

BIBIANI GOLD MINE

Western Region, Ghana



POTENTIAL ORE SOURCES



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Potential Ore Sources Report
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April 12th 2011

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Potential Ore Sources at Bibiani prior to Main Pit infrastructure relocation

Introduction

This report summarises shorter term mining options that could be considered prior to embarking on the final cutback of the Main Pit, which will require major infrastructure relocation. There are a number of potential ore sources that need to be ranked and evaluated. Most are largely unknown quantities at this time.

Summary of Potential Ore Sources

The currently identified potential ore sources available in the short-medium term are mostly still in the “estimated” category, are relatively small, and require further drilling. The one exception is the northern end of Main Pit to Big Mug, which is mostly defined, and with a little more upgrading could contribute a substantial tonnage.

While there are a large number of future exploration prospects the immediate aim is to supply ore for a December 2011 mill startup and the 12-24 month period beyond, while other exploration prospects are evaluated and/or developed and the Main Pit infrastructure relocation issues are solved.

Summary of existing potential ore sources estimates

Source	Ore Tonnes (Kt)	Grade (g/t)	Ounces (Koz)	Waste (Kt)	S/R	Priority	Timing
Main Pit - West wall	?					med	6 mths
Main Pit – North end	700	1.5	34	8000	11	high	4 mths
N'th Main Pit to Big Mug	1000	1.5	48	11000	11	high	4 mths
Grasshopper	350	1.8	20	2000	6	high	2 mth
Ahiman	250	1.4	11	1000	4	high	1 mth
Walsh	500 ?	3	48 ?	4000	8	high	3 mths
Strauss	500 ?	3	48 ?	4000	8	high	3 mths
South Hill – South of Hwy	200	1.5	10	1600	8	low	+6 mths
Elizabeth	?					med	3-6 mths
Total Pits	3500	2.0	220	30000	9		
Old Tailings – dams 1&2	700	0.9	20				
- levees	2300	0.7	52				

All tonnes, grades and ounces are estimates only.

Walsh and Strauss are purely “guesstimates” based on the potential of the previous drilling, and new drilling campaigns have only just commenced.

It is not possible to assign any value to the Main Pit west wall, this is a complex area with interaction to the underground, and the rear waste dump, and will require careful assessment. Elizabeth represents another good satellite target but is a relative unknown at the moment.

Ore Sources in Detail

Main Pit – West Wall:

- A large amount of drilling required that has only just commenced.
- The cutback is a critical component of the whole Main Pit that can only be done once, hence the need to fully assess all aspects
- Indications on the potential resources should appear within the next 2 -3 months

Main Pit – Northern End:

- Within the current pit design, above elevation 120RL, beyond 5930N
- Orezone 70m below mined surface – all sulphide ore
- Access difficult but possible in conjunction with Big Mug
- No drilling required

North of Main Pit – Big Mug:

- Initially narrow lower grade zone that did not make it into Main Pit
- Becomes wider and higher grade towards and under Big Mug old pit
- Two areas of discontinuous ore near surface and at depth as drill targets
- Inferred zone at depth to be targeted for upgrading
- Majority is sulphide ore
- Pit western wall will be in old waste backfill – flatter slopes, high strip ratio
- Access to the rear will be cut off by the pit – potential to backfill later (resources allowing)

Grasshopper:

- Initial drilling complete, assay results due in couple of weeks, modeling to follow

Ahiman:

- Drilling completed, initial model almost complete

Strauss & Walsh:

- New drilling campaign just commenced
- Aiming to expand both pits and connect between. Potential total strike length of 1.2 km.

South Hill Pit – South of Highway:

- Very limited working area (currently delineated Main Pit design, +50m south of highway)
- Drill targets in valley behind pit, and in the executive guest house hill
- Low mining priority at this stage due to location, but a good exploration prospect.

Elizabeth Galamsey Workings:

- Unknown quantity – a known prospect but recent interest due to significant galamsey workings
- 200m strike length of workings
- Ideal location close to plant and ample waste dumping space
- Not possible to estimate resources until drilling undertaken

Conclusions

- There is currently enough ore in the above estimates to cover perhaps 18 months of processing. If another 6 months ore was identified by year end, this would make a total of two years mill feed.
- Walsh and Strauss must be considered key areas because of their grade potential.
- The overall strip ratio is high (characteristic of pits that have already been mined), which must be factored into the mining program.

Recommendations for Further Work

This basically falls into 4 main categories and time periods related to current drilling:

- As the Ahiman and Grasshopper resource models become available, generate pit designs and reserves.
- When resource models for Walsh & Strauss become available, also generate pit designs and reserves.
- Following investigation into the Main Pit north / Big Mug area, and updating of those resources, the detailed pit design should be undertaken. This is a critical area requiring merging of the current Main Pit design and this northern extension. However it may be useful to undertake a preliminary design based on existing resources and update it later.
- Generate a basic mining schedule based on the above reserves.
- Incorporate Main Pit west wall and Elizabeth into the mine plan as they become available.

It is envisaged that a basic mining schedule would incorporate the four main satellite pits first, based on criteria such as location, grade, strip ratio, ease of mining, etc. However due to their limited tonnage quantities the Main Pit northern extension would have to be brought in shortly after, where the implication of large waste movements needs to be addressed.

Figure 1: Plan of Potential Ore Sources

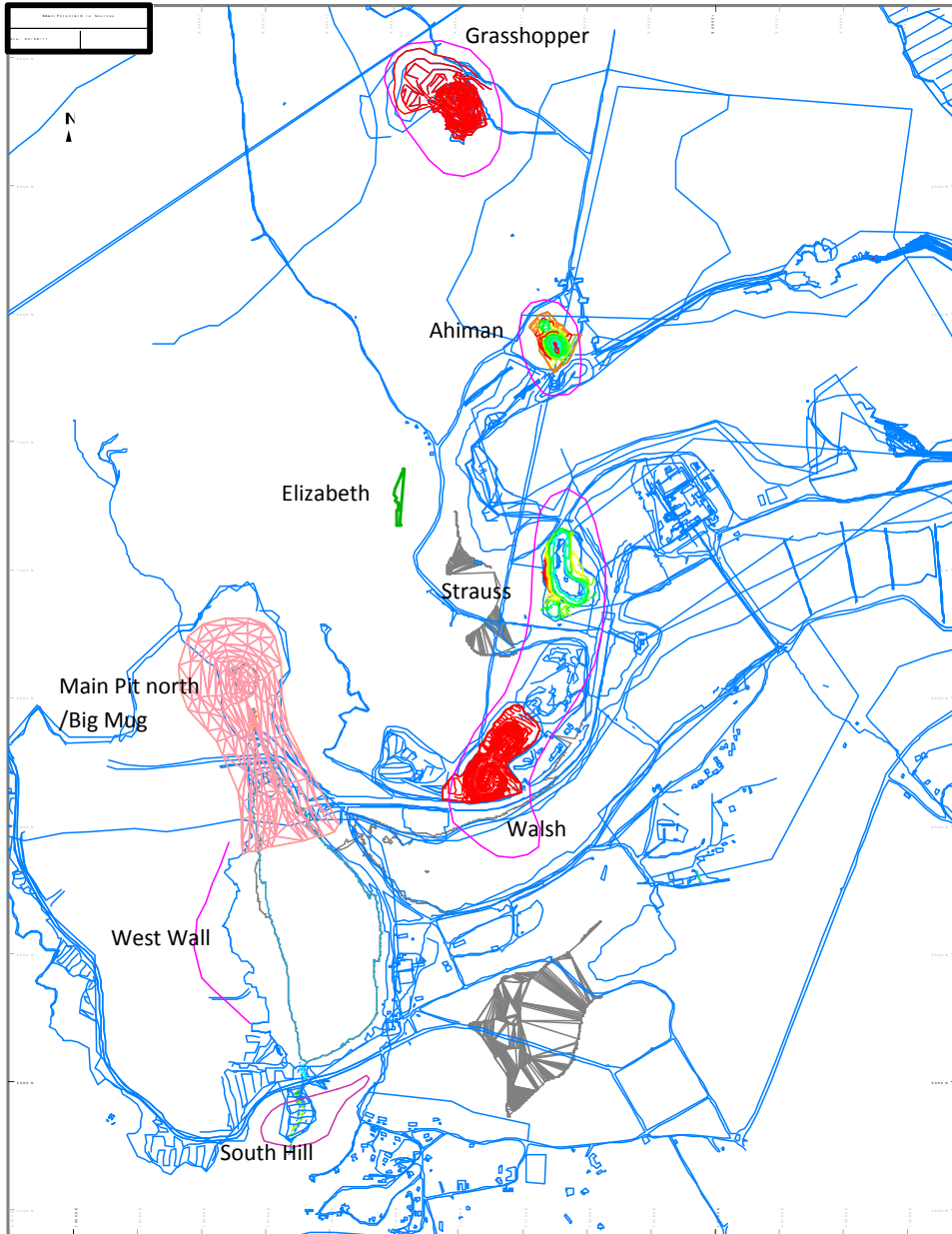


Figure 2: W-E Section through Big Mug old Pit

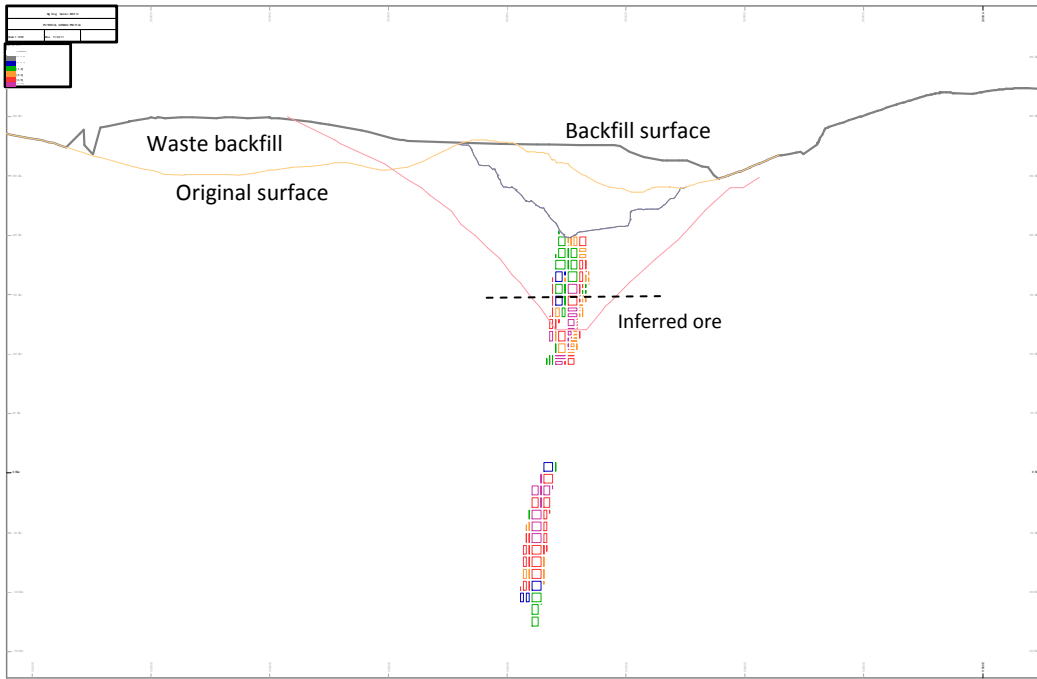


Figure 3: 3D Plan of Potential Ore Sources

