SEMAFO: Positive PEA Results for Nabanga

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After-tax Net Present Value of $100 Million

MONTREAL, Sept. 30, 2019 - Semafo Inc. (TSX:SMF), (OMX: SMF) is pleased to announce positive results from a pr

Highlights

- Pre-tax NPV of $147 million and after-tax NPV of $100 million, using a 5% discount rate
- LoM gold production of 571,000 ounces at AISC of $760/oz and a gold recovery of 92% during the 8 years of ope
- Pre-production capital expenditure of $84 million, including 20% contingency, and $56 million in LoM sustaining c
- Project economics (base case at $1,300/oz gold price):
  - After-tax 5% NPV: $100 million
  - After-tax IRR: 22.6%
  - Payback period: 4.4 years
- Preferred mining method – open-pit/ underground mining on the upper and at-depth portions of the ore zo
- Opportunities exist to improve returns through an increase in resources and additional cost saving measures in th

Benoit Desormeaux, President and CEO, stated, "The results in today's PEA highlight attractive economics for Nabang combining open-pit and underground mining operations. The goal of the PEA study was to assess the initial economic v development pipeline. We believe we can improve the project economics through additional work on mining cost optimi development expenditures. Furthermore, there remains potential to extend resources through additional exploration dri exists on the property. As we move beyond the PEA, we will be looking to maximise the potential to generate shareholc

Mineral Resources

The PEA is based on mineral resources estimated on December 31, 2018 for the Nabanga deposit.

Category	Tonnes Mt	Au g/t	Ounces K oz
Inferred resources [1]	3.4	7.7	840

[1] Nabanga mineral resource is reported above a cut-off grade of 3.0 g/t Au.

Mineralization

The mineralization at the Nabanga deposit is predominately hosted within a granodiorite intrusive. The gold mineralizat developed around the central quartz filled structure. The mineralized structure dips approximately 65 degrees towards t

Exploration Potential

On the exploration front, the Nabanga deposit remains open to the north and many of the ore shoots are open at depth 5.17 g/t Au over 3.4 meters along the plunge direction, confirming the continuity of the mineralized shoot. In addition, th soil and auger anomalies within trucking distance of the deposit. More specifically, auger drilling carried out in 2019 wit could offer proximal satellite zones of gold mineralization.

Gold Price Sensitivity Analysis

The Nabanga project sensitivity analysis was performed using a $100 variation from the base case gold price as illustra

	Base Case	$1,400 oz gold	$1,500 oz gold
	$1,300 oz gold		
After-tax 5% NPV ($M)	$100	$130	$160
After-tax IRR (%)	23	28	32
Payback period (years)	4.4	3.8	3.4

Mining

The PEA envisions a combination of contract-operated open pit and underground mining methods for the Nabanga deposit. The top portion of the mineralized zone is projected to be recovered by conventional truck & shovel open-pit mining down to a maximum depth of 60 to 70 meters. Open-pit production is contemplated at a rate of 16,000 tonnes per day (tpd) for a total of 14.7 million tonnes of material, including 616,000 tonnes of mineralized material at an average grade of 6.45 g/t Au. Drill and blast will be required almost at the beginning of the excavation work because there is almost no overburden. The open-pit operation is planned over a period of 2.5 years, including the pre-production period.

Below the open pit, recovery of the mineralized zone is foreseen using an underground mining method (sublevel long hole stoping) with the use of cemented rock fill. In the scenario presented in the PEA, development of the underground mine would commence in the second year of operations, starting from one of the small satellite pits located towards the central portion of the Nabanga deposit. More than 9,600 meters of underground development are planned over the project LOM to unlock the different mineralized zones. Approximately 2,365 million tonnes of material with an average head-grade of 6.48 g/t Au are projected to be mined from underground operations at an average of 1,000 tpd during the seven-year projected LoM.

Over the project LOM, combined open-pit and underground production is estimated at 2.98 million tonnes at an average grade of 6.47 g/t Au. A cut-off grade of 2 g/t Au has been used for the open-pit mineralized material while a cut-off grade of 3.7 g/t Au has been used for the underground mineralization.

	Tonnes Kt	Au grade g/t	Ounces K oz
PEA open pit mineralization[1]	616	6.45	128
PEA underground mineralization[2]	2,365	6.48	498
Total PEA (OP & UG) mineralization	2,980	6.47	626

[1] Nabanga PEA open pit mineralization is reported above a cut-off grade of 2.0 g/t Au and includes 12% dilution.

[2] Nabanga PEA underground mineralization is reported above a cut-off grade of 3.7 g/t Au and includes 0.5 meters of dilution in both the hanging wall and foot wall of the mineralization.

Metallurgy and Processing

The Nabanga process plant will be based on a conventional crushing and grinding circuit, with the crushing circuit composed of a single-stage jaw crusher. Crushed ore will then be conveyed to the grinding circuit using a SAG mill and ball mill circuit. Following that, a flotation circuit is expected to recover some 80% of the gold-bearing minerals, with the remaining 20% treated in CIL leach tanks. The flotation concentrate will pass to the regrind mill to reduce the particle size, before being sent to an intensive leach reactor. The CIL stream will undergo pressure elution, after which both pregnant solutions will be sent to electrowinning cells for gold recovery.

A gold recovery of approximately 92% is expected in fresh ore and 90% in oxide ore based on metallurgical test results obtained by Orbis Gold Ltd. in 2013 and 2014.

Capital expenditures

Initial capital costs are estimated at $84 million with LoM sustaining capital expenditure estimated at $56 million. See below for more detail.

Pre-production Expenditures	$M
OP mine development	8.7
Surface infrastructure	7.1
Process plant	27.6
Tailings & water management	2.4
Power plant & distribution	6.6
Indirect costs	17.2
Contingency	13.9
Total initial capital expenditures	84

Pre-production Expenditures per Year

In millions of $	Year 1	Year 2
Pre-production expenditures	17	67

LoM Total Cash and All-in Sustaining Costs
The table below gives the LoM AISC per tonne processed at Nabanga, which includes the government royalties and sustaining capital expenditures.

	$M	$/oz produced
Mining	154.6	271
Processing	139.1	244
General & administration costs	39.9	70
Government royalties	44.4	78
Sustaining capital expenditures	55.9	98
All-in sustaining cost (AISC)	433.9	760

Next Steps

Recommended next steps in the PEA include drilling the mineral resources up to the measured and indicated categories and launching a feasibility study to demonstrate the anticipated economic and technical parameters. From a corporate perspective, we will evaluate the best alternative to generate shareholder value.

Qualified Persons & Technical Report

The Nabanga deposit PEA is preliminary in nature and includes 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. There is no guarantee that inferred resources can be converted to indicated or measured resources and as such, there is no certainty that the PEA will be realized. A technical report for the PEA prepared in accordance with National Instrument 43-101 will be filed at www.sedar.com within 45 days of this news release.

The PEA was conducted by the firm DRA Met-Chem and revised by Patrick Moryoussef, Eng., Vice-President, Mining Operations, SEMAFO and Qualified Person, as defined by National Instrument 43-101. Patrick Moryoussef has reviewed this press release for accuracy and compliance with National Instrument 43-101. The PEA is based on SEMAFO's technical report on the resources of the Nabanga gold deposit as at December 31, 2018, available on SEDAR at www.sedar.com.

About SEMAFO
SEMAFO is a Canadian-based intermediate gold producer with over twenty years' experience building and operating mines in West Africa. The Corporation operates two mines, the Boungou and Mana Mines in Burkina Faso. SEMAFO is committed to building value through responsible mining of its quality assets and leveraging its development pipeline.

CAUTION CONCERNING FORWARD-LOOKING STATEMENTS
This press release contains forward-looking statements. All statements other than statements of present or historical facts are forward-looking. Forward-looking statements involve known and unknown risks, uncertainties and assumptions and accordingly, actual results and future events could differ materially from those expressed or implied in such statements. You are hence cautioned not to place undue reliance on forward-looking statements. Forward-looking statements include words or expressions such as "preliminary", "payback period", "opportunities", "improve", "increase", "initial", "development", "pipeline", "believe", "potential", "expand", "additional", "move beyond", "will", "maximise", "generate", "remainder", "could", "contemplated", "planned", "LOM", "estimated", "expected", "initial", "next steps", "launching", "demonstrate", "evaluate", "committed", "building", "leveraging", and other similar words or expressions. Factors that could cause future results or events to differ materially from current expectations expressed or implied by the forward-looking statements include the ability to (i) deliver the results of the Nabanga PEA, including its highlights, (ii) capitalize on Nabanga's exploration potential, (iii) meet Nabanga's expected mining, metallurgy

and processing methods, capital expenditures, pre-production expenditures, LOM and AISC, (iv) be in line with all assumptions contained in the PEA, (v) execute on our strategic focus, fluctuation in the price of currencies, gold or operating costs, mining industry risks, uncertainty as to calculation of mineral reserves and resources, delays, political and social stability in Africa (including our ability to maintain or renew licenses and permits) and other risks described in SEMAFO's documents filed with Canadian securities regulatory authorities. You can find further information with respect to these and other risks in SEMAFO's 2018 Annual MD&A, as updated in SEMAFO's 2019 First Quarter MD&A and 2019 Second Quarter MD&A and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These documents are also available on our website at www.semafo.com. SEMAFO disclaims any obligation to update or revise these forward-looking statements, except as required by applicable law.

TABLE 1 – NABANGA LOM PLAN AND CASH FLOW

	Total or Average LoM	Construction Period	Year 1	Year 2	Year 3
MINE SCHEDULE					
Open-pit ore (t)	615,974	88,067	308,251	219,657	
Open-pit grade (g/t)	6.45	6.20	6.33	6.70	
Open-pit waste (t)		2,894,907	5,401,199	5,762,218	
Underground ore (t)	2,364,459			88,411	359,981
Underground grade (g/t)	6,48			6.96	5.75
Total ore mined (t)	2,980,434	88,067	308,251	308,068	359,981
Ore grade (g/t)	6.47	6.20	6.33	6.78	5.75
PROCESSING SCHEDULE					
Ore processed	2,980,434		330,000	360,000	360,000
Grade processed (g/t)			6.3	6.69	5.79
Recovery (%)	92		92	92	92
Production (oz)			61,531	71,263	61,602
REVENUES (in $)			79,806,232	92 427 652	79 897 446
OPERATING COSTS (in $)			(40,893,017)	(46 773 854)	(48 473 535
EBITDA (in $)			38,913,215	45 653 798	31 423 911
Accounts receivable (in $)			9,975,779	11,553,457	9,987,181
Accounts payable (in $)			(3,407,751)	(3,897,821)	(4,039,461)
Working capital (in $)			6,568,028	7,655,635	5,947,720
Change in working capital (in $)		(6,568,028)	(1,087,608)	1,707,916	(2,115,376)
Initial capex	(83,695,551)	(83,695,551)			
Sustaining capex	(55,914,520)		556,818	19,500,314	13,722,562
Capitalized stripping activity (part of initial capex)	(13,923,466)	(13,923,466)			
Rehabilitation & closure costs	(5,000,000)				
CASH FLOW		(90,263,579)	37,268,790	27,861,401	15,585,973
Total cash cost /oz	662		665	656	787
All-in sustaining cost /oz	760		665	664	1,103

SOURCE SEMAFO

Contact
John Jentz, Vice-President, Corporate Development & Investor Relations, Email: John.Jentz@semafo.com; Ruth Hanna, Analyst, Investor Relations, Email: Ruth.Hanna@semafo.com, Tel. local & overseas: +1 (514) 744 4408, North America Toll-Free: 1 (888) 744 4408, Website: www.semafo.com