

# Guyana Goldfields Completes Positive Feasibility Study for its Aurora Gold Project in Guyana

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TORONTO, February 24, 2012 /PRNewswire/ --

Guyana Goldfields Inc.

('GGI' or 'the Company') is pleased to announce positive Feasibility Study results for its 100% owned Aurora Gold Project in Guyana, South America. The NI 43-101 Feasibility Study report will be compiled under the supervision of SRK Consulting (Canada) Inc. ('SRK') with contributions provided by prominent industry consultants. A conference call will be held today by Guyana Goldfields management at 11:00 am Eastern Time to further discuss the results (see details at the end of this release).

The Aurora Gold Project is expected to have a positive impact on the economy of Guyana by maximizing employment, skills training, and generating business opportunities for local suppliers and service providers. The Company is dedicated to becoming a leading corporate citizen and a productive partner in the future of Guyana's economy. The Aurora Gold Project is presently the only large-scale licensed gold mine development project in Guyana and will be the next producing gold mine in the country in late 2014.

All figures in this release are in US dollars except where noted. All figures include contingency where applicable.

## Highlights of the Feasibility Study

- Base case is calculated using \$1,300 per ounce of gold ('oz') and \$100/barrel WTI Crude Oil
- Proven and probable reserves of 4.6 million ounces of contained gold
- 22 full years life of mine ('LOM') for combined open pit ('O/P') and underground ('U/G') mining scenario
- Mill throughput rate of 8,000 tonnes per day ('tpd') from years 2015 - 2023 and an average of ~4,500 tpd (nominal) from years 2024 to 2035. In year 2019, production from the underground will commence and will gradually replace open
- Underground mine access via ramp and shaft (mine depth to 1,320m)
- Average LOM grade of 3.17 grams of gold per tonne ('g/t Au')
- Total gold production is 4.359 million ounces
- Average initial gold production of approximately 256,800 ounces per year for the first 10 full years (2015 - 2024)
- Average LOM cash operating costs of \$522/oz (pre-royalty)
- Pre-tax Net Present Value (NPV) of \$644 million at a 5% discount rate generating a pre-tax Internal Rate of Return (IRR) of 14.9% and a payback period of 6.9 years
- Estimated initial capital costs for surface and open pit is \$525 million, with underground development being funded from cash flow

At a recent spot gold price of \$1,775/oz and \$100/barrel WTI Crude Oil, pre-tax NPV increases to \$1.7 billion

at a 5% discount rate generating a pre-tax IRR of 28.6% with cash costs of \$522/oz (pre-royalty).

Claude Lemasson, President and COO, stated: 'The completion of the Feasibility Study is a major accomplishment for the Company, establishing the Aurora Gold Project as Guyana's largest undeveloped gold reserve in the country's history. The positive results confirm that the Aurora Gold Project is poised to become a future significant gold producer in Guyana and in the Guiana Shield. Construction on the project is expected to commence later this year and will last for approximately 24 months.'

## OPPORTUNITIES

An independent third party review of the Feasibility Study was initiated last month as well as an internal review by Guyana Goldfields which are both ongoing. The Company has recognized additional opportunities to improve the project economics. These opportunities are listed below.

- Alternative Power: Power costs represent over 30% of Cash Costs, with the Base Case being Heavy Fuel Oil power generation; alternative sources of power have been identified including hydro and biomass power generation options. Use of biomass power shows significant savings over the mine life. More work is planned in the next few months to determine the optimal power generation option.
- Processing Plant design at 8,000 tpd: Although the operating parameters are at 8,000 tpd, the process plant was designed at 9,500 tpd to allow the Underground Development to be moved forward; a redesign of the processing plant as part of the post-Feasibility Study design and engineering to 8,000 tpd would potentially reduce mill capital cost by approximately 10%.
- Various other potential opportunities being explored include:
  - Contract Mining for Open Pit
  - Timing of Underground Development
  - Optimization of Underground Design & Mining Methods
  - Used Equipment Purchases
  - Review of Grind Size in the Processing Plant
- Drill data cut-off for the current Resource was May 2011; since then, much drilling has been completed in the Golden Square Mile and more drilling will occur in the next few months; a revised Resource calculation for Aurora is expected to be completed by late 2012.
- Optimization study work will be completed in the next few months to review and consider opportunities identified.

## ALTERNATIVE CASES

The table below outlines key sensitivities for the NPV and IRR of the Aurora Gold Project. Fuel costs represent a significant proportion of all cash costs. It has been observed that the price of crude oil, which is the base to derive fuel prices, is correlated with the price of gold. GUY has compiled certain sensitivities to differing gold prices and used a historical correlation of oil to gold to recompute power consumption costs. A Gold/Oil Ratio of 16 to 1 was determined based on the 3-year (2009-2011) averages of the Gold Price and of WTI Crude Oil.

		\$1,300/oz	\$1,775/oz	\$2,250/oz	BASE CASE \$1,300/oz
Financials	Units	gold price	gold price	gold price	gold price
@ 5% Discount Rate					
Fuel Price (WTI Crude Oil)	US\$	81.25	110.94	140.63	100.00
Average Operating Cash Cost (LOM)	\$/oz	495	537	578	522
Average Operating Cash Cost w/Royalty (LOM)	\$/oz	599	679	758	626
Pre-Tax NPV	\$ M	706	1,683	2,660	644
Pre-Tax IRR	%	15.7	28.2	39.3	14.9
Payback	Years	6.7	3.5	2.4	6.9
After-Tax NPV	\$ M	476	1,164	1,849	432
After-Tax IRR	%	13.4	23.6	32.6	12.7
Payback	Years	7.0	4.3	2.8	7.2

## AURORA GOLD PROJECT FEASIBILITY STUDY

### BASE CASE DETAILS Project Assumptions and Parameters

Assumptions	Units	
Gold price	US\$/oz[(1)]	1,300
Fuel Price (WTI Crude Oil)	\$/barrel	100
Gross Royalty	%	8
Effective tax rate	%	30

(1) Approximates the 3-year trailing average

Mine Parameters	Units	
Open pit		
Ore milled	Mt	18.6
Grade	g/t	3.0
Waste mined	Mt	168.9
Strip ratio (without pre-stripping)	waste:ore	9.1:1
Strip ratio (with pre-stripping)	waste:ore	8.6:1
Underground		
Ore milled	Mt	26.6
Grade	g/t	3.28
Open pit & Underground		
Total ore milled	Mt	45.2
Average gold grade	g/t	3.17
Total contained gold	oz	4,603,500
Estimated gold recovery	%	94.8
Total payable gold	oz	4,359,600
Mine life (full)	years	22
Average annual gold production (LOM)	oz	198,200

## Mineral Reserves and Resources

### Aurora Gold Project Mineral Reserves at \$1,200/oz

February 2012			
Reserve Category	Quantity (Mt)	Grade (g/t)	Contained Gold (M oz)
Proven			
O/P saprolite	0.14	2.98	0.01
O/P fresh ore	5.31	3.16	0.54
U/G	-	-	-
Probable			
O/P saprolite	2.42	2.34	0.18
O/P fresh ore	10.74	3.06	1.06
U/G	26.61	3.28	2.81
Total (P&P)	45.22	3.17	4.60

\*Mineral Reserves are included in Mineral Resources \*UG in-situ cut-off grade of 1.8 g/t for Rory's Knoll and 2.25 g/t for Satellite Deposits. \*OP fresh ore in-situ cut-off grade of 0.45 g/t for Rory's Knoll and 0.55 g/t for other deposits \* OP saprolite ore in-situ cut-off of 0.35 g/t for Rory's Knoll and 0.40 g/t for other deposits

#### Aurora Gold Project Mineral Resources at \$1,200/oz

September 2011			
Resource Category	Quantity (Mt)	Grade (g/t)	Contained Gold (M oz)
Measured & Indicated (M&I)			
O/P	20.22	3.34	2.18
U/G	26.82	4.09	3.52
Total M&I	47.04	3.83	5.71
Inferred			
O/P	3.48	3.41	0.39
U/G	6.49	3.74	0.78
Total Inferred	9.97	3.63	1.17

\*Cut-off grade of 0.40 g/t Au for O/P and 1.80 g/t Au for U/G

The Feasibility Study database considers 291,556 metres of core drilling in 939 holes drilled by Guyana Goldfields between 2004 - May 2011. The Aurora 3-D mine model can be seen in the following link:  
[http://files.newswire.ca/826/Aurora\\_Ore\\_Model.pdf](http://files.newswire.ca/826/Aurora_Ore_Model.pdf)

#### Mining and Production

The mine plan contains 45.2 million tonnes of ore grading 3.17 g/t gold. Total gold production over a 22 full year mine life is estimated to be 4.359 million ounces, averaging 256,800 ounces per year for the first 10 full years (2015 - 2024). Ore production will begin from the open pit in 2014 at an average production rate of 8,000 tpd for the first 5 years. In year 2019, production from the underground will commence and will gradually replace open pit feed.

Summary of the annual mine production plan is outlined below.

Years	O/P Ore Mined (kt)	O/P Grade (g/t)	O/P Cont. gold (koz)	O/P Waste (kt)	O/P Strip ratio	U/G Ore Mined (kt)	U/G Grade (g/t)	U/G Cont. gold (koz)	U/G squared	Mill Head Grade (g/t)
Pre-production	137	2.96	13	5,165	37.6					
1 (2014)	939	2.44	74	16,976	18.1					2.52
2 (2015)	2,610	2.90	243	27,151	10.4					2.88
3 (2016)	2,755	2.99	265	27,875	10.1					2.97
4 (2017)	2,683	3.36	290	27,798	10.4	57	3.45	6		3.40
5 (2018)	2,094	3.03	204	25,029	12.0	448	3.82	55		3.14
6 (2019)	1,997	2.92	188	16,457	8.2	1,016	3.62	118		3.20
7 (2020)	2,576	2.90	240	13,504	5.2	1,327	3.61	154		3.44
8 (2021)	1,972	2.85	180	7,122	3.6	1,427	3.34	153		3.11
9 (2022)	846	3.57	97	1,805	2.1	1,479	3.14	149		3.22
10 (2023)						1,593	3.37	173		3.04
11 (2024)						1,587	3.64	186		3.27
12 (2025)						1,594	3.72	191		3.72
13 (2026)						1,602	3.74	193		3.74
14 (2027)						1,602	3.73	192		3.73
15 (2028)						1,602	3.41	175		3.41
16 (2029)						1,602	3.48	179		3.48
17 (2030)						1,602	3.24	167		3.24
18 (2031)						1,602	2.86	147		2.86
19 (2032)						1,602	2.72	140		2.72
20 (2033)						1,602	2.62	135		2.62
21 (2034)						1,602	2.63	135		2.63
22 (2035)						1,338	2.97	128		2.97
23 (2036)						329	3.11	33		3.11
Total/ Avg	18,608	3.00	1,794	168,881	9.1	26,614	3.28	2,810		3.17

(1)Open pit contained gold ounces

squaredUnderground contained gold ounces

Total Production from Mill	oz	4,359,600
Average Annual Production (10 full years 2015 - 2024)	oz	256,800
Average Annual Production (LOM)	oz	198,200

## Metallurgy, Processing, and Infrastructure

The metallurgy of the Aurora Gold Project deposit shows the ore to be free-milling allowing a flowsheet using conventional gold processing techniques. The only metal to be recovered is gold and when liberated to a grind size of 80% passing (P80) 75 micron produces excellent recovery. The deposit is predominantly non-refractory sulphides encompassing 94% of the ore, with the remaining being saprolite oxides. Grinding will occur through a SAG and Ball mill combination followed by a gravity circuit. Testwork results have shown approximately 30% of the gold could be recovered through gravity. The remaining gold in ore is leached in cyanide followed by carbon in leach (CIL) gold recovery. After carbon stripping, the gold in solution is sludged through electro-winning cells. The gold sludge is smelted and the gold poured into ingots. The LOM average gold recovery is estimated at 94.8%.

## Operating Costs

Operating cash costs over the life of the project are projected to average \$522/oz. Total operating costs (with royalty) are anticipated to average \$626/oz.

Operating Costs	Units	Price of gold \$1,300/oz
Open Pit		
Mining (incl.waste)	\$/t	1.49
Diesel	\$/t	0.64
Total	\$/t	2.13
Underground		
Mining (incl. waste)	\$/t	25.37
Power	\$/t	10.49
Diesel	\$/t	1.70
Total	\$/t	37.57
Processing	\$/t	
Processing (excl. power)	feed	8.38
	\$/t	
Power	feed	6.96
	\$/t	
Total	feed	15.34
	\$/t	
General & Administration	feed	4.72
Cash Costs		
Average Operating Cash Cost (pre-royalty)	\$/oz	522
Average Operating Cash Cost (with royalty)	\$/oz	626

### Capital Costs Estimates

The Feasibility Study is based on capital pricing as of the first quarter of 2012. The level of accuracy of the capital costs estimates is within plus or minus 15% for feasibility studies.

Capex Costs	Units
Initial O/P Capex (2012 - 2014)	\$ M 525
O/P Sustaining Capex	\$ M 116
Initial U/G Capex (2014 - 2019)	\$ M 465
U/G Sustaining Capex	\$ M 185

The cost breakdown for pre-production capital expenditures, assuming an owner operator scenario, is shown below.

Description	\$M
O/P Mobile Equipment	93
Mine Development	13
Primary Ore Handling	18
Process Plant	107
Off-site Infrastructure	20
On-site Infrastructure	45
Power Plant	53
River Dyke	19
Ancillary Buildings	29
Tailings & Reclaim	25
Construction Indirects	36
EPCM	38
Owner's Cost	22
Total	525

\*The average contingency for the capital costs is ~11.4%

## Financial Analysis

The financial analysis for the Base Case (at a gold price of \$1,300/oz and \$100/barrel WTI Crude Oil), which evaluates an owner's operation, indicates a pre-tax NPV at a 5% discount rate of \$644 million with an IRR of 14.9% and a payback period of 6.9 years. On an after-tax basis, the NPV at a 5% discount rate is \$432 million with an IRR of 12.7%.

## BASE CASE

Financials @ 5% Discount Rate	Units	\$1,300/oz gold price
Fuel Price (WTI Crude Oil)	US\$	100
Average Operating Cash Cost	\$/oz	521.6
Total Cash Cost (w/Royalty)	\$/oz	625.6
Pre-Tax NPV	\$ M	643.8
Pre-Tax IRR	%	14.9
Payback	Years	6.9
After-Tax NPV	\$ M	432.0
After-Tax IRR	%	12.7
Payback	Years	7.2

## Independent Qualified Persons

The Feasibility Study was prepared by leading independent consulting firms. Qualified Persons ('QP') under Canadian Securities Administrators' National Instrument 43-101 are listed below. The work was completed with the collaboration of the Aurora Gold Project technical group and Company staff. The QPs have reviewed and approved the content of this news release. The following consultants participated in the study:

- Mineral resource estimation, open pit and underground mine planning, and the mineral resource and mineral reserve statements were prepared by SRK Consulting (Canada) Inc. (Toronto) under the direction of Glen Cole, P.Geo. (mineral resource), Brian Connolly, P. Eng. (open pit reserves), and Ken Reipas, P. Eng. (underground reserves)
- The design of the underground mine shaft was prepared by DMC Mining Services 'Dynatec' (Toronto), under the direction of Leo Hwozdyk P.Eng
- The environmental management system was designed by AMEC Environment & Infrastructure, a Division of AMEC Americas Limited, under the general direction of Pedram Molkara, M.Sc., M.Eng., P.Geo. and senior review of David Bleiker, M.A.Sc., P.Eng.. Adam Coulson, Ph.D., P.Eng. directed the open pit and underground rock mechanics study, Prapote Boonsinsuk, Ph.D., P.Eng. directed the foundation design, Simon Gautrey, M.Sc., MBA, P.Geo. directed the hydrogeology study and Norman Smith, M.Sc.Eng., P.Eng. directed the hydrological studies
- The design of the Ventilation System was prepared by Bluhm Burton Engineering (PTY) Ltd. 'BBE' (South Africa), under the direction of Frank von Glehn
- The design of the Paste Backfill System was prepared by Golder PasteTec (Sudbury), under the direction of Chris Lee, P.Eng
- The design of the Processing Facilities was prepared by Ausenco Solutions Canada Inc., under the direction of David John Brimage, MAusIMM CP
- Environmental design was prepared by Environ Corp. (Washington, DC), under the direction of Reed Huppman, Principal, and Glenn Mills, Principal Consultant and Matthew Trout, Associate Consultant
- The design of the Power Systems was prepared by Martin Menard & Associates (Montreal), under the direction of Martin Menard
- Design of off-site and on-site infrastructure items were the responsibility of GGI under the direction of Claude Lemasson, P.Eng with review by SRK
- The financial model and economic analysis were prepared by GGI with review by SRK

A complete Technical Report summarizing the results of the Feasibility Study will be filed on the Company's website and on SEDAR within 45 days.

#### Conference Call

Guyana Goldfields will hold a conference call today at 11:00 AM EST where senior management will discuss the Feasibility Study and respond to questions. To join the call:

Conference Call Details:  
Date of Call: Friday, February 24, 2012  
Time of Call: 11:00am EST  
Conference ID: 55862903  
Dial-In Numbers:  
North America Toll-Free: (888) 231-8191  
International: (647) 427-7450

For anyone not able to participate in the conference call, an audio webcast will be available for 90 days through the following link: <http://www.newswire.ca/en/webcast/detail/926073/989287>

About Guyana Goldfields Inc. Guyana Goldfields Inc. is a Canadian based company, primarily focused on the exploration and development of gold deposits in Guyana, South America where the Company has operated since 1996. The Company recently completed its Definitive Feasibility Study for its Aurora Gold Project and expects to start the construction of the mine subject to Board approval. The mine plan contains 45.2 million tonnes of ore grading 3.17 g/t Au with a total of 4.6 million oz of contained gold. The current measured and indicated resource is 5.71 million ounces gold (47.04 million tonnes at a grade of 3.83 g/t).

At the Aranka Properties, the Company has discovered a gold deposit at Sulphur Rose and other highly prospective targets within a 5-km radius have been identified for drill testing in 2012.

As at the date hereof, the Company has approximately \$29 million in cash and short-term bank guaranteed investment certificates and no debt; there are approximately 83 million shares issued and outstanding.

#### Information Concerning Estimates of Mineral Reserves and Resources

The mineral reserve and resource estimates reported in this press release were prepared in accordance with Canadian National Instrument 43-101 Standards of Disclosure for Mineral Projects ('NI 43-101'), as required by Canadian securities regulatory authorities. For United States reporting purposes, the United States Securities and Exchange Commission ('SEC') applies different standards in order to classify mineralization as a reserve. In particular, while the terms 'measured,' 'indicated' and 'inferred' mineral resources are required pursuant to NI 43-101, the SEC does not recognize such terms. Canadian standards differ significantly from the requirements of the SEC. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories constitute or will ever be converted into reserves. In addition, 'inferred' mineral resources have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian securities laws, issuers must not make any disclosure of results of an economic analysis that includes inferred mineral resources, except in rare cases.

#### Forwarding-Looking Information

This news release contains 'forward-looking information' which may include, but is not limited to, statements with respect to the estimation of mineral resources. Often, but not always, forward-looking statements can be identified by the use of words and phrases such as 'plans,' 'expects,' 'is expected,' 'budget,' 'scheduled,'

'estimates,' 'forecasts,' 'intends,' 'anticipates,' or 'believes' or variations (including negative variations) of such words and phrases, or state that certain actions, events or results 'may,' 'could,' 'would,' 'might' or 'will' be taken, occur or be achieved.

Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made and are based on various assumptions.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of GGI to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others, the final findings set forth in the Feasibility Study, general business, economic, competitive, political and social uncertainties; the actual results of exploration activities; changes in project parameters as plans continue to be refined; accidents, labour disputes and other risks of the mining industry; political instability; delays in obtaining governmental approvals or financing or in the completion of development or construction activities, as well as those factors discussed in the section entitled 'Risk Factors' in GGI's annual information form. Although GGI has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of this news release and GGI disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results, except as may be required by applicable securities laws. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward looking statements.

PDF with caption: 'Aurora Ore Model'. PDF available at:  
[http://stream1.newswire.ca/media/2012/02/24/20120224\\_C7083\\_DOC\\_EN\\_10409.pdf](http://stream1.newswire.ca/media/2012/02/24/20120224_C7083_DOC_EN_10409.pdf)

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## **Guyana Goldfields Inc.**

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