

12 March 2014

AIM:AMA

**Amara Mining plc**  
**("Amara" or "the Company")**

**PRELIMINARY ECONOMIC ASSESSMENT FOR YAOURE GOLD PROJECT CONFIRMS  
STRONG FINANCIAL RETURNS**

Amara Mining plc is pleased to announce the results of the Preliminary Economic Assessment ("PEA") for its 100% owned Yaoure Gold Project ("Yaoure" or "the Project") in Côte d'Ivoire.

**HIGHLIGHTS**

- PEA demonstrates that Yaoure is a compelling gold development project
- Internal rate of return ("IRR") of 32% and post-tax net present value ("NPV") of US\$688 million based on a discount rate of 8% and a gold price of US\$1,250 per ounce
- Project remains robust at US\$1,100 per ounce with an IRR of 23% and NPV of US\$406 million
- Average annual production of 325,000 ounces over a 12 year initial life of mine ("LOM") from a single open pit containing 4.2 million ounces
- LOM average total cash cost (including royalties and refining) of US\$655 per ounce and all-in sustaining cost of US\$691 per ounce
- Plant and infrastructure capital cost of US\$274 million for an 8 Million tonne per annum ("Mtpa") plant, with a contingency of US\$42 million and an additional US\$92 million for an owner-operated mining fleet
- Rapid total payback period of 2.4 years
- Significant exploration upside opportunity:

- Potential to increase 6.3 million ounce Mineral Resource by targeting 'information gaps' within the US\$950 pit shell to reduce the overall strip ratio (currently 5.2:1)
- Fully unlock Yaoure's value through upgrading Inferred Resources to Measured and Indicated categories
- Several optimisation opportunities to further improve Yaoure's strong economics under investigation, including:
  - Selective mining of higher grade zones to increase feed grade and lower dilution
  - Equipment optimisation to reduce unit cost of bulk mining
  - Re-configuration of site infrastructure to reduce operating costs through the efficient exploitation of site topography
  - Staged plant development to reduce upfront capital cost requirements, including targeting oxides

The PEA is based upon the predominantly Inferred resource base announced on 13 December 2013. It demonstrates strong returns with robust economics, which supports conducting an in-fill drilling programme at the Project ("the Programme"). This Programme would focus on confirming grade continuity and should allow Amara to examine a range of optimisation opportunities at various scale, in addition to the bulk mining scenario considered in the PEA.

***Peter Spivey, Chief Executive Officer of Amara, commented:***

*"The initial results of the PEA have firmly identified Yaoure as one of Africa's most exciting gold development projects. It is one of a small group of gold projects that remain robust at gold prices below US\$1,200 per ounce, which highlights Yaoure's attractiveness in the current volatile market conditions. It will generate strong returns for all of its stakeholders, with significant additional exploration potential still to be realised.*

*"We have clearly demonstrated that Yaoure should be advanced to the next stage, where we can examine the numerous options available with a better understanding of the Project's geology, grade continuity and metallurgy, seeking to define the optimum size and process route for the operation. I am confident that the in-fill drilling programme will not only increase the resource base beyond 6.3 million ounces and lower the strip ratio, but will allow us to refine Yaoure's development plans to further improve the economics and reduce the execution and financial risks for all stakeholders.*

*"The next step is to continue our work on the 5Mtpa and 6.5Mtpa whole ore scenarios and smaller scale oxide heap leach opportunities and I look forward to updating the market on this and our upcoming work programme in the coming weeks."*

**Management Conference Call**

The management team of Amara will host a conference call for analysts and investors at 9:30am UK time today. Dial-in details are as follows:

Dial in number (UK toll free) 0808 237 0030  
Alternative dial in number: +44 (0)20 3139 4830  
Participant PIN Code: 37645958#

A presentation to accompany the conference call is available at [www.amaramining.com](http://www.amaramining.com) and playback of the conference call will be available at <http://www.amaramining.com/Investor-Relations/Webcasts> shortly after the conclusion of the call.

### **Overview of PEA**

Amara conducted a number of different bulk tonnage scenarios for Yaoure as part of the PEA to test the Project's viability, assuming variable mining rates, pit shells, plant sizes and processing methods. The 8 Mtpa plant tank leach process has been identified as providing the best return on capital of the options evaluated, although further optimisation studies are expected to provide numerous alternatives for improvement of this scenario.

The PEA supports the scenario of processing 8 Mtpa of material from an open pit operation to produce an average of 325,000 ounces of gold per annum over an initial 12 year life. The metallurgy is simple and non-refractory and the plant has been designed to process Yaoure's substantial sulphide resource, achieving a recovery rate of 95% using conventional whole ore leach processing methods in a carbon-in-pulp ("CIP") circuit. The Project demonstrates strong economics due to the low processing cost driven by an energy cost of 9 cents/kWh and high overall recoveries. Total cash costs (including royalties) are US\$655 per ounce over the LOM and all-in sustaining costs are US\$691 per ounce.

The 8 Mtpa scenario generates a post-tax NPV of US\$688 million and a post-tax IRR of 32% at a gold price of US\$1,250 per ounce and at an 8% discount rate. Importantly, the Project's economics remain robust at significantly lower gold prices, with a post-tax NPV of US\$406 million and a post-tax IRR of 23% at a US\$1,100 per ounce gold price and an 8% discount rate.

Yaoure requires a plant and infrastructure capital cost of US\$274 million, with an additional US\$92 million for an owner-operated mining fleet, which has the potential to be deferred through leasing or excluded if contractor mining is utilised, and US\$42 million contingency. The total payback period is 2.4 years. Work is ongoing for 5Mtpa and 6.5Mtpa throughput scenarios, which is expected to be completed in the coming weeks. Further options utilising more selective mining to improve average grades and reduce the overall strip ratio will be explored once in-fill drilling is complete and the overall size and continuity of the high grade zones within the Yaoure Mineral Resource are fully understood.

The key technical, operational and financial parameters for the 8 Mtpa scenario are summarised in the following table:

Parameter	Unit	Rate
Ore mined	Mt	94.6
Average head grade mined	g/t	1.39
Waste mined	Mt	492.0
Strip ratio	waste:ore	5.2:1
Contained gold	Koz	4,239
Average gold recovery rate	%	95.0
Average annual production over LOM	ounces	325,000
Open pit mine life	years	12
Processing plant capacity	Mtpa	8
Plant and Infrastructure Capital Cost inc. contingency	US\$ million	316
Total capital payback period	years	2.4
Total cash costs (including royalties)	US\$/oz	655
All-in sustaining costs	US\$/oz	691

### Mineral Resource Statement

The Mineral Resource estimate was reported on 11 December 2013 and was constrained within an open pit shell derived using a long-term gold price of US\$1,500 per ounce.

*Yaoure Mineral Resource estimate, including cut-off grade sensitivity, as of 11 December 2013*

Cut-Off g/t Au	Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t)	Content (Koz)	Tonnes (Mt)	Grade (g/t)	Content (Koz)
0.5	20.3	1.20	780	133.0	1.29	5,518
0.8	13.2	1.48	637	85.7	1.65	4,554
1.0	10.0	1.68	541	65.6	1.89	3,974

The LOM plan uses the Mineral Resources contained within a detailed pit design, which has been optimised using a US\$950 per ounce gold price. Both Indicated and Inferred resources were used in the LOM plan with Inferred resources representing 80% of the material mined for processing.

*Yaoure LOM estimate contained in an optimised pit shell using a US\$950 per ounce gold price, at 0.5g/t cut-off*

	Indicated			Inferred		
	Tonnes (Mt)	Grade (g/t)	Content (Koz)	Tonnes (Mt)	Grade (g/t)	Content (Koz)
LOM Plan	18.5	1.22	723	75.3	1.45	3,505

#### Notes to Mineral Resource tables

1. The effective date of the Yaoure Mineral Resource estimate is 11 December 2013, prepared by Mario E Rossi, GeoSystems International, Inc.
2. The gold price used in the Mineral Resource estimate is US\$1,500/oz assuming an open pit mining scenario. Oxides are being mined assuming Heap Leach economics, Sulphides assuming Flotation economics. Pit slopes are 35° in oxide, 46 ° in sulphide. Recoveries have been assumed at 90%.
3. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.
4. There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues that may materially affect the resource estimates.
5. Totals and average grades are subject to rounding to the appropriate precision and some columns or rows may not compute exactly as shown.
6. The stated resources include dilution in the block model that relates to the level of low selectivity envisioned in an open pit operation, assuming 10m bench heights. No additional operational or mining dilution or ore loss has been incorporated.
7. The 94.6 Mt of material scheduled for the financial evaluation contains a difference in rounding (of less than 1%) resulting from the different software packages and topography utilised for the relevant stages.

#### Mine Plan

Yaoure is planned to be developed and mined as a single open pit, comprising the CMA and Yaoure Central deposits. It is designed as a bulk mining operation and is based on an owner-operator scenario, using drill and blast with trucks and shovels for loading and haulage and with an average primary fleet of four PC3000s (240t) and six 90 tonne trucks.

This delivers 94.6 million tonnes of both oxide and sulphide material to the processing plant, at an average head grade of 1.39g/t, containing 4.2Moz ounces of gold. The resulting strip ratio is relatively low at 5.2:1 due to the shallow dipping nature of the mineralised zones and is expected to be further improved through in-fill drilling of 'information gaps' within the resource area. Additional technical details of the pit design are outlined in Appendix A.

The LOM plan focuses on achieving a consistent rate of feed to the processing plant, while also balancing grade consistency with the waste stripping requirements over the life of the Project.

## Metallurgy and Processing

Metallurgical test work has demonstrated high gold recoveries over a 24 hour period using cyanide leaching. Whole ore processing via tank leach followed by CIP was selected as the basis for the PEA as being the most cost effective processing method, with an estimated design recovery rate of 95%, based on the gold recovery achieved in the test work of 96.2%.

The flow sheet comprises run-of-mine material entering a three-stage crushing circuit followed by ball milling to 106 micron. Gold is then leached by cyanidation in a series of open, mechanically agitated tanks, where oxygen is added to the process. Leached gold is then recovered using the CIP process followed by a standard elution circuit for gold recovery into doré.

## Capital Costs

The Plant and Infrastructure Capital Cost for the Project is US\$274 million, plus an engineering contingency of US\$42 million. A further US\$92 million has been estimated for the mining fleet, which could be deferred by contracting or leasing. Yaoure has a total payback period of 2.4 years and a capital efficiency ratio (NPV:Total Pre-Production Capital Cost) of 1.69:1.

AMEC plc, which is an independent consultant responsible for the mineral processing and recovery methods upon which the PEA is based, assesses its capital estimate for the plant and infrastructure to be accurate to  $\pm 35\%$ . A breakdown is set out in the table below:

<b>Capital Costs</b>	<b>US\$m</b>
Process plant	142.8
Plant infrastructure including Tailings Management Facility ("TMF")	35.3
Other infrastructure	27.4
Miscellaneous	20.0
EPCM and Indirects	48.9
<b>Plant and Infrastructure Capital Cost</b>	<b>274.4</b>
Plant and Infrastructure Contingency	42.0
<b>Plant and Infrastructure Capital Cost including Contingency</b>	<b>316.4</b>
Mining fleet	91.8
<b>Total Pre-Production Capital Cost</b>	<b>408.2</b>

The Total Sustaining and Closure Capital over the LOM includes the mine closure costs and the development of the TMF. A breakdown is set out in the table below:

<b>Sustaining and Deferred Capital Costs</b>	
Mining	64.6
Process and Infrastructure excluding TMF	31.5
TMF	31.3
Closure costs	18.4
<b>Total Sustaining and Closure Capital</b>	<b>145.8</b>

### Operating Costs

The PEA has demonstrated total cash costs of US\$655 per ounce, including royalties and refining, over the LOM. Mining operating costs include labour, materials, consumables and other services and are based on the operating plans and schedules driven from the design mill capacity. Processing and some associated infrastructure operating costs were estimated by AMEC plc using a range of data sources and first principle estimates.

One of the key cost drivers for large scale gold mines is the availability of power. Yaoure is located 5km from the Kossou dam, which offers low-cost hydro-electric power from a 150MW plant and abundant water. This will be used to power Yaoure's 8 Mtpa processing plant. Based on tariff proposals from the Côte d'Ivoire state electricity provider, Compagnie Ivoirienne Electricité (CIE), an average power cost of 9 cents/kWh is estimated, which is significantly lower than the average cost of heavy fuel oil generation (20-25 cents/kWh) or diesel generation (30-35 cents/kWh) in West Africa. This represents a distinct advantage for Yaoure in terms of project economics, which is realised in the relatively low processing costs of US\$9.90/t processed.

Yaoure's location presents other infrastructural benefits too, such as a high quality road network connecting the project to the capital Yamoussoukro (40km) and the port of Abidjan (280km). There is also good accommodation and a mining university in Yamoussoukro offering a skilled workforce in the region.

Other primary cost drivers included diesel fuel (\$1.10/litre) for powering mining equipment and sodium cyanide (\$3,500/t). Labour costs were modelled based on the Company's existing operating experience in Côte d'Ivoire.

Category	Unit	US\$/tonne
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Mining	t mined	2.42
Processing	t processed	9.90
Other General and Administration	t processed	0.58 (or 0.85 including freight and refining)

**Notes**

Mining and processing costs include a portion of associated G&A representing US\$0.93/tonne.

<b>Category</b>	<b>US\$/oz produced</b>
Mining	352
Processing	232
General and Administration	14
<b>Operating Cash Cost</b>	<b>598</b>
Freight and refining	7
Royalties (and community fund)	50
<b>Total Cash Cost</b>	<b>655</b>
Sustaining Capex	36
<b>All-In Sustaining Cost</b>	<b>691</b>

The result is an all-in sustaining cost of US\$691 per ounce, benefiting from the large-scale operation and low relative input costs, driving the robust economics.

**Fiscal Terms**

Amara participated in discussions between the Government of Côte d'Ivoire and a number of other mining companies operating in country in the drafting of a new mining code. The new code was approved by Parliament in early March 2014, which did not include fiscal terms. The PEA is therefore based on a combination of these discussions, published government proposals and recent precedent mining agreements in country. The assumptions are provided in the table below:

<b>Item</b>	<b>Unit</b>	<b>Rate</b>
Corporate Tax	%	25
Community Fund	% Revenue	0.5
Royalties		Scale
<=US\$1,000/oz	%	3
<=US\$1,300/oz	%	3.5



<=US\$1,600/oz	%	4
>=US\$1,600/oz	%	5
Tax Holiday	Years	5

### Economic Sensitivity Analysis

The economic analysis uses an average gold price of US\$1,250 per ounce over the 12 year life. Examining the project economics at different gold prices demonstrates that Yaoure continues to deliver strong returns at a gold price of US\$1,100 per ounce, with a post-tax IRR remains above 20% and a post-tax NPV is US\$406 million.

#### *Yaoure Project discount rate and gold price sensitivity*

	US\$1,100	US\$1,200	US\$1,250	US\$1,300	US\$1,400	US\$1,500
<b>Post-tax NPV (US\$m)</b>						
5% discount	579	807	921	1,035	1,246	1,473
8% discount	406	594	<b>688</b>	782	957	1,144
10% discount	316	483	566	650	805	971
<b>Post-tax IRR (%)</b>	23	29	<b>32</b>	35	40	45

### Opportunities for Optimisation

The following key opportunities for optimisation were generated by the PEA. It is expected that they will further improve the project economics and Amara believes they warrant further investigation as part of the on-going advancement of Yaoure:

- *Staged development*: The capital spending profile of Yaoure may benefit from a staged development approach, particularly with regards to mill capacity, process route and the mining and processing schedule of oxide and sulphide material to reduce start-up capital requirements.
- *Selective mining*: The Mineral Resource and the PEA have assumed a bulk approach to mining. The economics of the Project may be optimised by selective mining of the mineralised packages contained in the high grade CMA zone. Increased selectivity would allow for reduced blocks sizes in the model, which is expected to result in lower dilution and higher grades to supplement the lower grade material of the Yaoure Central zone.
- *Equipment optimisation*: Given the bulk nature of the Yaoure mine plan and the relative proportion of mining operating costs,

there is potential for future optimisation of the size of the equipment fleet compared to what has been considered in the PEA.

- *Project layout:* Depending on the processing route taken, there is further potential to optimise the locations of site infrastructure such as the waste storage facility, TMF and the mill site to take greater advantage of the project topography, thus reducing total operating costs.
- *Process selection:* With favourable metallurgy and the amenability of Yaoure's material to a number of conventional processing methods, further work needs to be done on process selection. Pre-concentration via flotation warrants further testing and evaluation to assess if capital and operating savings can be achieved. Also, SAG milling has been excluded from the PEA based on a single rod mill test result. Further work is required to confirm that this is the correct approach.
- *Heap leach plant relocation:* An opportunity exists for a smaller-scale, near term oxide operation, assuming the relocation to Yaoure of the 1.6Mtpa Kalsaka/Sega plant.

## **Next Steps**

### *Pre-Feasibility Study ("PFS")*

The results of the PEA indicated that Yaoure should be taken to the next level of engineering study and economic assessment. Work on the optimisation opportunities identified should be undertaken in conjunction with in-fill drilling before deciding on the final mine development options to move forward to a PFS.

In terms of permitting, as the Project has reverted to exploration phase, the environmental, social and community work is currently being refocused on identifying the environmental and social issues likely to affect the potential larger scale resumption of mining in the future. A consultation programme with the government and community stakeholders has begun to discuss the path forward and both parties voiced their support for the development of the Project. The next step is the preparation of an Environmental and Social Impact Assessment (ESIA) pursuant to obtaining an environmental licence.

### **PEA Preparation**

The PEA has been prepared by Amara with input from GeoSystems International Inc., which reported the Mineral Resource estimate and AMEC plc, which reviewed the metallurgical work and proposed the engineering design and cost estimates for the process plant and associated infrastructure for the Project.

A NI 43-101 compliant technical report supporting the results of the PEA will be published within 45 days. In addition to the 8Mtpa base case, it will cover a range of other viable development scenarios.

### Qualified Person

Ian Jackson is a "Qualified Person" within the definition of National Instrument 43-101 and is responsible for the mineral processing and recovery methods upon which the PEA is based. He has reviewed and approved the relevant technical information relating to the recovery methods in this release. Mr Jackson (CEng, M IMMM) is Senior Process Engineer with AMEC plc.

Ciaran Molloy is a "Qualified Person" within the definition of National Instrument 43-101 having practiced for 34 years, and is responsible for the TMF and Heap Leach Pad Civil earthworks designs upon which the PEA is based. He has reviewed and approved the relevant technical information relating to the recovery methods in this release. Mr Molloy, BSc (civil engineering), MIMMM, is a Technical Director with AMEC Ashford.

Bruce van Brunt is a "Qualified Person" within the definition of National Instrument 43-101 and is responsible for the mining schedule upon which the PEA is based. He has reviewed and approved the relevant technical information relating to the mining schedule in this release. Mr van Brunt (MSc Mining Engineering, Fellow AusIMM) is Amara's General Manager of Technical Services and Business Development.

Peter Brown is a "Qualified Person" within the definition of National Instrument 43-101 and has verified the data disclosed in this release with regards to the exploration conducted at Yaoure for Amara, including sampling, analytical and test data underlying the information contained herein, and reviewed and approved the information contained within this announcement. Dr Brown (MIMMM) is the Group Exploration Manager.

Mario Rossi is a "Qualified Person" within the definition of National Instrument 43-101 and is responsible for the estimation of the Yaoure Mineral Resource. He has reviewed and approved the relevant technical information relating to the resource estimates in this release. Mr Rossi (Fellow AusIMM, Member CIM, Member SME) is Principal Geostatistician of GeoSystems International, Inc.

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### **About Amara Mining plc**

Amara is a gold developer-producer with assets in West Africa. The Company generates cash flow through its Kalsaka/Sega gold mine in Burkina Faso. Amara remains focused on its objective of becoming a mid-tier producer through the development of its Baomahun project in Sierra Leone and its Yaoure project in Côte d'Ivoire. With its experience of bringing new mines into production and a project pipeline spanning four countries, Amara aims to further increase its production profile with highly prospective opportunities across all assets.

*This report includes certain "forward-looking information" within the meaning of applicable Canadian securities legislation.*

*All statements other than statements of historical fact included in this report, including, without limitation, the positioning of the Company for future success, statements regarding exploration, drilling results, resource calculations and potential future production at Yaoure, and future capital plans and objectives of Amara, are forward-looking information that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from Amara's expectations include, among others, the risks related to international operations, the actual results of current exploration and drilling activities, changes in project parameters as plans continue to be refined, the timing of the PFS and FS, as well as future price of gold. Although Amara has attempted to identify important factors that could cause actual results to differ materially, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such 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. Amara does not undertake to update any forward-looking statements that are included herein, except in accordance with applicable securities laws.*

*Non IFRS Measures - Cash cost per ounce is a financial measure used by many investors to compare mining companies on the basis of*

*operating results and asset value. It is not a measure of financial performance, nor does it have a standardized meaning prescribed by IFRS, and it may not be comparable to similar measures presented by other companies. Investors are cautioned that cash cost per ounce should not be construed as an alternative to other financial measures determined in accordance with IFRS as an indicator of Amara's performance. This measure has been described and presented in this document in order to provide shareholders and potential investors with additional information regarding the Company's operational performance.*

## **APPENDIX A**

### **Mine Plan Technical Details**

<b>Aspect of Mine Plan</b>	
Open pit length	1.5km
Open pit width	1.4km
Open pit depth	230m
Batter design - primary	53 degrees
Batter design - weathered	44 degrees