

# Yamana Gold Announces a Positive Pre-Feasibility Study With an Impressive and Increased NPV of \$1.9 Billion and an Increased After-Tax IRR of 19.7% for the Long Life Integrated Agua Rica Copper-Gold Project

TORONTO, July 19, 2019 -- YAMANA GOLD INC. (TSX:YRI; NYSE:AUY) ("Yamana" or "the Company") is pleased to announce the results of the pre-feasibility study ("PFS") on the Agua Rica project in the Catamarca Province of Argentina.

# **Pre-Feasibility Study Highlights**

- Proven and probable copper mineral reserves increased from year-end 2018 by 21% to 11.8 billion pounds and gold mineral reserves increased by 12% to 7.4 million ounces
- Initial long mine life of 28 years
- Annual production for the first 10 full years increased to 533 million pounds of copper equivalent<sup>(1)</sup> production
- Cash costs decreased to \$1.29 per pound and all-in sustaining costs ("AISC")<sup>(2)</sup> decreased to \$1.52 per pound for the first 10 years of production
- Net present value ("NPV") increased to \$1.935 billion with an increased after-tax internal rate of return ("IRR") of 19.7%<sup>(3)</sup>
- Full feasibility study expected to be completed by 2020

The positive PFS results follow the March 7, 2019, announcement of a definitive integration plan between Yamana, Glencore International AG ("Glencore"), and Newmont Goldcorp Corporation ("Newmont Goldcorp") (collectively the "Parties"), which contemplates the development and operation of the Agua Rica project using the infrastructure and facilities of Minera Alumbrera Ltd. ("Alumbrera"), realizing important synergies, lowering initial capital required, and reducing the environmental footprint.

(All amounts are expressed in United States Dollars unless otherwise indicated.)

- 1. Copper equivalent metal includes copper with gold, molybdenum, and silver converted to copper-equivalent metal based on the following metal price assumptions: \$6,614 per tonne of copper, \$1,250 per ounce for gold, \$24,250 per tonne for molybdenum, and \$18.00 per ounce for silver.
- 2. Refers to a non-GAAP financial measure. Please see the discussion included at the end of this press release under the heading "Non-GAAP Financial Measures".
- 3. Assuming metal prices of \$3.00 per pound of copper, \$1,300 per ounce of gold price, \$18.00 per ounce of silver, \$11.00 per pound of molybdenum and using an 8% discount rate.

The integration plan generates significant synergies and lowers execution risk by bringing together the extensive mineral resource of Agua Rica with the existing infrastructure of Alumbrera to create a unique, high quality, and low risk brownfield project that the Parties believe will bring significant value to shareholders and local communities and stakeholders. This unique and innovative project will serve to position Catamarca as a focal point for development in northwestern Argentina.

The Parties are pleased to have collectively advanced the integration of Agua Rica and Alumbrera and now to have advanced the PFS under the oversight and with the support of a technical committee comprised of their respective representatives. The Parties also recognize and appreciate the collaboration of the national government of Argentina and provincial government of Catamarca, along with several state-owned entities, which led to the integration plan thereby supporting advancing the project with the PFS.

Based on mineral reserves updated as at June 30, 2019, the PFS estimates a mine life of 28 years with average annual production over the first 10 years of approximately 533 million pounds of copper equivalent<sup>(1)</sup> including 107,000 ounces of gold and contributions of molybdenum and silver. Costs are expected to fall well within the lower half of the cost curve, with average cash costs over the first 10 years estimated at \$1.29 per pound and competitive AISC<sup>(2)</sup> of \$1.52 per pound for the same period.

The initial capital cost estimate of \$2.4 billion realizes significant synergies from using the infrastructure and facilities of Alumbrera. The project is expected to generate strong economic returns with an after-tax NPV at an 8% discount rate (a discount rate that is consistent with other investments in country and the brown fields nature of the project) of \$1.935 billion, and an after-tax IRR of 19.7%, assuming a copper price of \$3.00 per pound ("base case"). Opportunities to further improve the economics will be evaluated in a value-seeking study scheduled for 2019 and the full feasibility study expected by 2020.

Parameter	Base Case	Comparison to RPM 2014 Study <sup>(5)</sup>
Life of Mine (years)	28	Increased
Contained copper equivalent production (pounds) <sup>(1)</sup>		
First 10 full years (millions)	533	Increased
Life of Mine (millions)	452	Increased

Throughput (tonnes per day, "tpd")	1	110,000	-
Strip ratio (tonnes waste: tonnes ore)			
First 10 full years		2.43	Improved
Life of Mine		1.66	Improved
Costs per tonne of ore processed (Life of Mine)			
Mining	\$	4.87	-
Process Plant	\$	5.53	-
G&A	\$	0.87	-
Others (including freight and royalties)	\$	2.05	-
Total Operating Cost	\$	13.32	Improved
Cash costs <sup>(2)</sup> (per pound)			
First 10 full years	\$	1.29	-
Life of Mine	\$	1.34	-
AISC <sup>(2)</sup> (per pound)			
First 10 full years	\$	1.52	-
Life of Mine	\$	1.54	-
Capital Costs			
Initial Capex (millions)	\$	2,386	-
Sustaining Capex (millions)	\$	1,537	-
Concentrate Grade (Life of Mine)		,	
Copper		25.2%	-
Gold		4.5 g/t	-
Silver		74.7 g/t	-
Molybdenum		50.0%	-
NPV <sup>(3,4)</sup> (millions)	\$	1,935	Improved
After-Tax IRR <sup>(3)</sup>		19.7%	Improved
Annual EBITDA <sup>(2)</sup>			
First 10 full years (millions)	\$	773	Increased
Life of Mine (millions)	\$	610	Increased

- 1. Copper equivalent metal includes copper with gold, molybdenum, and silver converted to copper-equivalent metal based on the following metal price assumptions: \$6,614 per tonne of copper, \$1,250 per ounce of gold, \$24,250 per tonne of molybdenum, and \$18.00 per ounce of silver.
- 2. Refers to a non-GAAP financial measure. Please see the discussion included at the end of this press release under the heading "Non-GAAP Financial Measures".
- 3. Assuming metal prices of \$3.00 per pound of copper, \$1,300 per ounce of gold price, \$18.00 per ounce of silver, \$11.00 per pound of molybdenum.
- 4. Assuming an 8% discount rate.
- 5. Independent Engineering Review of the Agua Rica project, Runge Pincock Minarco, dated December 9, 2014.

Sensitivities to copper price are presented in the table below with each \$0.25 increase per pound of copper equating to a more than \$500 million increase in NPV versus the base case. The strong financial projections of the base case, the project resilience to lower copper prices, and its leverage to higher metal prices, in addition to the potential for optimizations of the project in the next stages of design, present an opportunity for the Parties to realize significant value from this high quality project.

Copper Price (per pound) (1)	\$ 2.50	\$ 2.75	\$3.00 <sup>(4)</sup>	\$ 3.25	\$ 3.50
Based on Reserves (100% basis)					
NPV <sup>(2)</sup> (millions)	\$ 901	\$ 1,421	\$ 1,935	\$ 2,446	\$ 2,955
After-Tax IRR (%)	13.8%	16.9%	19.7%	22.5%	25.1%
Annual EBITDA <sup>(3)</sup> (millions)					
First five full years	\$ 689	\$ 803	\$ 918	\$ 1,033	\$ 1,148
First 10 full years	\$ 568	\$ 670	\$ 773	\$ 875	\$ 977
Life of Mine	\$ 442	\$ 526	\$ 610	\$ 694	\$ 778

- 1. Metal price assumptions include gold price \$1,300 per ounce, silver price \$18.00 per ounce, molybdenum \$11.00 per pound.
- 2. Discount rate of 8%.
- 3. Refers to a non-GAAP financial measure. Please see the discussion included at the end of this press release under the heading "Non-GAAP Financial Measures".

#### 4. Base case assumption.

The PFS assumes a throughput rate of 110,000 tpd with scenarios considering a higher throughput rate to be evaluated in the value-seeking study and subsequent full feasibility study. Preliminary evaluations have indicated the potential for significant upside to the project economics from increases to throughput with existing mineral reserves to 115,000 tpd, which would improve NPV to over \$145 million and require only a marginal increase to initial capital.

The PFS significantly advances Agua Rica and underscores Agua Rica as a long-life, low-cost project with robust economics and significant upside potential. Opportunities to realize further upside include converting economic-grade inferred mineral resources within the pit and expanding throughput scenarios to increase metal production and returns, among others.

The Parties have undertaken considerable preliminary work to ensure the highest standards of environmental protection. The environmental design criteria have been defined using the best practices of the mining industry, international guidelines, legal requirements, and corporate policies with the sole objective to prevent or minimize impacts to the environment, while embracing the unique characteristics of the region.

## About the Agua Rica - Alumbrera Integrated Project

Agua Rica is a large-scale copper, gold, silver, and molybdenum deposit located in the Catamarca Province, Argentina, 25 kilometres north of Andalgalá. The project has proven and probable mineral reserves of 11.8 billion pounds of copper and 7.4 million ounces of gold contained in 1.104 million tonnes of ore. Mineral resources include 260,000 tonnes of measured and indicated mineral resources, containing more than 1.6 billion pounds of copper and 954,000 ounces of gold. Additionally, inferred mineral resources of 743,000 tonnes represent significant upside potential to further define an increase to mineral reserves and life of mine.

The PFS for the integrated project considers the Agua Rica deposit will be mined via a conventional high tonnage truck and shovel open pit operation. Average life of mine material moved is expected to be approximately 108 million tonnes per year, with ore feed of 40 million tonnes per year and average life of mine strip ratio of 1.66.

Ore extracted from the mine will be transported from the open pit by truck to the primary crusher area and then transported via a conventional conveyor to the existing Alumbrera processing plant. To route the overland conveyor system, approximately 5.2 kilometres of tunnel development will be required. The conveyor extends 35 kilometres to the Alumbrera process plant, where it will feed the existing stacker conveyor via a new transfer station.

Relatively modest modifications to the circuit are needed to process the Agua Rica ore in order to produce copper and by-products concentrate, which will then be transported to the port for commercialization. An in-situ blending strategy has been defined to manage the concentrate quality over certain years of the mine life, which will allow the project to achieve the desired targets. Further optimizations to this strategy will be studied in the next design phase.

The mineral reserves pit contains 160 million tonnes of inferred mineral resources classified as waste in the base case. The majority of this material is not scheduled to be mined until late in the mine life and could displace lower grade material within the pit, representing an immediate opportunity to improve the base case by increasing average annual production if the inferred mineral resources can be converted to mineral reserves.

The high quality and well-preserved existing infrastructure of Alumbrera is fully utilized in the integration. Tailings storage facility, power supply, water supply, ancillary buildings, and logistical installations, among other infrastructure, are all included. This significantly reduces the environmental footprint of the project. Given the level of progress achieved in the PFS, the Parties have begun the process to prepare the Environmental Impact Assessment ("EIA") for the integrated project, as well as continuing engagement with local stakeholders and local communities.

The Company plans to commence a review of strategic and value-creating alternatives in the interests of advancing the project to development. This review may be commenced as soon as this year and continue through the period that a full feasibility study is advanced. Any additional upside opportunities for the project that will be considered as part of the feasibility study will be taken into account as part of this review. The project represents exceptional value across many fronts already, which is expected to improve with the upside opportunities.

The Parties will continue to work in close consultation with local communities, governments, and Catamarca authorities to ensure project design adheres to strict permitting standards that reduce Agua Rica's environmental footprint. In addition, the project will implement the Mining Association of Canada's Towards Sustainable Mining Protocols, a rigorous performance management system that helps mining companies evaluate and manage their environmental and social responsibilities. Agua Rica also plans to renew its ISO 14001 and OSHAS 18001 certifications and continue to engage extensively with local communities and promote diversity and shared values in the region.

# Other News - Early Results of Previously Announced Cash Tender Offer of Notes

The Company reported today that it has received \$462,420,000 of notes tendered under its note purchase offering, which now allocates in full the cash reserved toward its debt reduction plan. This well positions the Company toward achieving its goal of meaningfully retiring outstanding debt and thereby significantly improving its financial position in order to pursue organic growth and value creating opportunities including the opportunity that the integrated Agua Rica project represents.

## Mineral Reserve Statement, Agua Rica Project

	Proven Mineral Reserves		Probable Mineral Reserves			Total Proven & Probable			
	Tonnes	Grade	Contained	Tonnes	Grade	Contained	Tonnes	Grade	Contained
	(000's)	(g/t)	oz. (000's)	(000's)	(g/t)	oz. (000's)	(000's)	(g/t)	oz. (000's)
Gold	587,200	0.25	4,720	517,600	0.16	2,663	1,104,800	0.21	7,382
Silver	587,200	3.02	57,014	517,600	2.63	43,766	1,104,800	2.84	100,781

	Tonnes	Grade	Contained	Tonnes	Grade	Contained	Tonnes	Grade	Contained
	(000's)	(%)	lbs (mm)	(000's)	(%)	lbs (mm)	(000's)	(%)	lbs (mm)
Copper	587,200	0.57	4,779	517,600	0.43	4,450	1,104,800	0.48	11,829
Molybdenum	587,200	0.03	279	517,600	0.03	342	1,104,800	0.03	731

## Mineral Resource Statement, Agua Rica Project

	Measured Mineral Resources		Indicated Mineral Resources			Total Measured & Indicated			
	Tonnes	Grade	Contained	Tonnes	Grade	Contained	Tonnes	Grade	Contained
	(000's)	(g/t)	oz. (000's)	(000's)	(g/t)	oz. (000's)	(000's)	(g/t)	oz. (000's)
Gold	53,600	0.13	224	206,300	0.11	730	259,900	0.11	954
Silver	53,600	1.55	2,671	206,300	1.80	12,337	259,900	1.80	15,008

	Tonnes	Grade	Contained	Tonnes	Grade	Contained	Tonnes	Grade	Contained
	(000's)	(%)	lbs (mm)	(000's)	(%)	lbs (mm)	(000's)	(%)	lbs (mm)
Copper	53,600	0.22	260	206,300	0.30	1,364	259,900	0.28	1,624
Molybdenum	53,600	0.02	24	206,300	0.03	136	259,900	0.03	160

	Inferred	Inferred Mineral Resources						
	Tonnes	Tonnes Grade Containe						
	(000's)	(g/t)	oz. (000's)					
Gold	742,900	0.09	2,150					
Silver	742,900	1.62	38,693					

	Tonnes	Grade	Contained
	(000's)	(%)	lbs (mm)
Copper	742,900	0.23	3,767
Molybdenum	742,900	0.03	491

## Mineral Reserve and Mineral Resource Reporting Notes

# Mineral Reserves

Open pit mineral reserves are reported at a variable cut off value, which averages \$8.42/t. The cut off value is based on metal assumptions of \$3.00/lb for copper, \$1,250/oz for gold, \$18.00/oz for silver, and \$11.00/lb for molybdenum. A life of mine average open pit costs of \$1.72/t moved, processing and G&A cost of \$6.70/t of run of mine processed. The strip ratio of the mineral reserves is 1.66 with overall slope angles varying from 39 to 45 degrees depending on the geotechnical sector.

## Mineral Resources

Mineral resources are constrained by an optimized pit shell based on a metal assumption of \$4.00/lb for copper, \$1,600/oz for gold, \$24.00/oz for silver, and \$11.00/lb for molybdenum. Open pit mineral resources are reported at a variable cut off value, which averages \$8.42/t with overall slope angles varying from 39 to 45 degrees depending on the geotechnical sector.

- 1. Mineral reserves and mineral resources are estimated using a variable metallurgical recovery. A life of mine average metallurgical recoveries are 86% for copper, 35% for gold, 43% for silver and 44% for molybdenum were considered.
- 2. CIM (2014) definitions were followed for mineral reserves and mineral resources.
- 3. All mineral resources are reported exclusive of mineral reserves.
- 4. Mineral resources which are not mineral reserves do not have demonstrated economic viability.
- 5. Mineral reserves and mineral resources are reported as of June 30, 2019.
- 6. Due to rounding, numbers may not add precisely to the totals.
- 7. Mineral reserves QP, Giorgio de Tomi, MIMMM CEng. Member of the Institute of Minerals, Materials and Mining (UK), and Chartered Engineers (UK) of MCB Serviços e Mineração Ltda., consultants to Yamana. Mineral resources QP, Felipe Machado de Araújo, Registered Member of Chilean Mining Commission, former employee of Yamana.

## **Qualified Persons**

Scientific and technical information contained in this news release has been reviewed and approved by Anthony Maycock, P.

Eng, of MM Consultores Limitada, who is a "Qualified Person" as defined by Canadian Securities Administrators' National Instrument 43-101 - Standards of Disclosure for Mineral Projects.

#### **About Yamana**

1-888-809-0925

Yamana is a Canadian-based gold, silver and copper producer with a significant portfolio comprised of operating mines, development stage projects, and exploration and mineral properties throughout the Americas, mainly in Canada, Brazil, Chile and Argentina. Yamana plans to continue to build on this base through expansion and optimization initiatives at existing operating mines, development of new mines, the advancement of its exploration properties and, at times, by targeting other consolidation opportunities with a primary focus in the Americas.

FOR FURTHER INFORMATION PLEASE CONTACT: Investor Relations 416-815-0220

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This news release contains or incorporates by reference "forward-looking statements" and "forwardlooking information" under applicable Canadian securities legislation within the meaning of the United States Private Securities Litigation Reform Act of 1995. Forward-looking information includes, but is not limited to information with respect to the Agua Rica project and the Alumbrera mine, and the Parties strategy, plans and future financial or operating performance for the integration referred to herein. Forward-looking statements are characterized by words such as "plan," "expect", "budget", "target", "project", "intend", "believe", "anticipate", "estimate" and other similar words, or statements that certain events or conditions "may" or "will" occur. Forward-looking statements are based on the opinions, assumptions and estimates of management considered reasonable at the date the statements are made, and are inherently subject to a variety of risks and uncertainties and other known and unknown factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. These factors include the Parties' expectations in connection with the development, exploration and construction plans for the integrated Agua Rica and Alumbrera discussed herein being met, and the impact of general business and economic conditions, global liquidity and credit availability on the timing of cash flows and the values of assets and liabilities based on projected future conditions, fluctuating metal prices (such as gold, copper, silver, zinc and molybdenum), currency exchange rates (such as the Argentine peso versus the United States dollar), the impact of inflation, possible variations in ore grade or recovery rates, hedging programs, changes in accounting policies, changes in Mineral Resources and Mineral Reserves, risks related to other investments, risks related to metal purchase agreements, risks related to acquisitions, changes in project parameters as plans continue to be refined, changes in project development, construction, production and commissioning time frames, unanticipated costs and expenses, higher prices for fuel, steel, power, labour and other consumables contributing to higher costs and general risks of the mining industry, failure of plant, equipment or processes to operate as anticipated, unexpected changes in mine life, final pricing for concentrate sales, unanticipated results of future studies, seasonality and unanticipated weather changes, costs and timing of the development of new deposits, success of exploration activities, permitting timelines, government regulation and the risk of government expropriation or nationalization of mining operations, risks related to relying on local advisors and consultants in foreign jurisdictions, environmental risks, unanticipated reclamation expenses, risks related to fiscal stability agreements, risks relating to joint venture operations, title disputes or claims, limitations on insurance coverage and timing and possible outcome of pending and outstanding litigation and labour disputes, risks related to enforcing legal rights in foreign jurisdictions, as well as those risk factors discussed or referred to herein and in the Parties filings with applicable securities regulatory authorities and publically available. Although the Parties have 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 not to be anticipated, estimated or intended. 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. The Parties undertake no obligation to update forward-looking statements if circumstances or management's estimates, assumptions or opinions should change, except as required by applicable law. The reader is cautioned not to place undue reliance on forward-looking statements. The forward-looking information contained herein is presented for the purpose of assisting investors in understanding the Parties' expected plans and objectives and may not be appropriate for other purposes.

## NON-GAAP FINANCIAL MEASURES

The Company has included certain non-GAAP performance measures in this press release, including the following:

- · Cash Costs per pound of copper sold;
- All-in Sustaining Costs per pound of copper sold;
- EBITDA

The Company believes that these measures, together with measures determined in accordance with IFRS, provide investors with an improved ability to evaluate the underlying performance of the Company. Non-GAAP financial measures do not have any standardized meaning prescribed under IFRS, and therefore they may not be comparable to similar measures employed by other companies. The data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. Management's determination of the components of non-GAAP and additional measures are evaluated on a periodic basis influenced by new items and transactions, a review of investor uses and new regulations as applicable. Any changes to the measures are duly noted and retrospectively applied as applicable.

#### CASH COSTS AND ALL-IN SUSTAINING COSTS

The Company discloses "Cash Costs" because it understands that certain investors use this information to determine the Company's ability to generate earnings and cash flows for use in investing and other activities. The Company believes that conventional measures of performance prepared in accordance with IFRS do not fully illustrate the ability of its operating mines to generate cash flows. The measures, as determined under IFRS, are not necessarily indicative of operating profit or cash flows from operating activities.

The measure of Cash Costs and All-in Sustaining Costs (AISC), along with revenue from sales, is considered to be a key indicator of a company's ability to generate operating earnings and cash flows from its mining operations. This data is furnished to provide additional information and is a non-GAAP financial measure. The terms *Cash Costs per pound of copper sold*, and AISC per pound of copper sold do not have any standardized meaning prescribed under IFRS, and therefore they may not be comparable to similar measures employed by other companies. Non-GAAP financial measures should not be considered in isolation as a substitute for measures of performance prepared in accordance with IFRS and are not necessarily indicative of operating costs, operating profit or cash flows presented under IFRS.

Cash Costs include mine site operating costs such as mining, processing, administration, production taxes and royalties which are not based on sales or taxable income calculations, but are exclusive of amortization, reclamation, capital, development and exploration costs. The Company believes that such measure provides useful information about its underlying Cash Costs of operations. Cash Costs are computed on a weighted average basis as follows:

Cash Costs of copper - shown on a per pound basis. Costs directly attributable to GEO and copper will be allocated on
that attributable basis. Non-attributable costs will be allocated based on the relative value of revenues for each metal,
which will be determined annually at the beginning of each year. Costs attributable to copper sales are divided by
commercial copper pounds sold.

AISC figures are calculated in accordance with a standard developed by the World Gold Council ("WGC") (a non-regulatory, market development organization for the gold industry). Adoption of the standard is voluntary and the cost measures presented herein may not be comparable to other similarly titled measures of other companies.

AISC per sold seeks to represent total sustaining expenditures of producing and selling. The total costs used as the numerator of the unitary calculation represent Cash Costs (defined above) and includes cost components of mine sustaining capital expenditures including stripping and underground mine development, corporate and mine-site general and administrative expense, sustaining mine-site exploration and evaluation expensed and capitalized and accretion and amortization of reclamation and remediation. AISC do not include capital expenditures attributable to projects or mine expansions, exploration and evaluation costs attributable to growth projects, income tax payments, borrowing costs and dividend payments. Consequently, this measure is not representative of all of the Company's cash expenditures. In addition, the calculation of AISC does not include depletion, depreciation and amortization expense as it does not reflect the impact of expenditures incurred in prior periods.

• AISC per pound of copper - reflect allocations of the aforementioned cost components on the basis that is consistent with the nature of each of the cost component to GEO or copper production activities.

### **EBITDA**

EBITDA is a non-GAAP financial measure, which excludes the following from net earnings:

- Income tax expense;
- Finance costs: and
- Depletion, depreciation and amortization.

Management believes that EBITDA is a valuable indicator of the Company's ability to generate liquidity by producing operating cash flow to fund working capital needs, service debt obligations, and fund capital expenditures. Management uses EBITDA for this purpose. EBITDA is also frequently used by investors and analysts for valuation purposes whereby EBITDA is multiplied by a factor or "EBITDA multiple" that is based on an observed or inferred relationship between EBITDA and market values to determine the approximate total enterprise value of a company.