

Roxgold Announces Robust Séguéla Feasibility Study with After-Tax NPV of US\$380 Million and 49% IRR

19.04.2021 | [Business Wire](#)

[Roxgold Inc.](#) ("Roxgold" or the "Company") (TSX: ROXG) (OTCQX: ROGFF) is pleased to announce the results of the Feasibility Study (the "Feasibility Study") and Mineral Reserve estimate for the high-grade Séguéla Gold Project ("Séguéla" or the "Séguéla Gold Project") in Côte d'Ivoire. The Feasibility Study was prepared in accordance with Canadian Securities Administrators' National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101").

This press release features multimedia. View the full release here:
<https://www.businesswire.com/news/home/20210419005239/en/>

Figure 1. Séguéla Gold Project (Graphic: Business Wire)

The Feasibility Study confirms robust economics for the development of an open-pit mining operation at Séguéla, targeting a series of open-pit mines at Antenna, Koula, Ancien, Agouti and Boulder deposits that will feed a central gold processing facility. Roxgold intends to make a formal construction decision upon completion of a debt financing package and signed mining convention with the Government of Côte d'Ivoire.

A webcast and conference call to discuss the Feasibility Study results will be held on Monday, April 19th, 2021 at 4:30PM Eastern time - details with respect to participation on the call are outlined in the "Séguéla Gold Project Feasibility Study Conference Call" section below.

Key Highlights (all financial results are in U.S. dollars unless otherwise noted):

1. Feasibility Study

Robust Economics

- The Feasibility Study considers an operation with an initial nameplate of 1.25 million tonnes per annum ("Mtpa") and mine life of 9 years.
- LOM after-tax net cash flow of \$536 million at a gold price of \$1,600 per ounce.
- Robust economics with after-tax net present value ("NPV") and internal rate of return ("IRR") of:

Metric	Base Case @ Spot Price @	
	\$1,600/oz Au	\$1,750/oz Au
NPV _{5%} after-tax - attr. to Roxgold's 90% interest	\$380 million	\$451 million
After tax IRR	49%	56%

High-Grade Mineral Resource and Initial Mineral Reserve Estimate

- Initial Proven and Probable Mineral Reserve estimate of 12.1 million tonnes grading 2.8 g/t Au totalling 1.1 Moz Au - positioning Séguéla among the highest-grade open pit gold projects globally.

Enhanced and Extended Production Profile

- Average annual gold production of 133,000 ounces over the first six years of production, with an estimated production peak of 151,000 ounces in year four.
- Life of Mine ("LOM") gold production of 1.03 million ounces of gold with average annual production of 120,000 ounces.
- Processing plant throughput rate will be expanded by approximately 25% to 1.57Mtpa in year three, through a series of optimisation and debottlenecking measures with minimal capital requirements.

Low Quartile Costs

- Average cash costs¹ per ounce produced of \$567 per ounce over the LOM, including a cash cost of \$528 per ounce over the first six years of production.
- Average All-In Sustaining Costs ("AISC")¹ of \$832 per ounce over the LOM, including an AISC of \$797 per ounce over the first six years of production.

Development Capital

- Estimated pre-production capital cost of \$142 million.
- Early stage construction activities have commenced with site access road and camp construction underway. Full construction will commence following a formal construction decision and completion of debt financing.
- Front-end engineering and design work is well advanced and procurement activities of long lead items are underway.
- All permits required to begin construction are in hand.

2. Further Optimisation Opportunities

- Ongoing expansion and optimisation of the project. Drilling at depth at Koula and Ancien have continued to intersect high grade mineralization which suggests the potential for an underground expansion opportunity.
- An optimization study has commenced to explore the opportunity to mine more of the current Mineral Resource base from underground, which would reduce the need for larger respective pits and therefore substantially lower accompanying strip ratios.

3. Future Growth

- Roxgold is positioned well to expand the Séguéla Project with:
 - Potential for underground expansion at Koula and Ancien
 - Significant exploration prospectivity with the recent discovery of the Sunbird prospect and over 20 prospective targets yet to be tested

John Dorward, President and Chief Executive Officer commented: "We are pleased to share with the market the results of our Feasibility Study on Séguéla which underscores the substantial value accretion that this project will bring to Roxgold and its shareholders. Séguéla has rapidly become a cornerstone asset for Roxgold, with the potential to more than double the company's production profile within a short time frame. We expect to be able to deliver this without the need for equity dilution.

"The value creation at Séguéla has been remarkable and we still believe there is significant upside through further optimisation opportunities and the exploration potential at the project. We acquired Séguéla in 2019 for \$20 million in cash, and through the hard work of our exploration and project teams, we have been able to generate exceptional prospective project economics with an after-tax NPV attributable to Roxgold of \$380 million and an IRR of 49% at a gold price of \$1,600/oz.

"In the first six years of operation, the project will produce an average of 133,000 ounces of gold per year at an AISC of \$797 per ounce generating an average annual EBITDA¹ of \$130 million per year.

"Importantly, the Séguéla project as outlined today is just a snapshot in time of the potential value of the project. Our drill programs continue to have success delineating mineralization down plunge at Ancien and Koula, building confidence in the potential of high-grade underground scenarios from these deposits. Further, we continue to see the significant exploration prospectivity of Séguéla with the recent

announcement of the discovery of Sunbird, which has the potential to be another high grade prospect within close proximity to our planned operations and infrastructure. As we continue to drill and define additional targets on our property package, our understanding of the drivers of the mineralization throughout the property continues to improve, increasing the likelihood of additional successes to come from the twenty plus targets on the property yet to be tested. It is our belief that, with continued drilling success, there is the potential to continue to add significant production ounces and value to Séguéla."

Séguéla Gold Project Overview

The Séguéla Gold Project is located approximately 240 kilometres north-west of Yamoussoukro, the political capital of Côte d'Ivoire, and approximately 480 kilometres north-west of Abidjan, the commercial capital of the country. The Séguéla property covers an area of 35,360 hectares, defined by two exploration permits. The property is generally accessible year-round by road. Bituminised national highways facilitate transport between Abidjan, Yamoussoukro, and the town of Séguéla (population 65,000) which is the nearest major town to the property. The project is accessible from the town of Séguéla via approximately 40 km of unsealed road. The Séguéla Gold Project and the township of Séguéla occur in a region of low forested hills, with elevations averaging 347m above sea level.

Figure 1: Séguéla Gold Project

Table 1 - Feasibility Summary

Metrics	Units	Results
Gold Price	\$/oz	1,600
Life of Mine	years	8.6
Total Mineralized Material Mined	tonnes	12,064,000
Contained Gold In Mined Resource	oz	1,088,000
Strip Ratio	w:o	13.9:1
Throughput @ Start-up	Mtpa	1.25
Throughput @ Peak	Mtpa	1.57
Head Grade	g/t Au	2.8
Recoveries	%	94.5%
Gold production		
Total Production over LOM	oz	1,028,000
Annual Production, LOM	oz	120,000
Annual Production, first 6 years	oz	133,000
Per Unit Costs over LOM		
Total Mining Costs	\$/t, mined	\$2.79
Mining Costs, Sustaining Capital	\$/t, mined	\$0.78
Mining Costs, Operating Costs	\$/t, mined	\$2.01
Processing	\$/t, processed	\$12.57

G&A	\$/t, processed	\$5.30
Total Operating Costs (excl. Sustaining Capital)	\$/t, processed	\$47.83
Cash costs		
Average Operating Cash Costs, LOM	\$/oz	\$567
Average Operating Cash Costs, first 6 years	\$/oz	\$528
AISC		
Average AISC, LOM	\$/oz	\$832
Average AISC, first 6 years	\$/oz	\$797
Capital costs		
Initial Capital Expenditure	\$M	\$142
Sustaining Capital, Operations + Infrastructure (ex-closure costs)	\$M	\$32
Sustaining Capital, Mining	\$M	\$141
NPV _{5%} , pre-tax (100%)	\$M	\$455
Pre-tax IRR	%	53%
NPV _{5%} , after-tax (attr. to ROXG 90% interest)	\$M	\$380
After-tax IRR	%	49%
Payback Period	years	1.7
Annual EBITDA		
Average EBITDA over LOM	\$M	\$107
Average EBITDA over first 6 years	\$M	\$130
Environmental Data		
GHG Emissions Intensity (Scope 1 + 2)	tCO ₂ e/oz	0.58
Energy Intensity	GJ/oz	4.39

Mineral Resource and Reserves Estimate

The Séguéla Mineral Resource Estimate provided in Table 2 includes the Antenna, Koula, Ancien, Agouti and Boulder deposits and was prepared by Hans Andersen from Roxgold. Roxgold completed an updated Mineral Resource estimate for the Koula deposit, based on the drillhole data cut-off of March 31st, 2021. The Antenna, Ancien, Agouti and Boulder Mineral Resource estimates are unchanged since the previous reported Mineral Resource in the technical report entitled "NI 43-101 Technical Report, Séguéla Project, Worodougou Region, Cote d'Ivoire" with an effective report date of November 30th, 2020 which is available on SEDAR at www.sedar.com.

The Séguéla Mineral Resource estimate incorporates data from all Reverse Circulation ("RC") and Diamond Drilling ("DD") drilling prior to the cut-off, comprising 125,510 metres in 910 drillholes targeting Antenna, Koula, Ancien, Agouti, and Boulder since the acquisition of the Séguéla Project in April 2019.

Table 2 - Mineral Resource Estimate

	Measured			Indicated			Measured & Indicated			Inferred		
	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	(Mt)	(g/t Au)	(000 oz)	(Mt)	(g/t Au)	(000 oz)	(Mt)	(g/t Au)	(000 oz)	(Mt)	(g/t Au)	(000 oz)
Antenna -	-	-	-	8.2	2.2	586	8.2	2.2	586	1.1	1.9	69
Koula -	-	-	-	1.2	7.4	285	1.2	7.4	285	0.2	3.0	14
Ancien -	-	-	-	1.4	5.4	250	1.4	5.4	250	0.0	10.6	11
Agouti -	-	-	-	1.4	2.4	111	1.4	2.4	111	0.1	1.8	6
Boulder -	-	-	-	1.7	1.7	97	1.7	1.7	97	0.1	1.2	3
Total -	-	-	-	14.0	3.0	1,328	14.0	3.0	1,328	1.5	2.2	104

Notes:

(1) Mineral Resources are reported in accordance with NI 43-101 with an effective date of March 31st, 2021, for Séguéla.

(2) The Séguéla Mineral Resources are reported on a 100% basis at a gold grade cut-off of 0.3 g/t Au for Antenna and 0.5 g/t Au for the satellite deposits, based on a gold price of US\$1,700/ounce and constrained to MII preliminary pit shells.

(3) The identified Mineral Resources in the block model are classified according to the "CIM" definitions for the Measured, Indicated, and Inferred categories. The Mineral Resources are reported in situ without modifying factors applied.

(4) The Séguéla Mineral Resource Statement was prepared under the supervision of Mr. Hans Andersen, Senior Resource Geologist at [Roxgold Inc.](#) Mr. Andersen is a Qualified Person as defined in NI 43-101.

(5) All figures have been rounded to reflect the relative accuracy of the estimates and totals may not add due to rounding.

(6) Mineral Resources that are not Mineral Reserves do not necessarily demonstrate economic viability.

(7) Mineral Resources are reported inclusive of Mineral Reserves

(8) The Séguéla Gold Project is subject to a 10% carried interest held by the government of Cote d'Ivoire

The initial Séguéla Mineral Reserve estimate was prepared by Entech Pty Ltd, dated of March 31, 2021. Only Mineral Reserves have been incorporated into the mine plan and economic analysis.

Table 3 - Open Pit Mineral Reserve Estimate

	Proven			Probable			Proven + Probable		
	Tonnes	Grade	Metal	Tonnes	Grade	Metal	Tonnes	Grade	Metal
	(Mt)	(g/t Au)	(000 oz)	(Mt)	(g/t Au)	(000 oz)	(Mt)	(g/t Au)	(000 oz)
Antenna -	-	-	-	7.2	2.1	482	7.2	2.1	482
Koula -	-	-	-	1.2	6.5	243	1.2	6.5	243
Ancien -	-	-	-	1.3	4.9	211	1.3	4.9	211
Agouti -	-	-	-	1.2	2.2	88	1.2	2.2	88

Boulder	-	-	-	1.1	1.8	64	1.1	1.8	64
Total	-	-	-	12.1	2.8	1,088	12.1	2.8	1,088

Notes:

- (1) Mineral Reserves are reported in accordance with NI 43-101 with an effective date of March 31st, 2021, for Séguéla.
- (2) The Séguéla Mineral Reserves are reported on a 100% basis at a gold grade cut-off of 0.5 g/t Au for Antenna, Agouti and Boulder deposits and 0.6 g/t Au for Koula and Ancien deposits based on a gold price of US\$1,500/ounce, constrained to optimization pit shells and only Proven and Probable categories reported within the final pit designs.
- (3) The Mineral Reserves pit design were completed based on overall slope angle recommendations of between 37° and 57° for Antenna, Koula and Agouti deposits from oxide to fresh weathering profiles, between 34° and 56° for Ancien deposit from oxide to fresh weathering profiles and 37° and 60° for Boulder deposit from oxide to fresh weathering profiles.
- (4) The Mineral Reserves are reported with modifying factors of 15% Mining Dilution and 90% Mining recovery applied.
- (5) Mineral Reserves reported based on each open pit deposit demonstrating economic viability
- (6) The identified Mineral Reserves in the block model are classified according to the "CIM" definitions for the Proven and Probable categories.
- (7) The Séguéla Mineral Reserves Statement was prepared under the supervision of Mr. Shane McLeay, Principal Mining Engineer at Entech Pty Ltd. Mr. McLeay is a Qualified Person as defined in NI 43-101.
- (8) All figures have been rounded to reflect the relative accuracy of the estimates and totals may not add due to rounding.
- (9) The Séguéla Gold Project is subject to a 10% carried interest held by the government of Cote d'Ivoire

Feasibility Study Overview

The Feasibility Study is based on an updated mine plan and initial Mineral Reserve estimate outlining the design of an open-pit gold mining project targeting a series of open-pit mines at Antenna, Koula, Ancien, Agouti and Boulder deposits feeding a central gold processing facility. The operation will produce an average of approximately 120,000 ounces of gold per year with an initial nine year mine life and significant exploration upside as demonstrated by recent drill results down plunge at Ancien and Koula, as well as at the new Sunbird discovery located 1 km to the southeast of Antenna. Initial capital to fund construction and commissioning is estimated at \$142 million with total non-mining sustaining capital estimated at \$43 million over the LOM including closure costs. All-in sustaining costs are estimated at \$832 per ounce over the life of the Project, positioning the project among the lowest quartile of the industry.

The financial analysis performed from the results of this Feasibility Study demonstrates the robust economic viability of the Séguéla Gold Project using the base case gold price assumption of \$1,600 per ounce. This results in an after-tax net present value cashflow at a 5% discount rate (NPV_{5%}) of \$380 million (attributable to Roxgold) and an after-tax IRR of 49%. There are additional opportunities to further strengthen and enhance the project's economic foundation through the continued drilling and extension testing of the existing resource base and definition of new targets as well as optimisation of the existing deposits.

The Feasibility Study was prepared by Roxgold in collaboration with various globally recognized engineering firms: Entech Pty Ltd, Lycopodium Minerals Canada, Knight Piésold and ECG Engineering. An NI 43-101 technical report prepared by Roxgold will be filed on SEDAR within 45 days of this news release providing further detail including exploration, geological modelling, Mineral Resource estimation, mine design, process design, infrastructure design, environmental management, capital and operating costs and economic analysis. Readers are encouraged to read the technical report in its entirety, including all qualifications, assumptions and exclusions that relate to the details summarized in this news release. The technical report is intended to be read as a whole, and sections should not be read or relied upon out of context.

Figure 2: Séguéla Site Layout

Mining and Recovery Methods

Mining

The Séguéla Gold Project will consist of the simultaneous exploitation of the Antenna deposit and the satellite deposits: Koula, Ancien, Agouti, and Boulder. The overall strategy is to have production from these satellite deposits complement the production from Antenna to achieve a baseline production rate sufficient to feed the processing plant at 1.25 Mtpa initially and increasing to 1.57 Mtpa in year 3. The project mine life contemplated in the Feasibility Study is nine years.

Mining activities at Séguéla will utilize conventional open-pit mining methods. Drill and blasting are planned for oxide and fresh mineralized material, followed by conventional truck and shovel operations within the pits for the movement of mineralized material and waste.

Two 200 tonne ("t") excavators, complimented with one 120 tonne and one 80 tonne excavators in the latter stages of the satellite pits, with an estimated total material productive capacity of approximately 25.0 Mtpa, will have sufficient capacity to allow for maintenance, transport between the pits, and make-up capacity to account for low productivity periods such as high rainfall events. A fleet of up to twenty Caterpillar 777 trucks (payload of 100t) will be used in conjunction with several smaller articulated trucks for the latter stages of the satellite pits to truck and haul all mineralized and waste material. Roxgold will engage a mining contractor for initial operations, before switching to an owner mining arrangement after 3.5 years. A common pool of equipment will be used and scheduled across all active pits so that movement between the pits is minimised.

Figure 3: Séguéla Feasibility Study production profile

Run of Mine ("ROM") mineralized material will be trucked from the pit to the ROM pad and dumped either onto the ROM pad to be reclaimed and loaded to the ROM bin or by direct tipping. The Feasibility Study contemplates a single stage primary crush/SAG milling comminution circuit where the mineralized material will be drawn from the ROM bin via an apron feeder, scalped via a vibrating grizzly with the undersize reporting directly to the discharge conveyor and the oversize reporting to a primary jaw crusher for further size reduction. All crushed and scalped material will be conveyed to a surge bin. Crushed mineralized material and water will be fed to the mill.

Metallurgy

Metallurgical testing was performed at the ALS Metallurgy laboratory in Perth, Western Australia, Australia under the supervision of Roxgold. The feasibility study testwork program expanded upon earlier work completed as part of the PEA to include additional comminution, cyanidation, rheology and cyanide detoxification testing on samples from all five deposits, weighted in accordance with the anticipated portion of mill feed each deposit contributes over the LOM. A testwork program was also conducted to further investigate the effect of oxygen injection on leaching.

The key results are summarized in Table 4.

Table 4 - Key results from the Séguéla metallurgical testwork program

Criterion	Units	Average	Range	Plant Design Criteria
Head Grade	g/t Au	2.72	1.06 - 58.8	4.50
Bond Ball Mill Work Index	kWh/t	19.7	16.3 - 21.1	20.7

Bond Rod Mill Work Index kWh/t	21.8	19.5 - 22.7	22.7	
Gravity Gold Recovery	%	29.0	11.0 - 66.8	40
Overall Gold Recovery	%	94.5	86.6 - 99.2	94.5

The testwork showed that leaching is substantially complete within 24 hours and there is no apparent preg-robbing or refractory characteristics in the ores tested. Furthermore, it showed a fast-initial leaching rate with more than 80% of the stage extraction completed within the first 2 hours of cyanidation. The highest gold recovery was achieved for tests incorporating gravity recovery and elevated dissolved oxygen levels for the duration of the leach.

The mineralized material tested across all deposits exhibited a degree of grind sensitivity with an optimal grind size of 75 micron being confirmed for all extraction test work. The results of that program, were very encouraging, indicating free milling of the mineralized material with good leach kinetics and overall recoveries averaging 94.5%.

Comminution testwork including Bond Impact Crushability tests, Abrasion tests, Bond Ball and Rod Mill Work Index tests and unconfined compressive strength (UCS) tests were conducted and confirmed the PEA findings of Antenna being a hard/strong ore. The tests also confirmed that Boulder, Agouti, Ancien and Koula returned results indicating that these ores are all less competent than those at Antenna.

Processing

The Séguéla process plant design is based on a metallurgical flowsheet envisioned for the production of gold doré at optimum recovery while minimizing initial capital expenditure and operating costs. The flowsheet comprises of conventional crushing, milling, gravity recovery, a carbon-in-leach ("CIL") circuit, carbon elution and a gold recovery circuit.

The key project design criteria for the plant are:

- Initial nominal throughput of 1.25 Mtpa mineralized material, increasing to 1.57 Mtpa in year 3
- Crushing plant availability of 75%
- Plant availability of 91.3% for grinding, gravity concentration, leach plant and gold recovery operations

The proposed process design is comprised of the following circuits. An overall process flow diagram depicting the unit operations incorporated in the selected process flowsheet is presented in Figure 3:

- Primary crushing of ROM material.
- A surge bin with overflow stockpile to provide buffer capacity ahead of the grinding circuit.
- Grinding circuit: Single-stage semi-autogenous grinding ("SAG") mill with cyclones.
- Gravity recovery of cyclone underflow by a semi-batch centrifugal gravity concentrator, followed by intensive cyanidation of the gravity concentrate and electrowinning of the pregnant leach solution in a dedicated cell located in the gold room.
- Trash screening and thickening of cyclone overflow prior to leaching.
- Gold leaching in a CIL circuit.
- Acid washing of loaded carbon and split AARL type elution followed by electrowinning and smelting to produce doré. Carbon regeneration by rotary kiln.
- Disposal of tailings to the TSF.

The processing plant is planned to be expanded in year 3 to meet the realised productivity of the mine schedule. It is planned to increase the plants capacity from the initial 1.25 Mtpa to 1.57 Mtpa. This is expected to be achieved through an optimisation and debottlenecking process, whereby the installed capacity of the key plant bottlenecks is fully utilised. Another aspect of the design that contributes to this gain, is the plant comminution design criteria is based on Antenna ores, which are the most competent of the project. Therefore, as the other less competent ores make up more of the mill feed it is expected that the realised unit throughput rate will increase.

Figure 4: Séguéla Project Process Flow Sheet

Selected operating and production statistics from the Feasibility Study are presented in Table 5.

Table 5 - Séguéla Project Life-of-Mine Mining and Processing Plan Metrics

	Unit	Year -1	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	LOM
Antenna														
Ore mined	K t	-	315	1,259	681	962	744	603	816	1,234	558	-	-	7,173
Au grade	g/t	-	2.69	2.77	2.04	1.86	2.12	2.12	1.52	1.86	1.92	-	-	2.09
Koula														
Ore mined	K t	-	-	42	155	264	260	9	431	7	-	-	-	1,168
Au grade	g/t	-	-	4.58	6.52	6.14	6.43	3.58	6.86	9.34	-	-	-	6.46
Ancien														
Ore mined	K t	-	-	-	386	102	258	547	56	-	-	-	-	1,348
Au grade	g/t	-	-	-	6.34	2.73	3.35	4.58	8.64	-	-	-	-	4.88
Agouti														
Ore mined	K t	-	-	214	75	-	-	-	-	454	500	-	-	1,243
Au grade	g/t	-	-	2.10	2.00	-	-	-	-	1.98	2.47	-	-	2.20
Boulder														
Ore mined	K t	-	-	-	-	-	-	-	-	-	236	897	-	1,133
Au grade	g/t	-	-	-	-	-	-	-	-	-	1.19	1.92	-	1.77
Total														
Ore mined	K t	-	315	1,515	1,297	1,329	1,262	1,159	1,302	1,695	1,294	897	-	12,064
Au grade	g/t	-	2.69	2.73	3.85	2.77	3.26	3.30	3.59	1.93	2.00	1.92	-	2.80
Contained gold	K oz	-	27.2	132.8	160.6	118.5	132.2	122.7	150.3	104.9	83.1	55.4	-	1,088
Waste mined	K t	-	625	12,964	21,485	23,000	23,597	24,943	25,507	13,764	13,056	9,110	-	168,050
Total mined	K t	-	940	14,479	22,782	24,329	24,859	26,101	26,809	15,459	14,350	10,007	-	180,115
Stockpile														
Start of period	K t	-	-	315	580	627	385	77	-	-	125	-	-	n/a
Grade	g/t	-	-	2.69	2.71	2.79	2.77	2.77	-	-	1.93	-	-	n/a
Processing														
Ore milled	K t	-	-	1,250	1,250	1,570	1,570	1,236	1,302	1,570	1,419	897	-	12,064

Head grade	g/t	-	-	2.73	3.85	2.78	3.16	3.26	3.59	1.93	1.99	1.92	-	2.80
Contained gold	K oz	-	-	109.6	154.8	140.4	159.7	129.6	150.3	97.2	90.9	55.4	-	1,088
Recovery	%	-	-	94.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5	94.5	-	94.5
Gold production	K oz	-	-	103.6	146.3	132.7	150.9	122.5	142.1	91.8	85.9	52.3	-	1,028
Capital Expenditures														
Development	\$M	60.7	73.5	-	-	-	-	-	-	-	-	-	-	134.2

Tailings & Power

The tailings system will comprise of a tailings line and associated tailings pumps. The tailings storage facility ("TSF") will comprise a side-valley storage formed by two multi-zoned earth-fill embankments, designed to accommodate 13.0 Mt of tailings and built utilising the downstream construction methodology - in accordance with industry best practices and standards on tailings management.

A water storage dam will be the main collection and storage pond for clean raw and process water.

The envisioned power supply is through a connection to the Côte d'Ivoire electricity grid by a 4 km tee into the 90kV powerline from the Laboa to Séguéla substation. The Séguéla substation is fed via an existing 90kV transmission line from the 225/90kV Laboa substation. The Laboa substation is part of a 225kV ring main system around the country where various sources of generation are connected and, being a large ring main, offers a great deal of redundancy at 225kV. The grid supply from Côte d'Ivoire is, by world standards, economically priced and reliable benefitting from a large portion of hydro-sourced power.

Environmental and Permitting

Roxgold has all permits required to conduct mining for current operations and is permitted to operate within the approved Mine Permit Boundary. The exploitation permit was approved by the Council of Ministers and signed as a mining decree by the President of Côte d'Ivoire, and other governmental authorities, in December 2020. The decree grants Roxgold an industrial mining permit for development and operation of the Séguéla Gold Project and is valid for 10 years with opportunities to renew as further growth and expansion is proven. The Environmental and Social Impact Assessment ("ESIA") was approved in September 2020 by the Côte d'Ivoire Ministry of Environment and Sustainable Development. The ESIA represented the culmination of extensive consultations and stakeholder engagement in the communities surrounding the Séguéla Gold Project.

The conceptual closure plan considered in the Feasibility Study assumes the mine areas will be reclaimed to a safe and environmentally sound condition consistent with closure commitments developed during the life of the project in compliance with the national regulations, IFC standards and other industry best practices.

Capital Costs Summary

The capital required to develop Séguéla is estimated to be \$142 million (including \$8 million contingency) with sustaining capital representing an additional \$141 million directly related to mining operations, \$32 million of processing and infrastructure sustaining capital, and \$11 million of closure costs over the nine year mine life. The mining pre-production capital relates to mining activities prior to commissioning of the processing facility, where 315,000 tonnes of ore and 625,000 tonnes of waste are mined in order to establish a reasonable stockpile ahead of processing operations commencing. All contractor mobilization and setup costs are included in the pre-production capital allowance.

The processing plant capital relates to a facility with a nameplate throughout of 1.25 Mtpa. The capital cost estimate is based on an engineering, procurement and construction management ("EPC") implementation approach and horizontal (discipline based) construction contract packaging. The capital cost for the

processing plant considered in this study, was based on actual submissions for a competitive tender process between several experienced EPCM contractors, with project experience in West Africa. Within that process, equipment and materials pricing was based on actual costs from other recent similar scale Lycopodium projects and considered representative for Séguéla.

The surface infrastructure includes site electrical distribution, tailings management facility, water dams and accommodation camp. A summary of estimated capital costs is presented in Table 6 and annual estimated sustaining capital costs are shown in Table 7. Capital cost estimates in the Feasibility Study reflect the joint efforts of Knight Piésold Consulting, Lycopodium Limited, Entech Pty Ltd, ECG and Roxgold. Roxgold compiled the capital cost data into the overall cost estimate.

Table 6 - Summary of initial development capital costs

Capital Costs	Value (\$M)
Mining Pre-stripping	\$4.6
Process Plant	\$81.3
Infrastructure and Environment	\$16.6
Tailings and Water Storage	\$12.8
Grid Connection	\$9.9
G&A	\$9.0
Contingency	\$8.0
Total	\$142.2

Table 7 - Estimated annual sustaining capital costs

Year	Units	Year	Year	Year	Year	Year	Year	Year	Year	Year	Total	
		1	2	3	4	5	6	7	8	9		10
Mining	\$M	17.1	23.5	19.3	22.4	28.1	12.0	4.3	9.0	2.4	-	137.9
Mining, Other	\$M	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-	3.1
Processing	\$M	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.2	-	2.0
Infrastructure & Env.	\$M	4.7	4.0	2.8	2.8	2.9	2.9	3.5	5.4	0.6	-	29.7
Closure	\$M	-	-	-	-	-	-	-	-	3.2	8.0	11.2
Total	\$M	\$22.3	\$28.0	\$23.0	\$25.7	\$31.6	\$15.4	\$8.3	\$14.9	\$6.6	\$8.0	\$184.0

Operating Costs Summary

Cash costs and AISC per payable ounce of gold sold are non-GAAP financial measures. Please see "Cautionary Note Regarding Non-GAAP Measures".

Total estimated cash costs in the Feasibility Study are presented in Table 8. The mining operating costs were developed based on firm quotes from reputable mining contractors, all with experience in West Africa, including current operating experience in Côte d'Ivoire, and based on the Feasibility Study mine plan for the Séguéla project. The study contemplates the project commencing with a contractor performing the mining activities at Séguéla with a switch to owner mining and equipment lease arrangement after 3.5 years. The processing operating costs were developed from testwork, first principles and Lycopodium's database

according to typical industry standards applicable to gold processing plants in West Africa. General and administration costs were factored from historical operating cost data from the development and operation of Roxgold's Yaramoko Gold Mine in Burkina Faso as well as quoted services in Côte d'Ivoire.

Table 8 - Operating Cash Costs

Cash Costs	Value (\$/t milled)
Mining	\$29.96
Processing	\$12.57
General and Administrative	\$5.30
Total	\$47.83

As summarized in Table 9, operating costs, which includes mining, processing and general and administrative costs totals \$567 per payable ounce of gold sold over the nine-year operating plan in the Feasibility Study. AISC, which includes sustaining capital, reclamation, royalties, and refining costs totals \$832 per payable ounce of gold sold over the nine-year operating plan in the Feasibility Study.

Table 9 - Life of Mine All-In Sustaining Cost and All-In Cost

	\$M	\$/t milled	\$/payable oz
Operating Cost			
Mining	\$361	\$29.96	\$355
Processing	152	12.57	149
G&A	64	5.30	63
Subtotal, Direct Operating Costs	\$577	\$47.83	\$567
Refining	\$3	\$0.22	\$3
Royalties	75	6.24	74
Social Fund	8	0.67	8
Total Operating Costs ¹	\$663	\$54.97	\$652
Sustaining Capital, and Reclamation			
Mining, Sustaining	\$141	\$11.69	\$139
Processing + Infrastructure	32	2.63	31
Closure	11	0.93	11
All-in Sustaining Cost ¹	\$847	\$70.22	\$832
Development Capital Cost			
Mining	\$5	\$0.38	\$5
Processing	81	6.74	80
Infrastructure and Environment			

G&A	9	0.75	9
Contingency	8	0.66	8
Capital Expenditures (non-sustaining)	\$142	\$11.79	\$140
All-in Cost ¹	\$989	\$82.00	\$972

Financial Analysis

The Séguéla Gold Project has been evaluated on a discounted cash flow basis. The results of the analysis show the project to be economically very robust. The pre-tax net present value with a 5% discount rate (NPV 5%) is \$455 million and with an IRR of 53% using a base gold price of \$1,600/oz. The economic analysis assumes that Roxgold will provide all development funding via inter-company loans to the mine operating entity, which will be repaid with interest from future gold sales. On this basis, over the nine-year operating mine plan outlined in the Feasibility Study, Roxgold's 90% interest in the project is expected to provide an after-tax NPV_{5%} of \$380 million and an IRR of 49% at a gold price of \$1,600/oz.

Payback period is expected to be 1.7-years at a gold price of \$1,600/oz. Payback period is defined as the time after process plant start-up that is required to recover the initial expenditures incurred developing the Séguéla Gold Project.

Figure 5: Séguéla Cash Flow Profile

Table 10 - Key Feasibility Financial Estimates

	Units	LOM Total
Gold Revenue		
Gold Price	\$/oz	1,600
Gold Sales	000 oz	1,018
Gold Sales Revenue	\$M	1,629
Operating Costs		
Mining	\$M	(361)
Processing	\$M	(152)
G&A	\$M	(64)
Total Opex excluding Royalties and Social Fund	\$M	(577)
Gold Refining	\$M	(3)
Royalties, Other	\$M	(75)
Social Fund	\$M	(8)
Total Opex including Royalties and Social Fund	\$M	(663)
Capital and Closure Costs		
Development Capital	\$M	(142)
Sustaining Capital, Mining	\$M	(141)

Sustaining Capital, Infrastructure	\$M	(32)
Closure	\$M	(11)
Total capital and closure costs	\$M	(326)
Project Valuation		
Project Net Cash Flow, pre-tax	\$M	639
NPV _{5%} , pre-tax	\$M	455
IRR	%	53%
Payback Period	years	1.6
Attributable Net Cash Flow, after-tax	\$M	536
NPV 5% - attributable to ROXG's 90% interest	\$M	380
IRR	%	49%
Payback Period	years	1.7

Note: Figures may not total exactly due to rounding

Table 11 - Key Economic Assumptions

	Unit	Value
Currency	USD	
Gold Price	\$/oz	1,600
Gold Payable	%	99.0
Mill Recovery	%	94.5
Base Case Discount Rate	%	5.0
Exchange Rate		
EUR to USD		1.1761
XOF to USD		0.0018
Royalty		
<= 1,100 \$/oz	%	3.0
1,300 \$/oz	%	3.5
1,600 \$/oz	%	4.0
2,000 \$/oz	%	5.0
>2,000 \$/oz	%	6.0
Vendor Royalties*	%	1.2
Social Fund	%	0.5

* Roxgold holds a buy-back right for up to 0.6% at a pro rata price of AUD\$10M of the outstanding 1.2% NSR held by [Franco-Nevada Corp.](#) for a period of three years following the effective date of March 30, 2021

Sensitivity Analysis

The Séguéla Gold Project contemplated in the Feasibility Study demonstrates strong economic performance across a range of variables. Estimated NPV sensitivities for key operating and economic metrics are presented in Table 12, Table 13, Table 14 and Figure 3.

Table 12 - After-tax NPV (for Roxgold's 90% interest) sensitivity to discount rate and gold price

		Gold Price				
		\$1,400/oz	\$1,500/oz	\$1,600/oz	\$1,700/oz	\$1,800/oz
Discount Rate	5.0%	\$271	\$325	\$380	\$425	\$478
	7.5%	\$224	\$273	\$321	\$360	\$407
	10.0%	\$186	\$229	\$271	\$307	\$348

* Base case highlighted

Table 13 - After-tax IRR sensitivity to gold price

		Gold Price				
		\$1,400/oz	\$1,500/oz	\$1,600/oz	\$1,700/oz	\$1,800/oz
IRR	38%	44%	49%	53%	58%	

* Base case highlighted

Table 14 - After-tax NPV^{5%} sensitivity to capital costs and operating costs

		Operating Costs				
		-25%	-10%	0%	10%	25%
Capital Costs	-25%	\$481	\$435	\$404	\$373	\$326
	-10%	\$467	\$421	\$389	\$358	\$311
	0%	\$457	\$411	\$380	\$348	\$301
	10%	\$448	\$401	\$370	\$339	\$291
	25%	\$433	\$387	\$355	\$324	\$277

Figure 6: After-tax NPV^{5%} sensitivities

Opportunities and Next Steps

Several potential opportunities to improve the economics of the Séguéla Gold Project contemplated under the Feasibility Study have been identified. Examples include, but may not be limited to:

- Drilling at depth at Koula and Ancien have continued to intersect high grade mineralization which suggests the potential for an underground mine following open pit activities. An optimization study is recommended to explore the opportunity to mine more of the current resource base from underground, which would reduce the need for larger respective pits and therefore substantially lower accompanying strip ratios.
- Séguéla presents a significant opportunity to further assess multiple priority exploration targets within 15 kilometres of the envisioned central processing facility. These targets, including the recently discovered Sunbird prospect, have the potential to increase the mineral resource base and enhance the potential economics of the Séguéla project by adding additional ounces;
- Exploration potential to increase the mineral resources of the Antenna, Koula, Ancien, Agouti, and Boulder deposits along strike and at depth;
- Further geotechnical testing and modelling will be completed to further optimise the pit slopes realised.
- Further optimize mine design and sequencing resulting in operating cost savings and a fully utilised fleet

Analysis of the results and findings from each major area of investigation suggests several recommendations for further investigations to mitigate risks and improve the base case project definition to be incorporated during the development and operation of the project, including:

- Manage and mitigate COVID-19 through continuation of protocols and procedures in place; acknowledging that an outbreak at site remains a risk that could disrupt construction;
- Complete Mining Convention agreement negotiation;
- Finalize debt financing agreement in support of initial construction capital requirements;
- Execute Séguéla mining services contract with selected contractor;
- Continue ongoing environmental (e.g. climate, noise, water quality, etc.) testing and monitoring;
- Develop a detailed project implementation plan to precisely define the strategy that will be executed to develop the project successfully; and
- Continue to engage effectively with all the stakeholders as the project develops.

Séguéla Gold Project Feasibility Study Conference Call

A webcast and conference call to discuss the Séguéla Feasibility Study results will be held on Monday, April 19th, 2021, at 4:30PM Eastern time.

Listeners may access a live webcast of the conference call from the events section of the Company's website at www.roxgold.com or by dialing toll free 1 (844) 607-4367 within North America or +1 (825) 312-2266 from international locations. Registration is open through the live call, but to ensure you are connected for the full call, we suggest registering a minimum of 10 minutes before the start of the call.

An online archive of the webcast will be available by accessing the Company's website at www.roxgold.com. A telephone replay will be available for two weeks after the call by dialing toll free 1 (800) 585-8367 within North American or +1 (416) 621-4642 from international locations and entering passcode: 897 5423.

Notes:

EBITDA, cash costs and AISC per payable ounce of gold sold are non-GAAP financial measures. Please see "Cautionary Note Regarding Non-GAAP Measures". All-in Sustaining Costs are presented as defined by the World Gold Council less Corporate G&A.

Qualified Persons

The scientific and technical information contained in this news release has been reviewed and approved by the following qualified persons under NI 43-101:

Paul Criddle, FAusIMM, Chief Operating Officer for Roxgold, a Qualified Person within the meaning of NI 43-101, has reviewed, verified and approved the scientific and technical disclosure contained in this news release.

The scientific and technical information contained in this document relating to Séguéla's Mineral Resource is

based on, and fairly represents, information compiled by Hans Andersen. Mr. Andersen, MAIG, is a Member of the Australian Institute of Geoscientists. Mr. Andersen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a "Qualified Person" under NI 43-101. Mr. Andersen has consented to and approved the inclusion in this document of the matters based on his compiled information in the form and context in which it appears in this document.

Both Mr. Criddle and Mr. Andersen are full-time employees of Roxgold and are not "independent" within the meaning of NI 43-101.

The scientific and technical information contained in this document relating to Séguéla's Mineral Reserve is based on, and fairly represents, information compiled by Shane McLeay of Entech Pty Ltd. Mr. McLeay, is a Fellow of the AusIMM. Mr. McLeay has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a "Qualified Person" under NI 43-101. Mr. McLeay has consented to and approved the inclusion in this document of the matters based on his compiled information in the form and context in which it appears in this document.

Roxgold's disclosure of Mineral Reserve and Mineral Resource information is governed by NI 43-101 under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the "CIM") Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as may be amended from time to time by the CIM. There can be no assurance that those portions of Mineral Resources that are not Mineral Reserves will ultimately be converted into Mineral Reserves.

The qualified persons have verified the information disclosed herein, including the sampling, preparation, security and analytical procedures underlying such information, and are not aware of any significant risks and uncertainties that could be expected to affect the reliability or confidence in the information discussed herein.

National Instrument 43-101 Technical Report

A technical report for the Séguéla Gold Project will be prepared in accordance with National Instrument 43-101 and will be filed on SEDAR at www.sedar.com and on the Company's website at www.roxgold.com within 45 days of this news release. Readers are encouraged to read the technical report in its entirety, including all qualifications, assumptions and exclusions that relate to the details summarized in this news release. The technical report is intended to be read as a whole, and sections should not be read or relied upon out of context.

About Roxgold

Roxgold is a Canadian-based gold mining company with assets located in West Africa. The Company owns and operates the high-grade Yaramoko Gold Mine located on the Houndé greenstone belt in Burkina Faso and is advancing the development and exploration of the Séguéla Gold Project located in Côte d'Ivoire. Roxgold trades on the TSX under the symbol ROXG and as ROGFF on OTCQX.

Cautionary Note Regarding Forward-Looking Statements

This news release contains "forward-looking information" within the meaning of applicable Canadian securities laws ("forward-looking statements"). Such forward-looking statements include, without limitation: economic statements related to the Feasibility Study, such as future projected production, capital costs and operating costs, statements with respect to Mineral Reserves and Mineral Resource estimates, recovery rates, timing of future studies including the feasibility study, permitting approvals, environmental assessments and development plans. These statements are based on information currently available to the Company and the Company provides no assurance that actual results will meet management's expectations. In certain cases, forward-looking information may be identified by such terms as "anticipates", "believes", "could", "estimates", "expects", "may", "shall", "will", or "would". Forward-looking information contained in this news release is based on certain factors and assumptions regarding, among other things, the Feasibility Study, the estimation of Mineral Resources and Mineral Reserves, the realization of resource estimates and reserve estimates, any potential upgrades of existing resource estimates, gold metal prices, the timing and

amount of future exploration and development expenditures, the estimation of initial and sustaining capital requirements, the estimation of labour and operating costs, the availability of necessary financing and materials to continue to explore and develop the Company's properties in the short and long-term, the progress of exploration and development activities, the receipt of necessary regulatory approvals, and assumptions with respect to currency fluctuations, environmental risks, title disputes or claims, and other similar matters. While the Company considers these assumptions to be reasonable based on information currently available to it, they may prove to be incorrect.

Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include: delays resulting from the COVID-19 pandemic, changes in market conditions, unsuccessful exploration results, possibility of project cost overruns or unanticipated costs and expenses, changes in the costs and timing of the development of new deposits, inaccurate reserve and resource estimates, changes in the price of gold, unanticipated changes in key management personnel and general economic conditions. Mining exploration and development is an inherently risky business. Accordingly, actual events may differ materially from those projected in the forward-looking statements. This list is not exhaustive of the factors that may affect any of the Company's forward-looking statements, including the factors included in the Company's annual information form for the year ended December 31, 2020. These and other factors should be considered carefully and readers should not place undue reliance on the Company's forward-looking statements. The Company does not undertake to update any forward-looking statement that may be made from time to time by the Company or on its behalf, except in accordance with applicable securities laws.

Cautionary Note Regarding Non-GAAP Measures

This news release includes certain terms or performance measures commonly used in the mining industry that are not defined under International Financial Reporting Standards ("IFRS"), including EBITDA, cash costs and AISC per payable ounce of gold sold. Non-GAAP measures do not have any standardized meaning prescribed under IFRS and, therefore, they may not be comparable to similar measures employed by other companies. We believe that, in addition to conventional measures prepared in accordance with IFRS, certain investors use this information to evaluate our performance. The data presented 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. Readers should also refer to our management's discussion and analysis, available under our corporate profile at www.sedar.com for a more detailed discussion of how we calculate such measures.

View source version on businesswire.com: <https://www.businesswire.com/news/home/20210419005239/en/>

Contact

[Roxgold Inc.](#)
Graeme Jennings, CFA
Vice President, Investor Relations
416-203-6401
gjennings@roxgold.com

Dieser Artikel stammt von [GoldSeiten.de](#)

Die URL für diesen Artikel lautet:

<https://www.goldseiten.de/artikel/491275--Roxgold-Announces-Robust-Sgula-Feasibility-Study-with-After-Tax-NPV-of-US380-Million-and-49Prozent-IRR.html>

Für den Inhalt des Beitrages ist allein der Autor verantwortlich bzw. die aufgeführte Quelle. Bild- oder Filmrechte liegen beim Autor/Quelle bzw. bei der vom ihm benannten Quelle. Bei Übersetzungen können Fehler nicht ausgeschlossen werden. Der vertretene Standpunkt eines Autors spiegelt generell nicht die Meinung des Webseiten-Betreibers wieder. Mittels der Veröffentlichung will dieser lediglich ein pluralistisches Meinungsbild darstellen. Direkte oder indirekte Aussagen in einem Beitrag stellen keinerlei Aufforderung zum Kauf-/Verkauf von Wertpapieren dar. Wir wehren uns gegen jede Form von Hass, Diskriminierung und Verletzung der Menschenwürde. Beachten Sie bitte auch unsere [AGB/Disclaimer!](#)

Die Reproduktion, Modifikation oder Verwendung der Inhalte ganz oder teilweise ohne schriftliche Genehmigung ist untersagt!
Alle Angaben ohne Gewähr! Copyright © by GoldSeiten.de 1999-2021. Es gelten unsere [AGB](#) und [Datenschutzrichtlinien](#).