

## NEWS RELEASE



World Class Royalty Company

### **Royal Gold Announces Preliminary Economic Assessment for the Peak Gold Project**

**DENVER, COLORADO. SEPTEMBER 24, 2018: ROYAL GOLD, INC. (NASDAQ:RGLD)** (together with its subsidiaries, “Royal Gold” or the “Company”) is pleased to report that the Peak Gold, LLC joint venture (“Peak Gold”), of which our Royal Alaska, LLC subsidiary (“Royal Alaska”) owns a 40% interest, has completed a Preliminary Economic Assessment (“PEA”)<sup>1</sup> on the Peak Gold Project (the “Project”) located near Tok, Alaska. The PEA presents a robust open pit mining operation with attractive economics at base case gold and silver prices. All results presented herein are on a 100% Peak Gold basis.

#### **PEA Highlights**

Highlights of the PEA results, assuming base case metal price parameters of US\$ 1,250 per ounce of gold and US\$ 17.00 per ounce of silver, include:

- Pre-tax NPV5% of US\$ 393 million and IRR of 37.0%;
- After-tax NPV5% of US\$ 283 million and IRR of 29.1%;
- Mine life of 8 years with a 24-month pre-production period;
- 9.3 million tonnes processed at an average grade of 3.99 g/t gold and 11.7 g/t silver;
- Average metallurgical recoveries of 91.6% for gold and 57.0% for silver;
- Life of mine recovered gold of 1.093 million ounces and 1.996 million ounces of silver;
- Life of mine strip ratio of 3.9 tonnes of waste to tonnes of material processed;
- Life of mine total cash cost of US\$ 428 per ounce of gold recovered, and US\$ 470 per ounce of gold recovered including sustaining capital;
- Life of mine capital cost of US\$ 340 million, consisting of US\$ 294 million of initial development capital, and sustaining capital and closure costs of US\$ 46 million; and
- After-tax payback period for initial development capital of approximately 2 years.

The PEA was prepared by JDS Energy and Mining Inc. (“JDS”) of Vancouver, British Columbia, Canada.

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<sup>1</sup> The results of the PEA are preliminary in nature and are based on various assumptions. These assumptions may be affected by environmental, permitting, geological, metallurgical, legal, title, taxation, socio-political, market or other relevant factors, including changes in metal prices. In addition, no decision has been made by Peak Gold to proceed with the mine plan described in the PEA. A decision to proceed with the mine plan would require further economic and resource study. No decision has been made by Peak Gold to proceed with a further economic and/or resource study. Accordingly, there is no certainty that the results of the PEA will be realized even if Peak Gold decides to proceed with the mine plan described in the PEA at any point in the future.

“The results of the PEA are a significant milestone and show that the Peak Gold Project is one of the most interesting emerging gold projects in the United States,” commented Tony Jensen, President and CEO of Royal Gold. “The combination of robust grade, near-surface open-pit resource, and a large and prospective land package located close to existing infrastructure, makes the Peak Gold Project unique. Royal Gold is committed to this exciting Project over the long term and will focus on opportunities to realize the value of our interest in a manner more closely aligned with our core business model.”

## PEA Overview

The PEA considers a conventional truck and shovel open-pit mining operation covering the North, Main and West Peak deposits, feeding a 3,500 tonne per day processing plant with two-stage crushing, grinding and a carbon in leach (“CIL”) recovery circuit, with production of gold-silver doré bullion on site. The PEA is based on an update of the mineral resource<sup>2</sup> estimate for the Peak and North Peak deposits previously announced by Royal Gold in our June 2, 2017 press release.<sup>3</sup>

### *PEA Parameters and Economic Results*

The main parameters and results of the PEA are summarized in the following table:

Assumptions		
Gold price	\$/ounce	\$1,250
Silver price	\$/ounce	\$17.00
Production Profile		
Mine life	years	8
Total tonnes milled	million tonnes	9.3
Diluted gold grade	g/t	3.99
Diluted silver grade	g/t	11.7
Mill throughput	t/day	3,500
Gold recovery	%	91.6
Silver recovery	%	57.0
Recovered gold	million ounces	1.093
Recovered silver	million ounces	1.996
Average annual gold production	ounces/year	136,700
Average annual silver production	ounces/year	249,500

<sup>2</sup> The PEA was prepared in accordance with Canadian National Instrument 43-101 (NI 43-101). The terms “mineral resource”, “measured mineral resource”, “indicated mineral resource” and “inferred mineral resource” as used in the resource estimate, the PEA and this press release are Canadian mining terms as defined in accordance with NI 43-101. The U.S. Securities and Exchange Commission (SEC) does not recognize these terms. “Resources” are not reserves under the SEC’s regulations but are categorized under the securities laws regulations of various foreign jurisdictions (including NI 43-101), in order of increasing geological confidence into “inferred resources”, “indicated resources”, and “measured resources”. Investors are cautioned that resources cannot be classified as mineral reserves unless and until further drilling and metallurgical work is completed, until other economic and technical feasibility factors based upon such work have been resolved and it is demonstrated that they may be legally and economically extracted and produced, and, as a result, investors should not assume that all or any part of the mineralized material in any of these categories referred to in the resource estimate, the PEA and this press release will ever be converted into mineral reserves. In addition, the SEC normally only permits issuers to report mineralization that does not constitute mineral reserves as in-place tonnage of mineralized material and grade without reference to unit amounts of metal.

<sup>3</sup> The “Main Peak” and “West Peak” deposits were previously referred to as the “Peak” deposit in the June 2, 2017 resource estimate.

Operating Costs		
Life of mine average total cash cost	\$/oz gold	428
Life of mine cash cost + sustaining cost	\$/oz gold	470
Capital Costs		
Pre-production capital cost	\$ million	294
Sustaining capital cost + Closure	\$ million	46
Project Economics		
Royalties	% of NSR	5.75
Alaska State Tax / Federal Tax	%	9.4% / 21%
Pre-Tax:		
NPV5%	\$ million	393
IRR	%	37.0
Payback period	years	1.5
Post-Tax:		
NPV5%	\$ million	283
IRR	%	29.1
Payback period	years	2.0

### *Economic Sensitivities*

Sensitivity of the estimated post-tax NPV5% to changes to significant value drivers is shown below:

Parameter varied:	Post-Tax NPV5% (\$ million)				
	-20%	-10%	PEA Base Case	+10%	+20%
Gold price	129	206	283	358	433
Capital cost	348	315	283	250	217
Operating cost	327	305	283	260	236

### *Mineral Resource*

The PEA is based on the resource estimate prepared by Independent Mining Consultants, Inc. and reported by Royal Gold on June 2, 2017. The resource estimate was updated using operating costs, pit slope estimates and metal recoveries consistent with the PEA parameters in September of 2018, resulting in a revised resource estimate, which is summarized in the table below:

Resource Classification	Tonnes (000)	Grade			Contained Metal		
		Gold (g/t)	Silver (g/t)	Copper (%)	Gold (000 ounces)	Silver (000 ounces)	Copper (M lb)
Measured (M)	473	6.39	16.71	.148	97.1	254.0	1.5
Indicated (I)	8,728	3.96	14.06	.153	1,110.9	3,944.8	29.5
Total M + I	9,201	4.08	14.19	.153	1,208.1	4,198.8	31.0
Inferred	1,344	2.69	16.06	.151	116.4	694.1	4.5

The estimates of measured and indicated resources assumed metal prices of \$1,400 per ounce gold and \$20.00 per ounce silver for development of the pit shell. The cutoff grades used to define resources were 0.74 g/t gold equivalent for the Main Peak deposit and 0.66 g/t gold equivalent for the North Peak deposit.

### *Capital Costs*

The PEA is based on a capital cost summary with an estimated accuracy of +/- 30%, which is shown in the table below:

Capital Item	Pre-Production (\$ million)	Sustaining (\$ million)	Total (\$ million)
Mining	28.8	9.1	37.9
Site Development	4.9	-	4.9
Crushing and Reclaim	8.5	0.5	9.0
Tailings Management	8.9	20.3	29.2
Processing Plant	54.8	2.5	57.3
Infrastructure	56.3	5.0	61.3
Project Indirects	45.0	0.1	45.1
Engineering and Project Management	16.1	-	16.1
Owner's Costs	21.5	-	21.5
<b>Subtotal</b>	<b>244.8</b>	<b>37.4</b>	<b>282.2</b>
Contingency	49.0	-	49.0
Closure	-	8.4	8.4
<b>Total Capital</b>	<b>293.8</b>	<b>45.8</b>	<b>339.6</b>

Pre-production capital reflects the required investment to develop the Project through to production. Sustaining capital is for the entire life of mine and includes equipment, spare parts, expansion of the tailings management facility, water management and closure costs.

### *Mining*

The PEA assumes conventional open pit truck and shovel mining, and production designed to achieve a processing rate of 3,500 tonnes per day. The average mining rate assumed by the PEA is 15,000 tonnes per day of total material mined, with a maximum of 22,000 tonnes per day occurring in years 3 through 6.

The mine design assumed by the PEA will consist of two pits, with a mining sequence intended to maximize grade in the early years, reduce stripping requirements and maintain the processing facility at full production capacity. Operations would begin at the North Peak deposit and transition in year three to a single pit comprising the Main and West Peak deposits for the remainder of the mine life.

The primary owner-operated diesel mine fleet is designed to consist of 64 tonne capacity haul trucks, 7.0 m<sup>3</sup> front shovels, a 7.0 m<sup>3</sup> front end loader and 127 mm diameter drills. The ancillary mine fleet would consist of track dozers, graders, wheel dozers and water trucks.

### *Processing*

The PEA assumes mineralized material would be processed using a two-stage crushing circuit, a two-stage grinding circuit, and a CIL circuit. Run of mine material would be fed to a primary jaw crusher, after which oversize material would be fed to a secondary cone crusher. Fine mill feed would report to a primary rod mill to be mixed with cyanide, cement and milk of lime. The feed mixture would then proceed to a secondary ball mill, after which it would enter a grinding thickener followed by a five-stage leach/adsorption circuit. Gold and silver would be recovered from the leach solution and smelted in an induction furnace to produce doré bullion.

The PEA assumes CIL tailings would be pumped to a tailings thickener to remove process water and recover free cyanide for reuse in the plant. Thickened tailings would be detoxified and then pumped to the tailings management facility (“TMF”) for storage. The TMF would be lined with a synthetic geomembrane liner and would have foundation and underdrain systems to minimize and control potential seepage. The tailings embankment would be raised continuously over the mine life and would be designed to allow capacity for future expansion, if required.

### *Project Infrastructure*

The PEA assumes general infrastructure for the Project would support operations on a 24 hour per day, seven day per week basis. Major infrastructure items would include:

- Site access road connecting to the Tetlin Village road and the Alaska Highway, with upgrades to the existing site access road over a 10-kilometer distance;
- Haul roads for waste and mill feed materials sized to accommodate 65 tonne trucks;
- Maintenance, warehouse, administration, laboratory, security and first aid buildings;
- Plant facilities, including the crushing and grinding circuit, conveying equipment, and refinery;
- Ancillary facilities, including a truck shop, explosives storage and fuel storage;
- Power line from Delta Junction to a site substation (approximately 160 kilometers) to supply a total connected load of 8 MW;
- Camp accommodations in Tok for the portion of the workforce that does not come from Tok, Tetlin and the surrounding areas;
- Water supply and management system to minimize water discharge from the site;
- Lined TMF, constructed with an initial capacity for two years of tailings, with staged construction in subsequent years to increase storage capacity as required; and
- Waste rock storage areas to allow segregation of waste depending on its characteristics.

### *Operating Costs*

The PEA is based on assumed life of mine operating costs by activity area, as shown in the table below.

Operating Costs	\$/tonne Processed	\$/ounce Gold
Mining	14.91	127
Processing	21.58	184
G&A	7.73	66
Royalties	8.58	73
Refining	1.10	9
By-product Credits	(3.64)	(31)
<b>Total Cash Cost</b>	<b>50.26</b>	<b>428</b>
Sustaining Capital + Closure	4.92	42
<b>Cash Cost + Sustaining Capital</b>	<b>55.18</b>	<b>470</b>

Under the mineral lease for the Project, Peak Gold would pay a production royalty based on net returns of mineral production from the lease area. The production payment rates under the lease for precious metals are currently 2.25% of net returns for the first four years of production, 3.25% of net returns for years five through seven inclusive, and 4.25% of net returns for year eight and any following years. These royalty rates can be increased at the option of the royalty holder to 3.0%, 4.0% and 5.0%, respectively, with the payment of an additional \$150,000, \$300,000 and \$400,000 to Peak Gold for each respective royalty period, before July 15, 2020.

In addition, Peak Gold would pay a royalty to Royal Gold at a rate of 3.0% of net smelter returns on mineral production from the lease area underlying the project considered in the PEA.

#### *Permitting*

Peak Gold holds the required permits and approvals to continue exploring the areas comprising the Project. The collection of baseline water quality data, material characterization analysis and wetlands determination has progressed since 2012. A more comprehensive baseline data collection program is being contemplated for 2019.

#### *Project Enhancement Opportunities*

Several opportunities have been identified that could enhance the project considered by the PEA, including:

- Expansion of the mine through delineation or development of additional mineral resources;
- Pit slope steepening to improve the assumed waste to mill feed strip ratio;
- Optimization of the assumed mine plan and development schedule; and
- Potential recovery of copper.

#### **About Peak Gold**

Peak Gold is a joint venture between Royal Alaska and CORE Alaska, LLC (“CORE Alaska”), a wholly-owned subsidiary of Contango ORE, Inc. Peak Gold holds a 675,000 acre lease with the Native Village of Tetlin and an additional 175,000 acres of State of Alaska mining claims, all located near Tok, Alaska, on which Peak Gold explores for minerals. Royal Alaska holds a

40% membership interest in Peak Gold and is the manager of the joint venture. CORE Alaska holds a 60% membership interest in Peak Gold. Royal Gold also holds a 13.2% equity interest in Contango ORE, Inc., and royalties of 3.0% of net smelter returns on mineral production from the lease and certain State of Alaska mining claims held by Peak Gold and 2.0% of net smelter returns from certain other State of Alaska mining claims held by Peak Gold.

## **About Royal Gold**

Royal Gold is a precious metals stream and royalty company engaged in the acquisition and management of precious metal streams, royalties, and similar production-based interests. As of September 1, 2018, the Company owns interests on 191 properties on six continents, including interests on 40 producing mines and 18 development stage projects. Royal Gold is publicly traded on the Nasdaq Global Select Market under the symbol “RGLD.” The Company’s website is located at [www.royalgold.com](http://www.royalgold.com).

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**Cautionary “Safe Harbor” Statement Under the Private Securities Litigation Reform Act of 1995:** With the exception of historical matters, the matters discussed in this press release are forward-looking statements that involve risks and uncertainties that could cause actual results to differ materially from projections or estimates contained herein. Such forward-looking statements include: statements about the PEA presenting a robust open pit mining operation with attractive economics at base case gold and silver prices; statements about highlights of the PEA results summarized in this press release regarding assumed gold and silver prices, after tax NPV, mine life, tonnage, grade, average metallurgical recoveries for gold and silver, life of mine recovered gold and silver, life of mine operating cash cost per ounce of gold recovered, per ounce of gold recovered including sustaining capital, life of mine capital cost, consisting of initial development capital, sustaining capital and closure costs, and after-tax payback period for initial development capital; statements about the PEA results being a significant milestone and showing that the Peak Gold Project is one of the most interesting emerging gold projects in the United States; statements about robust grade, near-surface open-pit resource, and a large and prospective land package located close to existing infrastructure, making the Peak Gold Project unique; statements about Royal Gold being committed to this exciting Project over the long term and focusing on opportunities to realize the value of our interest in a manner more closely aligned with our core business model; statements about the main parameters and results of the PEA summarized in this press release regarding assumed gold and silver prices, production profile, mine life, total tonnes milled, diluted gold and silver grade, mill throughput, gold and silver recovery, recovered gold and silver, average annual gold and silver production, operating costs, life of mine average total cash cost, life of mine cash cost plus sustaining cost, pre-production capital cost, sustaining capital cost plus closure cost, project economics, royalties, Alaska State tax and Federal tax, pre-tax NPV, IRR and payback period, post-tax NPV, IRR and payback period; statements about sensitivity of estimated post-tax NPV to changes to significant value drivers, including gold price, capital cost and operating cost; Estimates of measured, indicated

and inferred resources for the Peak Gold Project and assumed metal prices for gold and silver used to develop the pit shell, and cut off grades used to define the resource for the Main Peak and North Peak deposits; and statements about the PEA being based on a capital cost summary with an estimated accuracy of +/- 30%; and statements about mining, processing, project infrastructure, operating costs, permitting and project enhancement opportunities. Like any joint venture or other interest on a non-producing or not-yet-in-development project, our interests in the Peak Gold Project and the results in the PEA and related statements are subject to numerous and substantial risks, such as the ability of an operator to progress the project successfully to feasibility, develop the project into a mine and bring the project into production and operate in accordance with feasibility studies, and the ability of Royal Gold to obtain value for its interest in the Peak Gold Project. Additional factors that could cause actual results to differ materially include, among others, precious metals and copper prices; the ability to find an operator to develop the project and finance project construction to completion and bring the project into production as expected; operator's delays in securing or inability to secure necessary governmental permits; decisions and activities of the operator of the project; unanticipated grade, environmental, geological, seismic, metallurgical, processing, liquidity or other problems the operator may encounter; completion of feasibility studies; changes in the operator's project parameters as plans continue to be refined; changes in estimates of reserves and mineralization by the operator; risks associated with conducting business on Tribal lands ; changes in laws governing the project; and other subsequent events; as well as other factors described in the Company's Annual Report on Form 10-K, Quarterly Report on Form 10-Q, and other filings with the Securities and Exchange Commission. Most of these factors are beyond the Company's ability to predict or control. The Company disclaims any obligation to update any forward-looking statement made herein. Readers are cautioned not to put undue reliance on forward-looking statements.