

# Maya Gold & Silver Reports Positive NI 43-101 Preliminary Economic Assessment Results at the Boumadine Polymetallic Mine in Morocco

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Project Indicates Pre-tax IRR of 56% with an NPV of US\$574.8 Million  
And After-tax(\*) IRR of 53% with an NPV of US\$497.6 Million (NPV discounted at 6.5%)

Mineralisation confirmed in different sectors at Boumadine mainly with DDH.

MONTREAL, April 24, 2019 - Maya Gold & Silver Inc. ("Maya" or the "Corporation") (TSX: MYA) is pleased to announce the results of an independent NI 43-101 Preliminary Economic Assessment Study ("PEA") related to its Boumadine Polymetallic Mine in Morocco. The project is owned by Compagnie Minière Maya Maroc (CMMM), a joint venture owned by Maya G&S (85%) and l'Office National des Hydrocarbures et des Mines of the Kingdom of Morocco (15%). The PEA, which has an effective date of March 29<sup>th</sup>, 2019, was prepared by GoldMinds Geoservices Inc. of Québec City Canada (GMG). Details of the PEA technical report NI 43-101 will be available on SEDAR and Maya's website within 45 days.

Maya started the first diamond-drilling program at Boumadine in January 2018 and such program has enabled Maya to increase the mineral resource estimates of Boumadine above historical statements.  
(\* In Morocco, taxes are low 0.5% on the first five year of operation for a new company and thereafter a 17.5% applies on profit.

Highlights of the Boumadine Polymetallic Mine PEA Study:

- A project life of 12 years with the current resources starting in 2021 and ending in 2033;
- Project Internal Rate of Return of 56% pre-tax and 53% after-tax;
- Project pre-tax Net Present Value of US\$574.8M (discounted at 6.5%) or US\$665.9M (discounted at 5%) at variable commodity prices;
- Project after-tax Net Present Value of US\$497.6M (discounted at 6.5%) or US\$576.7M (discounted at 5%) at variable commodity prices;
- The extraction of 7.59Mt at 1.03%Pb, 3% Zn, 1.67 g/t Au, 101.76 g/t Ag and 5.4 g/t Ge for production of 1.304M Oz of Gold Equivalent where 29.4% comes from Measured and Indicated and 70.6% from Inferred mineral resources.
- Milling starting at 1500tpd in June 2021 increasing to 2000 tpd during the period June 2023 until June 2033;
- Production starts at 83,746 Ounces of Gold Eq for 2 years increasing to 105,684 ounces of Gold Eq in the 3rd year and 109,158 per year thereafter until June 2029. Production then increases to 116,208 OzEq in 2030, 119,028 OzGEq in 2031, 120,438 OzGEq in 2032 and 129,462 OzGEq in 2033 for an average yearly production during the entire period of 108,675 Ounces of Gold Eq;
- Total operating costs of US \$101.72 per tonne (averaged over the expected life of the mine);
- Capex and sustaining capital requirements of US \$120.35M, where initial capex requirement is 89 M USD;

- The Boumadine PEA was prepared as an exclusive underground extraction of mineralized material fresh rock with limited tonnage extraction by open pit. The reprocessing of old tailings is not included in the economic analysis and such estimates could be enhanced by the optimization of the extraction sequence and configuration.

- Gold Equivalent calculation for economic analysis is:

$$\text{AuEq} = ((\text{Pb}\% \times 2,204\text{USD/t} \times 60\% \text{ rec}) + (\text{Zn}\% \times 2900\text{USD/t} \times 79.5\% \text{ rec}) + (\text{Au g/t} \times 1321\text{USD/Oz} / 31.103 \times 97.2\% \text{ rec}) + (\text{Ag g/t} \times 19\$/\text{Oz} / 31.103 \times 96.2\% \text{ rec}) + (\text{Ge g/t} \times 2.2\$ \times 75\% \text{ rec})) / (1321 \$/\text{USD} / 31.103)$$

- The projected mine contemplates a 1500 tpd mining with processing at a flotation mill with associated POx/CIL followed by an increase to 2000 tpd mining with the upgrades flotation mill.

A photo accompanying this announcement is available at <http://www.globenewswire.com/NewsRoom/AttachmentNg/4d257314-deae-40a7-a9e3-2af33896f714>

### Cautionary Statements

The PEA is preliminary in nature and includes the use of inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. Thus, there is no certainty that the results stated in the PEA will be realized. Actual results may vary, perhaps materially. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Additional exploration work is required to increase the quality of the mineral resources.

### Message from the Founder, President & CEO

Noureddine Mokaddem, Founder, President & CEO of Maya, stated: *"These positive results of the PEA mark an important milestone reached at the Boumadine project. We are very excited to see such high NPV projections in particular as the present drilling did certainly not reveal all the potential of the Boumadine property. The financial projections outlined in the PEA are very encouraging, indicating the potential economic viability of the known resources and supporting our belief that Boumadine is yet another robust project of Maya with the potential to grow into an important polymetallic producer. These results reinforce our initial assumption that the Boumadine mine could change the future of Maya Gold&Silver."*

### Mineral Resource Used in the PEA

The NI 43-101 PEA Study was based on the diluted mineral resource estimate prepared by GMG. The table below summarizes the mineral resource estimated by GMG combining all the mineralized zones.

A cut-off grade of 85USDEq was applied for the underground mineral resources.

$$\text{USDEq} = (\text{Au g/t} \times 41.8) + (\text{Ag g/t} \times 0.5) + (\text{Zn}\% \times 28.75) + (\text{Pb}\% \times 20.1) + (\text{Ge g/t} \times 2.2).$$

#### Elements Oz price

Au 1300 USD

Ag 15,5 USD

#### Elements ton price

Zn 2875 USD

Pb 2010 USD

Ge 2 200 000 USD

Mineral resources estimates Au g/t Ag g/t Zn% Pb% Ge g/t USDEq Au eq Tonnes

Total Measured	3,89	142,12	0,54	0,13	0,00	251,65	6,02	337 000
Total Indicated	1,57	127,88	3,06	1,20	3,90	250,45	6,00	2 195 000
Total Meas & Ind	1,88	129,77	2,73	1,06	3,38	250,61	6,00	2 532 000
Total Inferred	1,56	89,55	2,73	1,16	5,08	222,96	5,31	6 451 000

Total mineral resource estimates at Boumadine polymetallic mine including the tailings (rounded numbers).

Resources not including the tailings	Au g/t	Ag g/t	Zn%	Pb%	Ge g/t	USDEq	Au eq	Tonnes
Total Measured	7,76	137,52	1,86	0,43		455,40	10,89	98 000
Total Indicated	1,57	127,88	3,06	1,20	3,90	250,45	6,00	2 195 000
Total Meas & Ind	1,84	128,29	3,01	1,17	3,74	259,19	6,21	2 293 000
Total Inferred	1,56	89,55	2,73	1,16	5,08	222,96	5,31	6 451 000

Mineral resource estimates at Boumadine polymetallic mine excluding the tailings (rounded numbers).

Mineral Resources Boumadine	Au g/t	Ag g/t	Zn%	Pb%	Ge g/t	USDEq	Au eq g/t	Tonnes
Measured resources tailings	2,30	144	ne	ne	ne	168,22	4,02	238 892
Measured Zone centre	7,76	137,52	1,86	0,43	ne	455,40	10,89	97 820
Indicated Zone Centre	2,67	129,40	2,69	0,60	ne	265,57	6,35	586 920
Meas + Ind Zone centre	3,40	130,56	2,57	0,58	ne	292,69	7,00	684 740
Inferred Zone Centre	1,99	90,27	2,78	1,15	ne	231,36	5,54	3 864 817
indicated Zone Sud	1,42	172,80	3,40	1,67	ne	276,97	6,63	983 244
inferred Zone Sud	1,68	142,24	2,69	1,28	ne	244,60	5,85	652079,8
indicated Zone Nord	0,54	71,95	4,73	1,31	ne	220,72	5,34	278 298
Inferred Zone Nord	0,79	99,38	4,98	1,61	ne	257,97	5,94	581 825
indicated Tizi	1,13	75,32	2,24	1,23	ne	174,00	4,16	96 818
inferred Tizi	1,12	120,79	2,01	1,18	ne	189,00	4,52	413 554
Indicated Imariren	0,93	30,38	1,12	0,59	34,24	173,42	4,15	250 215
Inferred imariren	0,38	30,12	1,47	0,82	34,90	166,54	3,98	938 284

Detailed mineral resources estimate by zones (ne: not estimated).

Note: 7.59Mt of mineralized material is used in the PEA calculation, resources at depth in Zone Centre and Sud as well as old tailings are not used in the preliminary economic assessment.

## Project Economics

A summary of the base case parameters and assumptions are shown below:

### Project Base Case Economic Parameters and Assumptions

Items	Units	Values
Silver price (yearly average)	US/oz	\$21.00
Gold Price (yearly average)	US/oz	\$1,380.00
Lead Price (Yearly average)	US/t	\$2,501
Zinc Price (Yearly average)	US/t	\$3,125
Germanium (Yearly average)	US/Kg	\$2,200
Processed tonnage over LoM	metric tonne	7,590,000
Silver metal production	ounces	19,734,105
Gold metal production	ounces	327,226
Lead metal production	metric tonne	38,749

Zinc metal production	metric tonne	149,540
Germanium metal production	kg	16,150
Royalty on sales (ONHYM)	%	3.0
Maya Management Fees	%	2.75
Taxes for the first 5 years on gross revenues for a new company	%	0.5
Taxes after the first 5 years on profits	%	17.5

The project cash flow summary of the base case is shown in the following table:

#### Project Cash Flow Summary BOUMADINE

Items	Value USS
Total revenue of sales	\$1,731,996,000
Total operating costs	\$772,050,000
Pre-tax discounted (6.5%) NPV	\$574,821,000
After-tax discounted (6.5%) NPV	\$497,650,000

#### Operating Costs

The operating costs, also called operating expenditures (Opex), are expressed in USD per tonne processed, and are summarized below. This next Table outlines the costs of the total project.

#### Operating Costs

Items	Cost US	Cost US/t milled
Waste development cost	\$9,108,000	\$1.20
Mineralized Material production cost	\$210,243,000	\$27.70
Mineralized Material process cost	\$347,305,200	\$45.76
Concentrate transport & Refiner costs	92,522,100	12.19
Administration & Environment	\$13,282,500	\$1.75
Royalties & Management fees	\$99,589,758	\$13.12
Total	\$772,050,558	\$101.72

Note: The internal shaft, main ramps with all major underground developments of the mines are in the Capex with sustaining capital. Provision for additional underground development is taken into account with a 15% waste development cost on mineralized material mined.

#### Capital Costs

The breakdown of the surface, mill and underground remaining capital cost expenditures (Capex) and sustaining capital to materialize the study is summarized in the following table. It is important to note that the Boumadine project capital costs start with mining and processing of 1500 tpd and quick ramp-up after two years to 2000 tpd ROM. Capital expenditures are aligned with this plan.

It is important to mention that operating costs are based on existing real cost adapted to up scaling scenarios. Moreover, the mill capital cost estimates are based on real effective costs of Maya Maroc Zgounder Mine for the 500 tpd flotation Mill whose total cost amounted to 6.9 MUSD. This mill is installed and up and running.

#### Capex Summary

Description	Cost - US
Power Line + Power Stations	\$ 3 000 000

Flotation + POx/CIL Mill 15000 tpd	\$ 35 000 000
Well, pumps and water line	\$ 2 500 000
Fresh water reservoir	\$ 350 000
Main Ramps/Drift	\$10 885 000
New Tailings	\$ 2 500,000
Site Preparation Road	\$ 1 000 000
Pick-up trucks	\$ 350 000
Staff Mini-buses	\$ 300 000
Utility Loader and truck	\$ 350 000
Security system & Camera	\$ 250,000
Explosive magazine	\$ 800 000
Expansion 2000 t/d 50%	\$ 5 000 000
Generators	\$ 2 100 000
Fuel tanks	\$ 100 000
Exploration Drilling & Studies	\$ 5 000 000
Water Treatment plant	\$ 550 000
UG Equipment	\$ 9 600 000
Gate & balance	\$ 250 000
Communication system	\$ 500 000
Sub-Total	\$ 80 985 000
Contingencies	\$ 8 098 500
Total initial capex	\$ 89 083 500

1US\$=10Dirhams

The initial capex cover the time to build and 4 years of operation, while other Capex associated with explosive storage, garage, warehouse, ventilation, mining equipment, development works total \$21,267,000. In addition, \$5,000,000 are foreseen for the mill upgrade and another \$5,000,000 for the sustaining capital. The total of capex of the project is \$120,350,500.

A contingency of 10% on the initial Capex has been added even if it is a preliminary economic assessment with a +/- 30% precision.

## Mining

The Boumadine deposit assumes the processing of an average of 1500 tpd for the first two year starting June 2021 with an envisioned expansion to 2000 tpd forecasted for the rest of the mine life 2033.

In Boumadine, there are 5 mining zones called: Centre, Sud, Nord, Tizi and Imariren.

The mining will start with a small open pit at Imariren that will produce 100,000m.t. per year for two years. During the same period, a ramp from surface will start for the zones Centre and Nord to be ready to produce 1500m.t. per day including the Imariren open pit for two years starting year 2021.

All infrastructures such as: plant, offices, garage, warehouse etc, will be located at the Centre zone due to the fact that zone is the largest one in tonnage out of the 5.

Starting year 2023, the production will climb to 2000m.t. per day up to the end of the mine life which is the year 2033 if there is no other addition to the actual total tonnage. We are assuming 330 days of mining production per year.

During the year 2026, a ramp will start for zone South and the same for zones Tizi and Imariren during the year 2028.

The various zones of the deposit are located in competent rock and have steep overall dip, making it easily mined using free falling methods and cut and fill method (same method as at Zgounder). It is recommended to use as much as we can the open long-hole mining method with sub-levels for the proposed new mining sites.

The Nord zone is wide and will be in the long-hole stoping category.

The 5 zones will have a main ramp from surface and will have a second exit for ventilation and escape way from actual shafts from Centre, Sud and Tizi and new raise development for Imariren and Nord from bottom to surface. Raise extensions will have to be completed to connect the actual shaft and the bottom of the zone for Sud, Centre and Tizi. Raising will be done by Alimak method.

The various main ramp will have a dimension of 4.5m by 3.5m.

Each zone will have their own compressed air system, electricity, explosive storage room and a backup generator in case of power loss to keep the underground ventilation working.

For mining equipment, 1 boom jumbo, scooptram (3t.) and 5 cubic meters dumpers will be the main equipment used.

During the life of the mine, the mining equipment will go from one zone to develop a next zone thus saving capex on equipment due to the fact that each zone will be mined more or less the same way and not at the same time.

Since, there is no production shaft but only a main ramp for each zone, all mineralized material will be hauled via trucks up to surface and transferred into bigger trucks to be hauled at the plant near Centre zone. Production shaft is not viable for now due to the shallowness of each zone.

## Metallurgy and Processing

Feed rate to the mill will be 1500 tpd from June 2021 to June 2023 to be increased to 2000 tpd from June 2023 until depletion of the actual known resources.

Even if for the first two years of operation the feed rate to the mill will be only 1500 tpd, the mill building will be built as to immediately accommodate the future 2000 tpd operation.

Feed to the mill will principally come from the Boumadine open pit and underground fresh material. Milling of the old tailings will only compensate for the lack of fresh feed coming from the mining operation and will essentially take place whenever there will be a shortage of fresh feed to the mill.

Milling of the fresh material will comprise crushing, grinding, lead, zinc and sulphide flotation, pressure oxidation of the sulphide concentrate, cyanidation of the POX residue and finally a cyanide destruction circuit directly in the mill. Milling of the old tailings will basically utilize the same circuit as the one used for the fresh feed material except that the crushing, grinding and the flotation circuits will be by-passed. Recoveries are derived from Metallurgical tests done at SGS Lakefield in Canada.

It is expected that about 80% of the process water will come from the recirculation to the mill of the water from the tailings polishing pond. The other 20% will come from a source distant some 7.5 km from the Boumadine central zone.

## Infrastructure

The energy will be provided by a new power line rating 10MVA and is expected to be powerful enough for the milling operation of the 2000 tpd. The new line will have to be installed from the Village of Goulmima. The discussions with the Office National of Energy (ONE) set the total Capex to US3.5 million.

A new water line will have to be installed for the mill and there is a provision in the Capex for this. As well, new tailings (one for the flotation and one lined for the cyanidation CIL tails) will be prepared for the whole mine life of the PEA. A polishing pond with water containment is planned to assist in the management of recycle water. Provision for a water treatment plant near the polishing pond has been done.

No provision in the Capex exists for the expansion of the existing accommodation camp as it is scheduled that workers will be living in nearby cities and villages (the staff and mining contractors).

## Mineral Resources parameters:

For the present mineral resource estimation, GMG has used the Boumadine database composed by surface diamond drill-holes, percussion holes, drift samples and soil samples (using the AMS soil core sampler).

In addition to the historical database, GMG has requested in 2018 a diamond drilling program on the principal mineralized bodies at Boumadine to validate the historical panels as well as the validation of the vertical extensions of these mineralized bodies.

After compilation and validation/verification of the database the geological interpretation was done by sector and by geological zones. The database used for this mineral estimate includes drill results obtained from the recent drill program and a detailed topographic surface. A total of fifty-one (51) 3D envelopes were constructed by connecting the defined mineralized prisms.

Each composite has a length of 1m created from the beginning of each mineralized interval. The envelopes have been filled by regular blocks (1mE x 1mN x 2mZ) and only composites within the envelopes have been used to estimate the grades of the blocks.

During the site visit, GMG geologist took independent core samples from two drill holes (interval of 39m core samples from Holes B-17-02 and B\_17-04). The specific gravity results from these intervals show an average of 3.97 t/m<sup>3</sup>. In order to calculate tonnage from the volumetric estimates of the block models and to be more conservative a fix specific gravity of 3.65 t/m<sup>3</sup> was used by GMG. This specific gravity reflects the typical mineralized interval composed mainly by ignimbrites and andesites.

Search ellipsoids were used for the grade estimation and follow the geological interpretation trends, each are specific envelope. Block grades were interpolated from the composites in two passes using the inverse distance to the square methodology. For run one and two we used a number of composites limited to twelve (12) with a minimum of two (02).

The mineral resources were classified using the search ellipsoids for each category:

- Measured mineral resources were estimated using the results from the last drilling campaign. We used a maximum of twelve (12) composites and a minimum of two (02) composites from the same drill hole.
- Indicated mineral resources were estimated using a maximum of twelve (12) composites per block and a minimum of two (02) composites from the same drill hole. And the remaining blocks within the envelopes are classified as inferred mineral resources blocks.
  - Search ellipsoid radius measured 30m x 30m x 15m.
  - Search ellipsoid radius indicated 40m x 40m x 15m.
  - Remaining inferred.

In order to accurately estimate the resources, GMG removed the mined out volumes (stopes, drifts and adits &ndash; digitized from historical plans) after the block model estimation since the mined out volumes were

included in the modelled envelopes.

## Qualified Persons

The technical content of this news release has been prepared and reviewed by Daniel Dufort Eng., Claude Duplessis Eng., Gilbert Rousseau Eng. and Dr. Merouane Rachidi P. Geo. from GoldMinds Geoservices Inc. all independent Qualified Persons under NI 43-101 standards.

## Forward-looking statements

This news release contains statements about our future business and planned activities. These are "forward-looking" because we have used what we know and expect today to make a statement about the future. Forward-looking statements including but are not limited to comments regarding the timing and content of upcoming work and analyses. Forward-looking statements usually include words such as may, intend, plan, expect, anticipate, and believe or other similar words. We believe the expectations reflected in these forward-looking statements are reasonable. However, actual events and results could be substantially different because of the risks and uncertainties associated with our business or events that happen after the date of this news release. You should not place undue reliance on forward-looking statements. As a general policy, we do not update forward-looking statements except as required by securities laws and regulations.

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