and Mining Projects (Pty) Ltd., Tailings Dam Operating and Maintenance Manual, (July 2007)

Strathcona Mineral Services Limited, Review of the Taparko Project, Burkina Faso, (Toronto, Canada, 2001)

SRK Consulting, Addendum to the Taparko-Bouroum Project, Burkina Faso, 43-101 F1 Technical Report, November 2003, (Toronto, Canada, March 2004)

High River Gold Mines Ltd., Taparko-Bouroum Project, Burkina Faso, 43-101 Technical Report, (Toronto, Canada, June 2004)

Golder Associates, Draft Report on Assessment of Pit Wall Stability, Taparko Project, Burkina Faso, West Africa, (September 2003)

SRK Consulting, Addendum to the Taparko-Bouroum Project, Burkina Faso, 43-101 F1 Technical Report, June 2004, (Toronto, Canada, May 2005)

Piteau Associates, Letter Report – Re: Pit Slope Stability – Taparko-Bouroum Gold Project, (January 2007)

APPENDIX A

Mineral Titles for the Taparko and Bouroum Projects

PERMIS D EXPLOITATION
4 Août 2004

00110
BURKINA FASO

Unite - Progres - Justice

DECRET N° 2004-329/PRES/PM/MCE/ MFB/MEDEV/MECV portant octroi d'un permis d'exploitation minière industrielle d'or à la « Société des mines de Taparko » (SOMITA-S.A) à Taparko dans la province du Namentenga.

06-08-04

LE PRESIDENT DU FASO,
PRESIDENT DU CONSEIL DES MINISTRES,

VU la Constitution ;

VU le décret n° 2002-204 /PRES du 6 juin 2002 portant nomination du Premier Ministre ;

VU le décret n° 2004-003/PRES/PM du 17 janvier 2004 portant remaniement du Gouvernement du Burkina Faso ;

VU la loi n° 14/96/ADP du 23 mai 1996 portant Réorganisation agraire et foncière ;

VU la loi n° 031-2003/AN du 8 mai 2003 portant code minier au Burkina Faso ;

VU la loi n° 005/97/ADP du 30 janvier 1997 portant code de l'environnement au Burkina Faso ;

VU le décret n° 2002-255/PRES/PM du 18 juillet 2002 portant attributions des membres du Gouvernement ;

VU le décret n° 2000-629/PRES/PM/MCE du 30 décembre 2000 portant dispositions applicables la gestion des titres miniers ;

VU le règlement n° R09/98/CM/UEMOA du 20 décembre 1998 relatif aux relations financières extérieures des Etats membres de l'UEMOA ;

VU la demande de la Société des mines de Taparko (SOMITA-S.A) en date du 30 novembre 2003 ;

VU le compte rendu des travaux de la Commission nationale des mines réunie le 11 mai 2004 ;

SUR rapport du Ministre des mines, des carrières et de l'énergie ;

LE Conseil des Ministres entendu en sa séance du 23 juin 2004 ;

D E C R E T E

ARTICLE 1 : Il est octroyé à la Société des mines de Taparko (SOMITA-S.A) ayant fait élection de domicile à Ouagadougou rue 3-37 cité An III, 01 BP 4418 Ouagadougou 01 Burkina Faso un permis d'exploitation minière industrielle d'or à Taparko, province du Namentenga dans les limites définies à l'article 2 du présent décret.

ARTICLE 2 : Le périmètre du permis octroyé pour l'exploitation industrielle du gisement d'or de Taparko est délimité par des bornes dont les coordonnées UTM (XY) du réseau géodésique officiel du Burkina Faso sont les suivantes :

Bornes	X	Y
A	0797604,250 E	1 503 324,125 N
B	0779 556,313 E	1 503 126,625 N
C	0779 942,625 E	1 466 229,750 N
G	0788 978, 813 E	1 466 324,750 N
H	0798 015,500 E	1 466 422,625 N

ARTICLE 3 : La superficie accordée pour le permis d'exploitation industrielle du gisement d'or de Taparko est de 666,5 km² dans les limites du périmètre défini à l'article 2 ci-dessus.

ARTICLE 4 : Le présent permis d'exploitation minière industrielle d'or de Taparko est valable pour une durée de vingt ans pour compter de la date de signature du présent décret. Il est renouvelable par périodes consécutives de cinq ans jusqu'à épuisement du gisement dans les limites de la superficie définie à l'article 3 ci-dessus.

ARTICLE 5 : La Société des mines de Taparko (SOMITA-S.A) est tenue d'adresser au Directeur général des mines, de la géologie et des carrières :

- un rapport d'activités au terme de chaque trimestre calendaire ;
- un rapport d'activités au terme de l'année civile.

ARTICLE 6 : Ces différents rapports sont établis conformément aux dispositions réglementaires du code minier.

ARTICLE 7 : La participation de l'Etat burkinabè au capital social de la Société des mines de Taparko (SOMITA-S.A) est de dix pour cent (10%) des actions, libre de toutes charges et non diluable.

ARTICLE 8 : La Société des mines de Taparko (SOMITA-S.A) a l'obligation d'exploiter le gisement objet du présent décret dans les règles de l'art et s'engage à réhabiliter les sites avant leur abandon conformément à la réglementation minière et à l'étude d'impact environnemental.

ARTICLE 9 : Les infractions au code minier et au code de l'environnement ainsi qu'à leurs textes d'application sont passibles de sanctions prévues par les dispositions légales et réglementaires sans préjudice du retrait du permis d'exploitation minière industrielle.

ARTICLE 10 : Le permis d'exploitation minière industrielle est retiré si la Société des mines de Taparko (SOMITA-S.A) n'observe pas les règles de l'art, d'hygiène et de sécurité au travail et toutes autres dispositions légales et réglementaires de la réorganisation agraire et foncière, du code minier et du code de l'environnement.

ARTICLE 11 : La Société des mines de Taparko (SOMITA-S.A) bénéficie dans le cadre de ses activités d'exploitation minière industrielle des avantages douaniers et fiscaux tels que prévus par le code minier et les textes réglementaires en la matière.

ARTICLE 12 : Le Ministre des mines, des carrières et de l'énergie, Ministre des finances et du budget, le Ministre de l'économie et du développement et le Ministre de l'environnement et du cadre de vie sont chargés chacun, en ce qui le concerne, de l'exécution du présent décret qui sera publié au Journal Officiel du Faso.

Ouagadougou, le 4 août 2004

Blaise COMPAORE

Le Premier Ministre

Paramanga Ernest YONLI

Le Ministre des finances et du budget

Jean-Baptiste Marie Pascal COMPAORE

Le Ministre des mines, des carrières et de l'énergie

Abdoulaye Abdoulkader CISSE

Le Ministre de l'économie et du développement

Seydou BOUDA

Le Ministre de l'environnement et du cadre de vie

Laurent SEDOGO

BURKINA FASO

Unité – Progrès – Justice

DECRET N° 2005-342 /PRES/PM/MCE/ MFB portant octroi d'un permis d'exploitation minière industrielle d'or à la Société « SOMITA-SA » à Bouroum, dans la province du NAMENTENGA.

Visa CF N° 05251
21-06-05

LE PRESIDENT DU FASO,
PRESIDENT DU CONSEIL DES MINISTRES,

VU la Constitution ;
VU le Décret n° 2002-204/PRES du 6 juin 2002 portant nomination du Premier Ministre ;
VU le Décret n° 2004-003/PRES/PM du 17 janvier 2004 portant remaniement du Gouvernement ;
VU la Loi N° 14/96/ADP du 23 mai 1996 portant Réorganisation agraire et foncière ;
VU la Loi N° 031/2003/AN du 08 mai 2003 portant code minier au Burkina Faso ;
VU la Loi N° 005/97/ADP du 30 janvier 1997 portant code de l'environnement au Burkina Faso ;
VU le Décret N° 2002-255/PRES/PM du 18 juillet 2002 portant attributions des membres du Gouvernement ;
VU le Décret N° 2000-629/PRES/PM/MCE du 30 décembre 2000 portant dispositions applicables à la gestion des titres miniers ;
VU le Règlement N° R09/98/CM/UEMOA du 20 décembre 1998 relatif aux relations financières extérieures des Etats membres de l'UEMOA ;
VU la Demande de la Société SOMITA S.A en date du 24 juin 2004 ;
VU le Compte rendu des travaux de la Commission nationale des mines réunie le 11 mai 2004 ;
SUR rapport du Ministre des mines, des carrières et de l'énergie ;
Le Conseil des Ministres entendu en sa séance du 04 mai 2005 ;

DECRETE

ARTICLE 1 : Il est octroyé à la Société SOMITA-SA ayant fait élection de domicile à Ouagadougou Rue 3-37 cité An III, 01 BP 4418 Ouagadougou 01 Burkina Faso un permis d'exploitation minière industrielle d'or à Bouroum (Province du Namentenga), dans les limites définies à l'article 2 du présent décret.

1

ARTICLE 2 : Le périmètre du permis octroyé pour l'exploitation industrielle du gisement d'or de Bouroum est délimité par des bornes dont les coordonnées UTM (XY) du réseau géodésique officiel du Burkina Faso sont les suivantes :

Bornes	X	Y
A	747 500,0 E	1 506 000,0 N
B	754 000,0 E	1 506 000,0 N
C	754 000,0 E	1 502 200,0 N
D	752 500,0 E	1 502 200,0 N
E	752 500,0 E	1 504 800,0 N
F	747 500,0 E	1 504 800,0 N

ARTICLE 3 : La superficie accordée pour le permis d'exploitation industrielle du gisement d'or de Bouroum est de 11,7 Km² dans les limites du périmètre défini à l'article 2 ci-dessus.

ARTICLE 4 : Le présent permis d'exploitation minière industrielle d'or de Bouroum est valable pour une durée de vingt (20) ans pour compter de la date de signature du présent décret. Il est renouvelable par périodes consécutives de cinq (05) ans jusqu'à épuisement du gisement dans les limites de la superficie définie à l'article 3 ci-dessus.

ARTICLE 5 : La Société SOMITA-SA est tenue d'adresser au Directeur général des mines, de la géologie et des carrières :

- un rapport d'activités au terme de chaque trimestre calendaire ;

- un rapport d'activités au terme de l'année civile.

ARTICLE 6 : Ces différents rapports sont établis conformément aux dispositions du code minier.

ARTICLE 7 : La participation de l'Etat burkinabé au capital social de la Société SOMITA-SA est de dix pour cent (10 %) des actions, libre de toutes charges et non diluable.

ARTICLE 8 : La Société SOMITA-SA a l'obligation d'exploiter le gisement objet du présent décret dans les règles de l'art et s'engage à réhabiliter les sites avant abandon conformément à la réglementation minière et à l'étude d'impact environnemental.

ARTICLE 9 : Les infractions au code minier, et au code de l'environnement ainsi qu'à leurs textes d'application sont passibles de sanctions prévues par les dispositions légales et réglementaires sans préjudice du retrait du permis d'exploitation minière industrielle.

ARTICLE 10 : Le permis d'exploitation minière industrielle est retiré si la Société SOMITA-SA n'observe pas les règles de l'art, d'hygiène et de sécurité au travail et toutes autres dispositions légales et réglementaires de la Réorganisation agraire et foncière, du code minier, du code de l'environnement.

ARTICLE 11 : La Société SOMITA-SA bénéficie dans le cadre de ses activités d'exploitation minière industrielle des avantages douaniers et fiscaux tels que prévue par le code minier et les textes réglementaires en la matière.

3

ARTICLE 12 : Le Ministre des mines, des carrières et de l'énergie, le Ministre des finances et du budget, le Ministre de l'économie et du développemen et le Ministre de l'environnement et du cadre de vie sont chargé chacun en ce qui le concerne de l'exécution du présent décret qui ser publié au journal officiel.

Ouagadougou, le 22 juin 2005

Blaise COMPAORE

Le Premier Ministre

Paramanga Ernest YONLI

Le Ministre des finances et du budget

Jean-Baptiste Marie Pascal COMPAORE

Le Ministre des mines, des carrières et de l'énergie

Abdoulaye Abdoulkader CISSE

Le Ministre de l'économe et du développement

Seydou BOUDA

Le Ministre de l'environnement et du cadre de vie

Laurent SEDEGO

4

APPENDIX B

Comparison of 1997 and 2003 Burkina Faso Mining Codes Relative to the HRG Burkina Faso Convention

Comparison of Burkina 1997 and 2003 Burkina Faso Mining Codes relative to the HRG Burkina Faso Convention.

Feature	**Modified Mining Code** **30/06/2003**	**Mining Code** **22/10/97**	**HRG-Burkina Faso Convention** **19/2/1996**
Date of 1st commercial production	"Art. 4.3" Same, except at 70% of capacity.	First of: 1) start of 60 days when r sustains 60% of capacity establisl feasibility study; or, 2) date of firsl delivery for commercial purposes.	First of: 1) start of 30 consecutive days at average of 60% of nominal capacity; or, 2) date of first sale of products by the company.
Mining Convention	"Art. 13" The Exploration permit is valid for 3 years and can be renewed twice for 3 year periods each time. "Art. 19" The maximum area per permit is 250 kilometres square. On the second renewal the area must be reduced by one quarter.	"Exploration permits may be joine mining convention that the Goverr signs with the exploration permit holder". Valid maximum period (2 with 10 yr renewals.	Cites "Law No. 14/93/ADP of 19 May 1993 supporting the Mining Investment Code".
State Participation	"Art. 18" 10% free carried, except in case of small-scale mines	10% free carried	20% participation by BUMIGEB or Burkinabe companies, but if BUMIGEB cannot contribute, its participation cannot be diluted to less than 15% of the capital stock of the company.
Fixed (transfer and area taxes (fees))	For exploitation permit will cost 500,000 FCFA/km^2/year Exploitation Permit is valid for 20 years and 5 yr. renewals until the depletion of orebodies ("Art. 21")	Set by regulation	For exploitation permit will cost 150,000 FCFA/km^2/year for first 5 years, 200,000 FCFA/km2/year for 6th year onwards
Proportional (Royalty) Taxes (set by regulation under Mining Code)	Same; 3%.	In case of gold, 3% set by regulat	3% (ad valorum) "based on the net value of sales of the production".
Minimum Content Tax for Commercial and Industrial Professions (IMFPIC); Patents; Explorer & Apprenticeship Tax (TPA); Tax on property in Mortmain (TBM)	Exempt for 7 yrs or half of mine life as defined in feasibility study for operations with less than 14 years life.	Exploitation permit 7-year exempt but not to exceed half of mine life	7 year exemption for holders of exploitation permit OR 13 year exemption for holder of a Mining Concession effective from first date of production (Note: Mining Concessions are no longer granted)
Tax on industrial and commercial profits (BIC)	"Art.88" Reduced by 10 points to 25%	35.00%	35.00%
Tax on stocks and shares income (IRVM)	"Art. 88" Reduced by half to 6.25%	12.50%	12.50%
Withholding Tax	Withholding Tax on professional services to Outsiders – 10%		
Deductible Interest	"Art. 89, P. 4" limited to the extent that the amount of the interest does not exceed the rates allowed by the existing fiscal regulations. Presently 8%	Limited to 8% under legislation administered by the finance minis	Allowed to deduct the total loan interest incurred. The fractions of interest paid to affiliate companies as shall only be deductible from taxable income to the extent of 2% or less above LIBOR. ("Art. 9")
Amortization	Accelerated amortization and depreciation allowed up to maximum loss of $0 loss created		Straight line. (Annexe C Item 6) Indefinite deferral in case of period of fiscal loss
Fiscal Losses	Carry forward maximum 5 yrs as long as loss is not due to amortization		Carry forward maximum 4 yrs, value maintained in FCFA (Annexe C Item 8).
Custom Duties	"Art. 85" Equipment, spare parts, supplies and fuel used in the exploration phase that are on the Ministry list pay	Equipment and spare parts exempt during exploration 11% during exploration license period.	Exploration Phase Exempt during exploration, but liable for duty on sale of imported exploration equipment and supplies

Feature	Modified Mining Code 30/06/2003	Mining Code 22/10/97	HRG-Burkina Faso Convention 19/2/1996
	duties of 5% (Note must add approx. 2.5% for customs fees not mentioned in law) "Art. 87" Exemption of duties during development phase (max. 3 years) on equipment, parts, supplies, fuel for power generation and fuel for vehicles for the construction. The 3 taxes; Redevance Statistique, PCS and PC (total 3.5%) must be paid on the CAF value. These advantages also apply to subcontractors provided a contract is signed. (i.e. this then entails a registration tax of 3% on the value of the contract) "Art. 91" As of first commercial production, a total rate of 7.5% for duties and taxes on all equipment, parts, supplies, fuel and lubricants for power supply and vehicles used on the mine. The same applies to subcontractors with a contract signed with the company.		Construction/Development Phase. Total exemption on customs, duties and duty taxes for building construction, etc. materials, fuel used to generate energy for mining operating and specific lubricants. Assuming the exemption also applies to the 3 taxes of Redevance Statistique, PCS and PC (i.e. total 3.5% for the 3 taxes). Exempt on materials, equipment, etc. for putting property into production, as well as, first lot of replacement parts Production Phase. 3 year exemption, from first date of prod's on all capital duties and taxes on importation of primary products. "Fuel for mining equipment, reagents, grinding media for plant are assumed as primary products."
VAT (18%)	"Art. 84" Exemption during exploration and development phase. "Art. 86" Exemption during construction or development phase on imported or locally mfg. equipment and services by geo. Services companies. Maximum exemption period of 2 yrs and 1 extra yr on application. No mention of exemption on fuel but is assumed to also apply. Same as 97 for production phase	No exemption	No reference to VAT exemption after exploration phase

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, Ken Reipas, residing at 43 Deverell Street, Whitby do hereby certify that:

1) I am a Principal Mine Engineer with the firm of SRK Consulting (Canada) Inc. with an office at Suite 1000, 25 Adelaide Street East Toronto, Ontario, Canada;
2) I am a graduate of Queen's University with a B.Sc in Mining Engineering in 1981, and have practiced my profession continuously since 1981;
3) I am a Professional Engineer registered with the Professional Engineers of Ontario (PEO);
4) I have personnaly visite the Taparko project between January 9 and 11, 2008;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, am independent of the issuer as defined in Section 1.4 of National Instrument 43-101;
7) I am responsible for the compilation of Sections 16.2, 17 except 17.3, 17.8 and 17.9.8, and 19 and have reiviewed the technical report;
8) SRK Consulting (Canada) Inc. was retained by High river Gold Mines Ltd. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, our review of project files and discussions High River Gold Miens Ltd. and Somita SA personnel;
9) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I hereby consent to use of this report for submission to any Provincial regulatory authority;
11) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Ken Reipas

Toronto, Canada
March 31, 2008

Ken Reipas, P.Eng
Principal Mine Engineer

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, Jean-Francois Couture, residing at 59 Tiverton Avenue, Toronto, Ontario do hereby certify that:

1) I am a Principal Geologist with the firm of SRK Consulting (Canada) Inc. with an office at Suite 1000, 25 Adelaide Street East Toronto, Ontario, Canada;
2) I am a graduate of the Université Laval in Quebec City with a BSc. in Geology in 1982. I obtained an MSc.A. in Earth Sciences and a Ph.D. in Mineral Resources from Université du Québec à Chicoutimi in 1986 and 1994, respectively. I have practiced my profession continuously since 1982;
3) I am a Professional Geoscientist registered with the Association of Professional Geoscientists of the province of Ontario (APGO#0197) and a fellow with the Geological Association of Canada;
4) I have personnaly visite the Taparko project between January 9 and 11, 2008;
5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, am independent of the issuer as defined in Section 1.4 of National Instrument 43-101;
7) I am responsible for the compilation of Sections 2 to 14, and 16.1 and have reiviewed the technical report;
8) SRK Consulting (Canada) Inc. was retained by High river Gold Mines Ltd. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, our review of project files and discussions High River Gold Miens Ltd. and Somita SA personnel;
9) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I hereby consent to use of this report for submission to any Provincial regulatory authority;
11) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Toronto, Canada
March 31, 2008

Jean-François Couture, Ph.D, P.Geo
Principal Geologist

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, John Starkey, residing at 2073 Pinevalley Crescent, Oakville Ontario do hereby certify that:

1) I am a Principal Consulting Engineer with Starkey & Associates at 212-151 Randall Street, Oakville Ontario, Canada;
2) I am a graduate of the University of Toronto in 1961. I obtained a BASc. in Mining Enginnering. I have practice my profession continuously since May 15, 1961;
3) I am a Professional Engineer registered with the Prodessional Engineers of Ontario (APEO#44133015);
4) I have personnaly visite the Taparko project in December 4 and 5 2007;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, am independent of the issuer as defined in Section 1.4 of National Instrument 43-101;
7) I am responsible for the preparation of Sections 15 and 17.3 of this technical report;
8) SRK Consulting (Canada) Inc. was retained by High river Gold Mines Ltd. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, our review of project files and discussions High River Gold Miens Ltd. and Somita SA personnel;
9) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I hereby consent to use of this report for submission to any Provincial regulatory authority;
11) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Toronto, Canada
March 31, 2008

John Starkey, P.Eng.
Principal Consulting Engineer

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, Rene Gharapetian, residing at 124 Kingslake Road, Toronto, Ontario do hereby certify that:

1) I am an Associate Mine Engineer with the firm of SRK Consulting (Canada) Inc. with an office at Suite 1000, 25 Adelaide Street East Toronto, Ontario, Canada;
2) I graduated with a B.Sc. degree in Mining Engineering from the University of Tehran in 1990. I have practiced my profession continuously since graduation;
3) I am a Professional Engineer registered with the Association Professional Engineers of of the province of Ontario (APEO#100055424);
4) I have not visited the Taparko and Bouroum projects;
5) I have read the definition of “qualified person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, am independent of the issuer as defined in Section 1.4 of National Instrument 43-101;
7) I performed the pit optimizations on Taparko-Bouroum open pits;
8) SRK Consulting (Canada) Inc. was retained by High river Gold Mines Ltd. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, our review of project files and discussions High River Gold Miens Ltd. and Somita SA personnel;
9) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I hereby consent to use of this report for submission to any Provincial regulatory authority;
11) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Rene

Toronto, Canada
March 31, 2008

Rene Carapetian, P.Eng
Principal Engineer

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, Glen Cole, residing at 15 Langmaid Court, Whitby, Ontario do hereby certify that:

1) I am an Principal Resource Geologist with the firm of SRK Consulting (Canada) Inc. with an office at Suite 1000, 25 Adelaide Street East Toronto, Ontario, Canada;
2) I am a graduate of the University of Cape Town in South Africa with a B.Sc (Hons) in Geology in 1983; I obtained an M.Sc (Geology) from the University of Johannesburg in South Africa in 1995 and an M.Eng in Mineral Economics from the University of the Witwatersrand in South Africa in 1999. I have practiced my profession continuously since 1986;
3) I am a Professional Geoscientist registered with the Association of Professional Geoscientists of the province of Ontario (APGO#1416) and am also registered as a Professional Natural Scientist with the South African Council for Scientific Professions (Reg#400070/02);
4) I have personnaly visite the Taparko project between January 9 and 11, 2008;
5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
6) I, as a qualified person, am independent of the issuer as defined in Section 1.4 of National Instrument 43-101;
7) I contribured to the section 16.1 and 16.2.3 of this technical report
8) SRK Consulting (Canada) Inc. was retained by High river Gold Mines Ltd. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, our review of project files and discussions High River Gold Miens Ltd. and Somita SA personnel;
9) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
10) I hereby consent to use of this report for submission to any Provincial regulatory authority;
11) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Toronto, Canada
March 31, 2008

Glen Cole, P.Geo
Principal resource Geologist

CERTIFICATE AND CONSENT

To accompany the report entitled: Taparko-Bouroum Gold Mine, Independent Technical Report, Burkina Faso, dated March 31, 2008.

I, Daniel George Vanin, residing at, 63 Woodlawn Ave. West, Toronto, Ontario do hereby certify that:

12) I am a Chief Operating Officer of High River Gold Mines Ltd. with an office located at Suite 1700, 155 University Street, Toronto, Ontario, Canada;
13) I graduated in 1975 with a B. Eng in Mine engineering from McGill University I have practice my profession continually since;
14) I am a Professional Enfinner registered with the l'Ordre des Ingénieurs du Quebec (OIQ#33841);
15) I have visited the Taparko project on numerous occasions since 2003;
16) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;
17) I, as a qualified person, a an employee and officer of the issuer as defined in Section 1.4 of National Instrument 43-101;
18) I am a co-author of this report having contributed to Sections 3, 17.3.7, 17.8, and 17.9.8 for which I take responsibility;
19) High river Gold Mines Ltd retained SRK Consulting (Canada) Inc. to prepare a technical report for the Taparko-Bouroum Gold Mine in accordance with NI 43-101 and Form 43-101F1 guidelines. ;
20) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;
21) I hereby consent to use of this report for submission to any Provincial regulatory authority;
22) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report.

Toronto, Canada
March 31, 2008

Daniel Vanin, P.Eng
Chief Operating Officer
High River Gold Mines,