2018 Annual Information Form

March 21, 2019

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1. IMPORTANT INFORMATION ABOUT THIS DOCUMENT

This annual information form ("**AIF**") provides important information about Centerra Gold Inc. It describes our history, our markets, our operations and projects, our mineral reserves and resources, sustainability, our regulatory environment, the risks we face in our business and the market for our shares, among other things. Unless otherwise indicated, information in this AIF is provided as of December 31, 2018.

Throughout this document, the terms *we, us, our, Centerra* and *the Company* mean Centerra Gold Inc. and its direct and indirect subsidiaries.

It also incorporates by reference:

- our management's discussion and analysis (the "**MD&A**") for the year ended December 31, 2018, which is available on SEDAR at www.sedar.com; and
- our audited consolidated financial statements for the year ended December 31, 2018 (the "**2018 financial statements**") which are also available on SEDAR.

1.1 Reporting Currency

All dollar amounts in this AIF are expressed in United States dollars except as otherwise indicated. References to $ or dollars are to United States dollars and references to C$ are to Canadian dollars. For reporting purposes, we prepare our financial statements in United States dollars and in conformity with accounting principles generally accepted in Canada, being International Financial Reporting Standards, as issued by the International Accounting Standards Board.

The annual average exchange rate in 2018 for U.S. dollars to Canadian dollars, based on the Bank of Canada noon rate and the (closing) exchange rate at December 31, 2018 (the last business day), were one U.S. dollar per C$1.2987 and C$1.3642 respectively.

With respect to legal and regulatory claims or decisions made by certain governmental agencies or courts and described in this AIF, the amounts of the claims or decisions are reported in the U.S. dollar equivalent as at of the date of such claim or decision.

1.2 Historic Metals Prices

The price of gold, copper and molybdenum fluctuates. The following table shows the average annual price for gold, copper and molybdenum from 2009 to 2018, and as of close on March 20, 2019:

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	March 20, 2019
Average Gold Price ($/oz)(1)	973	1,225	1,572	1,669	1,411	1,266	1,160	1,251	1,258	1,268	1,303
Average Copper Price ($/lb)(2)	2.34	3.42	4.00	3.61	3.32	3.11	2.49	2.21	2.80	2.96	2.94
Average Molybdenum Oxide Price ($/lb)(3)	11.08	15.71	15.49	12.74	10.30	11.38	6.63	6.50	8.19	11.93	12,.38

(1) London Bullion Market annual average daily afternoon gold price fixing.
(2) London Metal Exchange Copper Cash-Settlement.
(3) Platts Metals Week.

1.3 Technical Information

The disclosure in this AIF of a scientific or technical nature for our Kumtor Mine, Mount Milligan Mine, Öksüt Project, Kemess Project, and Greenstone projects are based on technical reports prepared for these properties in accordance with National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("**NI 43-101**") of the Canadian Securities Administrators. The technical information has been updated with current information where applicable. Information regarding qualified persons is as of the effective date of the relevant technical report.

- The technical report on the Kumtor Mine with an effective date of December 31, 2014 (filed on of March 20, 2015), (the "**Kumtor Technical Report**") was prepared by Gordon D. Reid, Judy Wong, Tommaso Roberto Raponi,

Kevin D'Souza, Pierre Landry, Jack Seto, and Al Chance. Each of these persons is a qualified person for purposes of NI 43-101 and Messrs. Seto and Chance are independent of Centerra. Mr. Seto is an employee of BGC Engineering Inc. and Mr. Chance is an employee with Golder Associates Ltd. ("**Golder**").

- The technical report for the Mount Milligan Mine, with an effective date of December 31, 2016 (filed on March 22, 2017), (the "**Mount Milligan Technical Report**") was prepared by Peter Andrews, P.Eng, Doug Berthelsen, P. Geo, and Ignacy (Tony) Lipiec, P.Eng. Each of these persons is a qualified person for purposes of NI 43-101. Mr. Lipiec is an employee with Amec Foster Wheeler Americas Limited and independent of Centerra.
- The technical report for the Öksüt Project, Turkey with an effective date of June 30, 2015 (filed on September 3, 2015) (the "**Öksüt Technical Report**") was prepared by Gordon D. Reid, Peter Woodhouse, Malcolm Stallman, Mustafa Cihan, Pierre Landry, Tyler Hilkewich, Tommaso Roberto Raponi, Kevin D'Souza and Chris Sharpe. Each of these persons is a qualified person for the purposes of NI 43-101. None of these individuals are independent of Centerra.
- The technical report for the Kemess underground project and Kemess east project, British Columbia, Canada prepared for AuRico Metals Inc. ("**AuRico**") with an effective date (and filing date) of July 14, 2017 (the "**Kemess Technical Report**") was prepared by Serge Chevrier, P.Eng., Marianne Rosted, P.Eng, Stephen Rice, P.Eng, and Don Kidd, P.Eng, all from AMEC Foster Wheeler, Andrew Jennings, P.Eng. of Conveyer Dynamics, Chad Yuhasz, P.Geo, Iouri Iakovlev, P.Eng., and Jarek Jakubec, C.Eng all from SRK Consulting (Canada) Inc., Chris Struthers, P.Eng. of Struthers Technical Solutions, Dan Stinnette, P.Eng. of Mine Ventilation Services, David Kratochvil, P.Eng., of BioteQ Environmental Technologies; Kenneth Major, P.Eng. of KWM Consulting Inc., Rolf Schmitt, P.Geo of ERM Consultants Canada, and Ross Hammett, P.Eng and Alva Kuestermeyer, both from Golder. Each of these persons is a qualified person for the purposes of NI 43-101. All individuals were independent of AuRico at the time of filing of the Kemess Technical Report.
- The technical report for the Hardrock Project with an effective date of October 1, 2016 (filed on December 21, 2016) (the "**Hardrock Technical Report**") was prepared by Louis-Pierre Gignac, Glen Schlyter, Martin Ménard, Rejean Sirois, Charley Murahwi, Eric Poirier, Pierre Roy, David G. Ritchie, Marc Rougier, and Craig Johnston. Each of these persons is a qualified person for the purposes of NI 43-101. All individuals are independent of Centerra. Messrs. Gignac, Schlyter, Ménard, and Sirois are employees of G Mining Services Inc., Mr. Murahwi is an employee of Micon International Limited, Mr. Poirier is an employee with WSP Canada Inc., Mr. Roy is an employee with Soutex Inc., Mr. Ritchie is an employee of Amec Foster Wheeler, Mr. Rougier is an employee of Golder, and Mr. Johnston is an employee of Stantec Inc.

The technical reports have been filed on SEDAR at www.sedar.com. In the case of the Kemess Technical Report, this technical report was prepared for AuRico (prior to our acquisition which closed on January 8, 2018). The Kemess Technical Report can be found under the AuRico Metals Inc. profile on www.sedar.com. To the best of our knowledge, information and belief, there is no new material scientific or technical information that would make the disclosure of the mineral resources or mineral reserve on the Kemess Project inaccurate or misleading.

The mineral reserve and resource estimates, mine production information, and other scientific and technical information in this AIF were prepared in accordance with the standards of the Canadian Institute of Mining, Metallurgy and Petroleum, and NI 43-101, and were prepared, reviewed, verified and compiled by our geological and mining staff under the supervision of Gordon Reid, Professional Engineer and Centerra's Vice President, Chief Operating Officer, who is a qualified person for the purpose of NI 43-101. Sample preparation, analytical techniques, laboratories used and quality assurance-quality control protocols used are done consistent with industry standards and independent certified assay labs are used with the exception of the Kumtor Mine and the Mount Milligan Mine, as described in the Kumtor Technical Report and the Mount Milligan Technical Reports respectively.

A glossary of geological and mining terms has been included at the end of this AIF for ease of reference.

1.4 Forward-Looking Information

This AIF and the documents incorporated by reference into this AIF contain statements and information about our expectations for the future. When we discuss our strategy, plans, proposed exploration and development activities and future financial and operating performance, or other things that have not yet taken place, we are making statements considered to be forward-looking information under Canadian securities laws.

Key things to understand about the forward-looking information in this AIF:

- It typically includes words and phrases about the future, such as *plans*, *expects* or *does not expect*, *budget*, *forecasts*, *projections*, *anticipate* or *does not anticipate*, *believe*, *intend*, *potential*, *strategy*, *schedule*, *estimates*, *contemplates*, *targets*, and similar expressions or statements that certain actions, events or results *may*, *could*, *would*, *might* or *will* be taken, occur or be achieved.
- It is based on a number of material assumptions, including those we have listed below, which may prove to be incorrect.
- Actual results and events may be significantly different from what we currently expect, because of the risks associated with our business. We list a number of these material risks below. We recommend you also review other parts of this document, including "*Risk Factors"* starting on page 101, which include a more detailed discussion of other material risks that could cause our actual results to differ from current expectations.

Forward-looking information is designed to help you understand management's current views of our near and longer-term prospects. It may not be appropriate for other purposes. We will not necessarily update this forward-looking information unless we are required to by securities laws.

Examples of Forward-Looking Information in this AIF

- Our expectations regarding successfully closing the Kumtor Strategic Agreement (as defined below).
- Expectations that we will have sufficient water at the Mount Milligan Mine to continue operations as planned for 2019.
- Expectations regarding the outcome of necessary studies and consultations with potentially impacted Indigenous groups to work towards a life-of-mine amendment to the Mount Milligan Environmental Assessment Certificate to address water sufficiency issues at Mount Milligan.
- Expectations regarding renewing the Öksüt mining license in the normal course before its current expiry date of January 16, 2023, and without any adverse impact to the continued availability of the Öksüt Facility (as defined below).
- Expectations regarding the timing for completing construction at the Öksüt project and for first gold pour to occur in the first quarter of 2020.
- Expected gold and copper production at our Kumtor Mine and the Mount Milligan Mine operations for 2019, and life of mine production estimates for projects that are in construction or in development (Öksüt Project and Kemess).
- Expected grades, recoveries and forecasted sustaining costs per ounce and forecasted all-in sustaining unit costs (on a by-product basis, or on a co-product basis) per ounce of production at Kumtor Mine and the Mount Milligan Mine.
- Estimated growth capital, sustaining capital, decommissioning and reclamation costs at our properties.
- Our exploration plans for 2019.
- Our expectations regarding pit wall stability, the continued success of the buttress, and the results of the dewatering program at Kumtor Mine.
- Our expectations regarding ice and waste dump movement at Kumtor Mine and our ability to continue managing them.
- Our expectations regarding future growth, results of operations and financial performance.
- Our expectations as to the future business and political environment in the jurisdictions where we operate.
- Our business prospects.
- The ability to deliver our concentrate to port in a timely manner.
- No labour disruptions at the mine or in our delivery pipeline.

Material Assumptions

- Centerra and our applicable subsidiaries throughout the year continue to meet the terms of our credit facilities in order to maintain current borrowing amounts and compliance with the financial covenants contained in the credit facilities.
- That the positive relationship with the Kyrgyz Republic Government (the "**Kyrgyz Government**") continues and that the parties continue to work constructively to complete the Kumtor Strategic Agreement, that the Kyrgyz Government does not take any actions that are contrary to the Strategic Agreement and/or the Kumtor Project Agreements

and which have a material adverse impact on the Kumtor Mine operations, and that the Kyrgyz court or other proceedings are not progressed or restarted contrary to the terms of the Kumtor Strategic Agreement and/or the Kumtor Project Agreements.

- The mine plans, expertise and related permits and authorizations at Kumtor Mine which have been received to date for 2019 are not withdrawn and that any further approvals are obtained in a timely manner from relevant Kyrgyz Governmental agencies.
- Any recurrence of political or civil unrest in the Kyrgyz Republic will not impact operations, including movement of people, supplies and gold shipments to and from the Kumtor Mine and/or power to the mine site.
- Any sanctions imposed on Russian entities do not have a negative effect on the costs or availability of inputs or equipment to the Kumtor Mine.
- The movement in the Central Valley Waste Dump at Kumtor Mine and in the Lysii and Sarytor Waste Dumps, does not accelerate and will be managed to ensure continued safe operations, without impact to gold production.
- The buttress constructed at the bottom of the Davidov glacier continues to function as planned.
- The Company is able to manage the risks associated with the increased height of the pit walls at Kumtor Mine.
- The dewatering program at Kumtor Mine continues to produce the expected results and the water management system works as planned.
- The pit walls at Kumtor Mine and Mount Milligan Mine remain stable.
- The water levels in the central pit at Kumtor Mine can be successfully managed to ensure continued access to the pit bottom
- The resource block model at Kumtor Mine and Mount Milligan Mine reconciles as expected against production.
- The Mount Milligan mill (processing facility) continues to have access to sufficient water supplies to operate year-round at the intended capacity. This includes management's expectations that the spring freshet will produce the expected levels of run-off water which will be captured for our operations.
- Grades and recoveries at Kumtor Mine and Mount Milligan Mine remain consistent with the 2019 production plan to achieve the forecast gold and copper production.
- The Kumtor mill and the Mount Milligan mill continues to operate as expected, including that there are no unplanned suspension of operations due to (among other things), mechanical or technical performance issues.
- The permanent secondary crushing plant at Mount Milligan Mine continues to perform as designed.
- There are no changes to any existing agreements or relationships with potentially impacted Indigenous groups which would materially and adversely impact our operations, and no demands are received from such groups to enter into new agreements which would materially and adversely impact our operations.
- There are no unfavourable changes to concentrate sales arrangements at Mount Milligan Mine and the roasting arrangements at the Langeloth facility.
- There are no adverse regulatory changes affecting any of our operations.
- Exchange rates, prices of key consumables, costs of power, labour, material costs, supplies and services (including transport), water usage fees, and any other cost assumptions at all operations and projects of the Company are not significantly higher than prices assumed in planning.
- No unplanned delays in or interruption of scheduled production from our mines, including due to climate/weather conditions, political or civil unrest, natural phenomena, regulatory or political disputes, equipment breakdown or other developmental and operational risks.
- Spot and realized prices for gold and copper will be as expected.
- Tax rates, foreign currency exchange rates, and interest rates will be as expected.
- Our growth capital, sustaining capital, decommissioning and reclamation estimates are accurate.
- Our mineral reserve and resource estimates, and the assumptions upon which they are based are accurate.
- No labour related disruptions occur at any of our operations.
- Our counterparties in any of our sales contracts for gold doré bars or copper/gold concentrate meet their contractual obligations to us.

Material Risks

- The political risks associated with some of our operations and the risk of resource nationalism in these jurisdictions.
- The ability of Centerra to make payments on its corporate credit facility depends on the cash flow of subsidiaries.
- Changes in, or more aggressive enforcement of, laws, regulations and government practices relating to mining and exploration activities.
- Community activism may influence laws and regulations, result in increased contributory demands, or in business interruption.
- We may not successfully complete the Kumtor Strategic Agreement.
- Permits, approvals and commissions necessary for operations/or and exploration activities may not be received in a timely manner, or at all, or may be withdrawn.
- Our relationship with local communities may affect our existing operations and development projects.
- Indigenous claims and consultation issues.
- Litigation.
- Defects in title in connection with our properties.
- Our ability to enforce our legal rights.
- Risks associated with having a significant shareholder.
- Possible director conflicts of interest.
- Anti-corruption legislation.
- Our exploration and development activities may not be successful.
- Our ability to replace our mineral reserves.
- Risks associated with the conduct of joint ventures/partnerships, including experiencing difficulties with our partners.
- Our mineral reserve and mineral resource estimates may be imprecise.
- Our production and cost estimates may be inaccurate.
- Reputation risk and losing control over how we are perceived.
- Inability to grow our business or replace depleted reserves; not being able to integrate new businesses and assets that we acquire.
- Large fluctuations in the Company's trading prices
- Ground movement at Kumtor Mine.
- Waste dump and ice movement at Kumtor Mine.
- Natural or man-made disasters.
- Competition for mineral acquisition opportunities.
- The sensitivity of our business to the volatility of gold and copper prices.
- The use of provisionally priced sales contracts could have a negative impact on our revenues.
- Our reliance on a few key customers for our copper-gold concentrate from Mount Milligan Mine.
- Our commodity hedging activities involves risks relating to the price we receive for our products and involves counterparty risks.
- The sensitivity of our business to the volatility of fuel prices.
- The impact of currency fluctuations.
- The impact of global financial conditions.
- Our ability to obtain future financing.
- The impact of restrictive covenants in our credit facilities.
- The possibility of dilution if we raise funds through share issuances or convertible debt instruments.
- The adequacy of our insurance to mitigate operational and other risks.
- The impact of taxation in multiple jurisdictions.
- The effect of market conditions on our short-term investments.
- General operation and production risks.
- Environmental, health and safety risks.
- Water management and oversight of tailings management facilities.
- Workforce may be exposed to widespread pandemic.
- Cyanide is used in our mining activities and unintentional discharges may occur.
- Our products may contain naturally occurring impurities and toxic substances that we do not fully remove or reduce.
- Management of the capacity shortfall at the tailings facility at Kumtor and Mount Milligan.

- Availability of sufficient water supplies for our project, particularly at our Mount Milligan Mine which experienced water shortages starting in 2017.
- Regulation of greenhouse gas emission may increase our costs.
- Substantial decommissioning and reclamation costs, including the fact that actual costs may be significantly higher than estimated.
- Construction and development risks at our Öksüt Project.
- Mechanical breakdowns.
- The occurrence of any labour unrest or disturbances, and our ability to successfully re-negotiate collective agreements when required.
- Our ability to attract and retain qualified personnel.
- Long lead times required for equipment and supplies given the remote location of our properties.
- Supply chain disruptions.
- Our critical operating systems may be compromised by cyber-attacks.

1.5 Non-GAAP Measures

This AIF contains the following non-GAAP financial measures: all-in sustaining costs per ounce sold on a by-product basis, all-in sustaining costs per ounce sold on a by-product basis including taxes, and all-in sustaining costs per ounce sold on a co-product basis. In addition, non-GAAP financial measures include operating costs (on a sales basis), adjusted operating costs and adjusted operating costs per ounce sold, as well as capital expenditures (sustaining) and capital expenditures (growth) and cash provided by operations before changes in working capital. These financial measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other issuers, even as compared to other issuers who may be applying the World Gold Council ("**WGC**") guidelines, which can be found at http://www.gold.org.

We believe that the use of these non-GAAP measures will assist analysts, investors and other stakeholders of our Company in understanding the costs associated with producing gold and copper, understanding the economics of gold/copper mining, assessing our operating performance, our ability to generate free cash flow from current operations and to generate free cash flow on an overall Company basis, and for planning and forecasting of future periods. However, the measures do have limitations as analytical tools as they may be influenced by the point in the life cycle of a specific mine and the level of additional exploration or expenditures a company has to make to fully develop its properties. Accordingly, these non-GAAP measures should not be considered in isolation, or as a substitute for, analysis of our results as reported under GAAP.

Definitions

The following is a description of the non-GAAP measures used in this AIF. The definitions are similar to the WGC's Guidance Note on these non-GAAP measures:

- Production costs represent operating costs associated with the mining, milling and site administration activities at the Company's operating sites, excluding costs unrelated to production such as mine standby and community costs related to current operations.
- Operating costs (on a sales basis) include mine operating costs such as mining, processing, site support, royalties and operating taxes (except at Kumtor Mine where revenue-based taxes are excluded), but exclude depreciation, depletion and amortization, reclamation costs, financing costs, capital development and exploration.
- Adjusted operating costs per ounce sold include operating costs (on a sales basis), regional office administration, mine standby costs, community costs related to current operations, refining fees and by-product credits.
- All-in sustaining costs on a by-product basis per ounce sold include adjusted operating costs, the cash component of capitalized stripping costs, corporate general and administrative expenses, accretion expenses, and sustaining capital, net of copper and silver credits. The measure incorporates costs related to sustaining production. Copper and silver credits represent the expected revenue from the sale of these metals.
- All-in sustaining costs on a by-product basis per ounce sold including taxes, include revenue-based tax at the Kumtor Mine and taxes (mining and income) at the Mount Milligan Mine.

- All-in sustaining costs on a co-product basis per ounce of gold sold or per pound of copper sold, operating costs are allocated between copper and gold based on production. To calculate the allocation of operating costs, copper production has been converted to ounces of gold equivalent using the copper production for the periods presented, as well as an average of the futures prices during the quotational pricing period for copper and gold sold from the Mount Milligan Mine. For the twelve months ended December 31, 2018, 422 pounds of copper was equivalent to one ounce of gold.
- Adjusted earnings is calculated by adjusting net earnings (loss) as recorded in the condensed interim consolidated statements of income (loss) and comprehensive income (loss) for non-recurring items.
- Capital expenditure (sustaining) is a capital expenditure necessary to maintain existing levels of production. The sustaining capital expenditures maintain the existing mine fleet, mill and other facilities so that they function at levels consistent from year to year.
- Capital expenditure (growth) is capital expended to expand the business or operations by increasing productive capacity beyond current levels of performance.
- Growth projects are defined as projects that are beyond the exploration stage but are pre-operational. In 2018, the Company's growth projects include Öksüt, Kemess, and the Greenstone Gold Property.
- Average realized gold price is calculated by dividing revenue (including third party sales and the fixed amount received under the Mount Milligan Streaming Arrangement) derived from gold sales by the number of ounces sold.
- Average realized copper price is calculated by dividing revenue (including third party sales and the fixed amount received under the Mount Milligan Streaming Arrangement) derived from copper sales by the number of pounds sold.
- Free cash flow (unlevered) is calculated as cash provided by operations less additions to property, plant and equipment.
- Cash provided by operations before changes in working capital starts with cash provided by operations and removes the changes in working capital as presented in the Company's Statement of Cash Flows.

A reconciliation of the non-GAAP measures used in this AIF is contained in our MD&A for the year ended December 31, 2018, which is available on SEDAR at www.sedar.com.

2. ABOUT CENTERRA

We are a Canadian-based gold mining company focused on operating, developing, exploring and acquiring gold properties in North America, Asia and other markets worldwide. Centerra is one of the largest western-based gold producer in Central Asia.

Our head office is in Toronto, Ontario. We also have offices in Bishkek, Kyrgyz Republic; Prince George, British Columbia (Canada); Ankara, Turkey; Denver, Colorado, (USA); Langeloth, Pennsylvania (USA); and Challis, Idaho (USA).

We have approximately 3,500 employees.

We are publicly listed on the Toronto Stock Exchange ("**TSX**") under the symbol CG.

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2.1 Our Properties

The table below sets out our properties. We have two material properties – the Kumtor Mine in the Kyrgyz Republic and the Mount Milligan Mine in British Columbia, Canada.

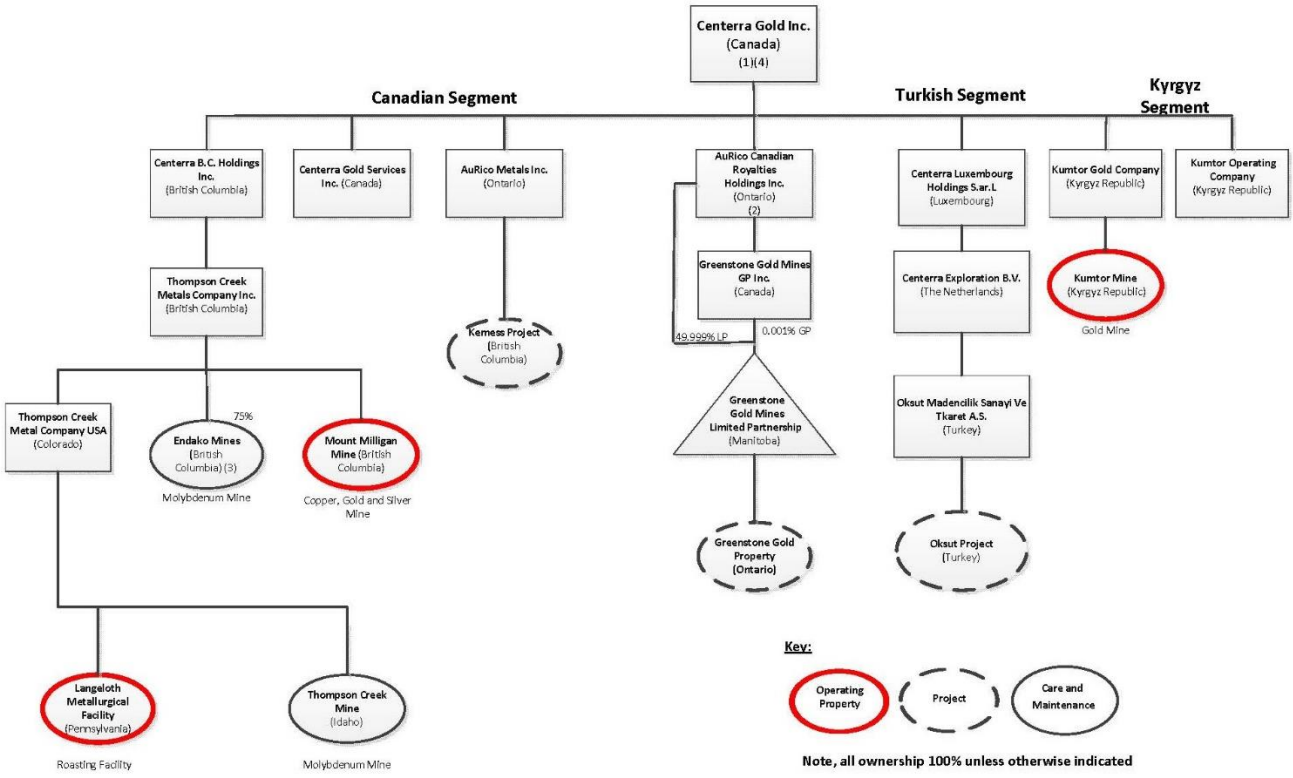
We own 100% interest in each of the following properties except for (i) the Hardrock Project in which we own a 50% interest owed by our wholly owned subsidiary AuRico Canadian Royalties Holdings Inc. ("**ACRH**"), (ii) the Endako Mine in which we own a 75% joint venture interest (the remaining 25% is held by Sojitz Moly Resources, Inc. ("**Sojitz**"), a subsidiary of Sojitz Corporation) (the "**Endako Mine Joint Venture**"), and (iii) the optioned interest in various exploration projects which we are still in the process of earning.

	Property Name	Location	Metal
Producing Mines	Kumtor (the "**Kumtor Mine**")	Kyrgyz Republic	Gold
	Mount Milligan (the "**Mount Milligan Mine**")	Canada	Gold/Copper
Construction Projects	Öksüt (the "**Öksüt Project**")	Turkey	Gold
Development Projects	Kemess (the "**Kemess Project**")	Canada	Gold/Copper/Silver
	Hardrock (the "**Hardrock Project**") (of the Greenstone Gold Property)	Canada	Gold/Copper
Exploration Projects	Yamaç	Turkey	Gold/Copper
	Berg	Canada	Copper/Molybdenum
	Options on projects in Canada, Mexico and Finland		
Care and Maintenance/Stand-by Projects	Thompson Creek Mine (the "**TC Mine**")	United States	Molybdenum
	Endako Mine (the "**Endako Mine**")	Canada	Molybdenum

We also own 100% of the Langeloth Metallurgical Facility which is located in Langeloth, Pennsylvania and processes molybdenum concentrate for third party producers.

2.2 Inter-Corporate Relationships

Our principal subsidiaries are set out below as at December 31, 2018. On October 12, 2018 we sold all of our interests in Boroo Gold LLC and Centerra Gold Mongolia LLC (the "**Mongolian Subsidiaries**") which held the Boroo Gold Mine and Gatsuurt Project, respectively. Each of our principal subsidiaries are 100% owned, unless otherwise noted.



(1) Centerra was incorporated under the *Canada Business Corporations Act* by articles of incorporation dated November 7, 2002 under the name 4122216 Canada Limited. Centerra changed its name on December 13, 2002 to Kumtor Mountain Holdings Corporation, and on December 5, 2003 to Centerra Gold Inc.

(2) AuRico Canadian Royalties Holdings Inc. owns a 50% interest in Greenstone Gold Mines LP which through its managing partner, Greenstone Gold Mines GP Inc., (the "**Managing Partner**") owns the Greenstone Gold Property in Ontario, Canada (the "**Greenstone Gold Property**"). The Managing Partner is owned 50/50 by ACHRH and its partner, Premier Gold Mines Limited ("**Premier**").

(3) Centerra owns an indirect 75% joint venture interest in the Endako Mine.

(4) Other subsidiaries, including those through which we hold our interest in exploration properties (including those in which we are earning an optioned interest), have not been included in the above chart as their respective assets represent less than 10% of the consolidated assets of Centerra, and less than 10% of the consolidated sales and operating revenue of Centerra. These subsidiaries are wholly owned, directly or indirectly, by Centerra.

2.3 Recent Developments

The following is a summary of key developments over the past three years that have influenced the general development of our business. For further information regarding the developments, see the applicable section of this document dealing with the property.

Kumtor Mine

- Starting in 2012, Kyrgyz Republic regulatory authorities commenced court claims in the Kyrgyz Republic against our Kyrgyz Republic subsidiaries, Kumtor Gold Company CJSC ("**KGC**") and Kumtor Operating Company ("**KOC**") alleging, among other things, environmental damages, mismanagement of assets and non-compliance with corporate laws relating to dividends. Kyrgyz Republic authorities also commenced a number of criminal investigations relating to Kumtor Mine, KGC and KOC. For more information please see "*Centerra's Properties – Producing Mines - Kumtor Mine*".

- On July 12, 2016, we commenced an arbitration proceeding with the Permanent Court of Arbitration ("**PCA**") against the Kyrgyz Republic and Kyrgyzaltyn in relation to certain ongoing disputes relating to the Kumtor Mine, including the environmental claims discussed above and on January 12, 2017, we filed with the PCA a request for partial award, or in the alternative, interim measures, against the Kyrgyz Republic. For more information please see "*Centerra's Properties – Producing Mines - Kumtor Mine*".

- On September 11, 2017, we announced the entering into of a comprehensive settlement agreement with the Kyrgyz Government on behalf of the Kyrgyz Republic (the "**Kumtor Strategic Agreement**"). The Kumtor Strategic Agreement includes full and final reciprocal releases and resolution of substantially all existing arbitral and environmental claims, disputes, proceedings and court orders, and releases Centerra and our Kyrgyz subsidiaries from future claims covering the same subject matter as the existing environmental claims arising from approved mine activities.

- As part of the Kumtor Strategic Agreement (which is still pending closing), we agreed to:

    - make a one-time lump sum payment totalling $57 million to a new government-administered Nature Development Fund ($50 million) and to a new, government administered Cancer Care Support Fund ($7 million);
    - within 12 months of closing make a further one-time payment of $3 million to the new government administered Cancer Care Support Fund;
    - make annual payments of $2.7 million to the Nature Development Fund, conditional on the Kyrgyz Government continuing to comply with its obligations under the Kumtor Strategic Agreement; and
    - accelerate annual payments to Kumtor's Reclamation Trust Fund in the amount of $6 million a year until the total amount contributed by KGC reaches the total estimated reclamation cost for the Kumtor Mine (representing the independent assessment of Kumtor Mine's current reclamation costs) subject to a minimum total reclamation cost of $69 million (which is broadly in line with our current estimated reclamation cost for the Kumtor Mine);

  The releases of liability and outstanding payments are subject to a range of initial conditions precedent designed to protect Centerra, KGC and KOC.

  The Company is continuing to work closely with the Kyrgyz Government to expeditiously satisfy the remaining conditions precedent to the Kumtor Strategic Agreement, including the termination of certain legal proceedings. The Company understands that certain Kyrgyz Government officials have made public statements suggesting a desire to enhance the terms of the Kumtor Strategic Agreement. The initial longstop date for the satisfaction of all of the conditions precedent to completion of the Kumtor Strategic Agreement has been extended by agreement of all the parties to May 31, 2019.

- As a result of entering into the Kumtor Strategic Agreement, the international arbitration has been suspended until May 31, 2019.

Mount Milligan Mine

- On July 5, 2016, we announced that we entered into definitive agreements to acquire all of the issued and outstanding common shares of Thompson Creek Metals Company Inc. ("**Thompson Creek**"). Total consideration for the acquisition was $1.03 billion, which included the payment of all outstanding bonds and debt of

Thompson Creek. The transaction subsequently closed on October 20, 2016. We issued a total of 22,327,001 Centerra Common Shares as part of the acquisition.

- On December 27, 2017, we announced that due to a lack of sufficient water resources, mill processing operations at the Mount Milligan Mine in British Columbia, Canada were temporarily suspended. In January 2018, we received an amendment to Mount Milligan Environmental Assessment Certificate that allows for a limited withdrawal of water from Philip Lake until October 2018. We restarted operations at partial capacity on February 5, 2018 using only one ball mill to minimize water requirements. We restarted the second ball mill on March 23, 2018 as a result of building up sufficient water resources in our tailings storage facility ("**TSF**"). The water build-up was attributed to thawing of ice in the TSF and pumping water from groundwater sources, tower drains and nearby Philip Lake.
- Throughout 2018, we carried out necessary studies and consultations with relevant Indigenous groups in order to obtain further permits for continued access to water, and to make permanent amendments to the Mount Milligan Environmental Assessment Certificate. On September 14, 2018, we announced that, Mount Milligan Mine received approval to access certain short-term water sources, namely to (i) pump from groundwater wells within Mount Milligan Mine's TSF (as well as from a single groundwater well outside of the TSF for the entire LOM) and (ii) pump up to 15% of the base flow from Philip Lake until November 15, 2018. In November 2018, we were granted a further approval to pump water from Philip Lake until April 30, 2019.
- Throughout the winter of 2018/2019, the Company slowed its production at Mount Milligan Mine to conserve water.
- In the first quarter of 2019, we received approval to pump water from Philip Lake, Meadows Creek and Rainbow Creak during open water season commencing in 2019 until November 30, 2021 and to pump from groundwater sources within a radius of approximately 6 kilometres of the Mount Milligan Mine TSF for the life of the mine.
- The Company has started the necessary studies, and commenced consultation with potentially impacted Indigenous groups to work toward a further, longer-term amendment to the Environmental Assessment Certificate.

Öksüt Project

- In 2015, we received approval of the environmental impact assessment for the Öksüt Project.
- In April 2016, our wholly owned subsidiary in Turkey, Öksüt Madencilik A.S. ("**OMAS**") which owns the Öksüt Project entered into a $150 million project financing term loan facility for the development of the Öksüt Project (the "**OMAS Facility**"). All conditions precedent for the availability of the OMAS Facility were satisfied as of June 26, 2018. Centerra has provided a guarantee of OMAS' obligations under the OMAS Facility, which can only be called upon if certain conditions relating to the tenure of the OMAS mining license are not satisfied by August 22, 2022. The OMAS mining license has an expiry date of January 16, 2023. OMAS will apply for a renewal of the license in the ordinary course and in accordance with the time frames permitted by applicable Turkish authorities.
- In July 2016, OMAS received its forestry permit for the Öksüt Project site from the Ministry of Forestry and received its GSM operating license.
- On January 11, 2018, we announced that we received the approval of a pastureland permit for the Öksüt Project, the last key permit needed to commence construction activities at the Öksüt Project.
- On February 12, 2018, OMAS also received an investment incentive certificate from the Turkish Ministry of Economy. The investment incentive certificate provides OMAS with certain anticipated tax incentives.
- On February 22, 2018, our Board of Directors approved the development of the Öksüt Project.
- In March, 2018, construction activities at the Öksüt Project commenced. As at the end of December 2018, construction of the Öksüt Project is approximately 38% complete. The project is on time and on budget. The Company expects that the first gold pour from the Öksüt Project will occur in the first quarter of 2020.

Mongolia – Boroo and Gatsuurt Projects

- On October 11, 2018, the Company competed the sale of its Mongolian business unit, including Boroo Gold LLC (which owns the Boroo mine and related processing facility) and Centerra Gold Mongolia LLC (which owns the Gatsuurt Gold Project) to OZD ASIA PTE Ltd. for net proceeds of $35 million.

Greenstone Gold Project

- In February 2015, we entered in a definitive agreement with Premier Gold Mines Limited ("**Premier**") to form a 50/50 partnership to develop Premier's Trans-Canada property (subsequently renamed the Greenstone Gold Property).
- In November 2016, the Company and Premier announced a feasibility study results on the Hardrock Project (part of the Greenstone Gold Property). A NI 43-101 technical report was filed on SEDAR on December 22, 2016.
- In June 2018, the Greenstone Partnership entered into a definitive agreement with Long Lake #58 First Nations.
- On December 13, 2018, the Environmental Impact Study and Environmental Assessment ("**EA**") on the Hardrock Project was approved by the Minister of Environment and Climate Change of Canada. The Ontario provincial approval of the EA is anticipated in the first quarter of 2019.
- In December 2018, the Greenstone Partnership signed a long-term relationship agreement with The Métis Nation of Ontario Secretariat Inc.

Corporate

- We acquired all of the outstanding shares of Thompson Creek on October 20, 2016. In connection with the acquisition of Thompson Creek, we completed a bought deal equity financing to raise approximately C$195 million (gross) and issued 26,599,500 Common Shares.
- As part of the Thompson Creek acquisition, our wholly owned subsidiary Centerra B.C. Holdings Inc. (which owns the Mount Milligan Mine) entered into a credit agreement on October 20, 2016 for a $250 million non-revolving term credit facility and a $75 million revolving term credit facility (the "**Centerra BC Credit Facility**").
- On January 8, 2018, we completed the acquisition of all of the issued and outstanding common shares of AuRico for C$1.80 cash consideration per share, for an aggregate transaction value of approximately C$310 million. With this acquisition, we acquired 100% ownership in the Kemess Project and a portfolio of royalties, including a 1.5% NSR on the Young-Davidson mine located in Canada owned by Alamos Gold Inc., and a 2.0% NSR on the Fosterville mine located in Australia owned by Kirkland Lake Gold Ltd. (collectively, the "**Royalty Portfolio**").
- On February 1, 2018, we announced that we had entered into a $500 million four-year secured revolving credit facility (the "**Corporate Facility**") with a lending syndicate led by The Bank of Nova Scotia and National Bank of Canada. The Corporate Facility is an amendment and restatement of the Centerra BC Credit Facility (discussed below) and accordingly both Centerra and Centerra B.C. Holdings Inc. are borrowers under the facility. The Corporate Facility is for general corporate purposes, including working capital, investments, acquisitions and capital expenditures. In connection with entering into the Corporate Facility, Centerra repaid and subsequently terminated its credit facility with the European Bank for Reconstruction and Development.
- On June 27, 2018, we announced the completion of the sale of our Royalty Portfolio to a subsidiary of Triple Flag Mining Finance Bermuda Ltd. ("**Triple Flag**") for an up-front cash payment of $155 million, subject to customary adjustments, including an economic effective date of April 1, 2018. At the same time, the Company and Triple Flag entered into a $45 million silver stream on the Kemess Project. Under the silver stream agreement, the Company has agreed to sell 100% of the silver production from the Kemess Project in exchange for advance payments for silver payable in tranches of $10 million, $10 million, $12.5 million and $12.5 million. The payments would be due upon public announcement of a construction decision for the Kemess underground development project and the three succeeding anniversaries of such date. In addition, Triple Flag will make ongoing payments of 10% of the then current market price for each ounce of silver delivered.

2.4 Other Disclosure Relating to Ontario Securities Commission Requirements for Companies Operating in Emerging Markets

Controls Relating to Corporate Structure Risk

We have implemented a system of corporate governance, internal controls over financial reporting, and disclosure controls and procedures that apply at all levels of the Company and its subsidiaries. These systems are overseen by the Company's board of directors, and implemented by the Company's senior management. The relevant features of these systems include:

Control Over Subsidiaries

Centerra's corporate structure has been designed to ensure that the Company controls, or has a measure of direct oversight over the operations of its subsidiaries. All of our subsidiaries are directly or indirectly wholly-owned by the Company with the exception of (i) our 50% limited partnership interest in the Greenstone Partnership which holds exploration interests in Ontario, Canada, (ii) shareholdings in other publicly traded and privately held companies which represent less than 10% of the consolidated assets of Centerra, and less than 10% of the consolidated sales and operating revenue of Centerra.

Centerra controls the appointments of all directors and officers of its wholly owned subsidiaries, except for KGC where we have an arrangement with Kyrgyzaltyn which provides that we will use commercially reasonable efforts to have at least one representative from Kyrgyzaltyn elected as Chair of the board of directors of KGC and a member of each of the KGC management committee and the KGC auditing committee.

The directors of Centerra's wholly-owned subsidiaries are ultimately accountable to Centerra as the shareholder appointing him or her, and to Centerra's board of directors and senior management. As well, the annual budget, capital investment and exploration program in respect of the Company's mineral properties are established by the Company and approved by the Centerra board of directors. Members of management of all subsidiaries are also subject to written delegation of financial authority rules (adopted by the board of directors of each subsidiary) which limit their ability to bind such company. Our internal audit group also regularly travels to Centerra's operating sites and subsidiaries and reports directly to the Audit Committee on compliance with various matters.

In the case of the Greenstone Partnership (which owns the Greenstone Gold Property in Northern Ontario, Canada), the partnership is governed by an amended and restated limited partnership agreement (the "**Greenstone Partnership Agreement**") which sets out the rights and obligations of the partners. In accordance with the Greenstone Partnership Agreement, we currently have the right to nominate 50% of the directors on the board of the Managing Partner. The other 50% of the board is appointed by our partner in the Greenstone Partnership, Premier Gold Mines Limited.

We have a 75% interest in the Endako Mine Joint Venture which was formed on June 12, 1997 pursuant to the terms of the Exploration, Development and Mine Operating Agreement between Thompson Creek and Sojitz (the "**Endako Mine Joint Venture Agreement**"). Sojitz owns the remaining 25% interest in the Endako Mine Joint Venture. Our 75% interest in the contractual joint venture is held through our wholly owned subsidiary, Thompson Creek. We appoint all officers and directors of Thompson Creek. We are the manager of the Endako Mine Joint Venture with overall management responsibility for operations. As manager, we prepare annual budgets and production plans and submit them to Sojitz for approval. Oversight is provided by a joint venture committee whose members are appointed by Thompson Creek and Sojitz.

Signing officers for subsidiary foreign bank accounts (of our wholly owned subsidiaries) are either employees of Centerra or directors of the subsidiaries. In accordance with the Company's internal policies, all subsidiaries must notify the Company's corporate treasury department of any changes in their local bank accounts including requests for changes to authority over the subsidiaries' foreign bank accounts. Monetary limits are established internally by the Company as well as with the respective banking institution. Annually, authorizations over bank accounts are reviewed and revised as necessary. Changes are communicated to the banking institution by the Company and the applicable subsidiary to ensure appropriate individuals are identified as having authority over the bank accounts.

Strategic Direction

Centerra's board of directors is responsible for the overall stewardship of the Company and, as such, supervises the management of the business and affairs of the Company. More specifically, the board is responsible for reviewing the strategic business plans and corporate objectives, and approving acquisitions, dispositions, investments, capital expenditures and other transactions and matters that are material to the Company including those of its material subsidiaries.

Internal Control Over Financial Reporting

The Company prepares its consolidated financial statements and MD&A on a quarterly and annual basis, using IFRS as issued by the International Accounting Standards Board, which require financial information and disclosures from its subsidiaries. The Company implements internal controls over the preparation of its financial statements and other financial disclosures to provide reasonable assurance that its financial reporting is reliable and that the quarterly and annual financial statements and MD&A are being prepared in accordance with IFRS and relevant securities laws. These internal controls include the following:

(i) The Company has established a monthly and quarterly reporting package relating to its subsidiaries that standardizes the information required from the subsidiaries in order to complete the consolidated financial statements and MD&A. Management of the Company has direct access to relevant financial management of its subsidiaries in order to verify and clarify all information required.

(ii) All public documents and statements relating to the Company and its subsidiaries containing material information (including financial information) are reviewed by members of the in-house legal department and our internal disclosure committee comprised of the President & Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, General Counsel, and Vice President, Investor Relations before such material information is disclosed, to make sure that all material information has been considered by management of the Company and properly disclosed. Where appropriate, the disclosure committee will also convene a subset of other employees to ensure that our public documents and statements do not contain any misrepresentations, as such term is defined in applicable Canadian securities laws.

(iii) As more fully described below, the Company's Audit Committee obtains confirmation from the Chief Executive Officer and Chief Financial Officer as to the matters addressed in the quarterly and annual certifications required under National Instrument 52-109 - *Certification of Disclosure in the Company's Annual and Interim Filings* ("**NI 52-109**"), including its review of internal controls over financial reporting and disclosure controls and procedures.

(iv) The Company's Audit Committee reviews and approves the Company's quarterly and annual financial statements and MD&A and recommends to the Company's board of directors for the approval of the Company's quarterly and annual financial statements and MD&A, and any other financial information requiring board approval, prior to their publication or release.

(v) The Company's Audit Committee assesses and evaluates the adequacy of the procedures in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements by way of reports from management and its internal and external auditor.

(vi) Although not specifically a management control, the Company engages its external auditor to perform reviews of the Company's quarterly financial statements and an audit of the annual consolidated financial statements in accordance with Canadian generally accepted auditing standards.

Disclosure Controls and Procedures.

The responsibilities of the Company's Audit Committee include oversight of the Company's internal control systems and disclosure controls and procedures including those systems to identify, monitor and mitigate business risks as well as compliance with legal, ethical and regulatory requirements.

CEO and CFO Certifications.

In order for the Company's President & Chief Executive Officer and Chief Financial Officer to be in a position to attest to the matters addressed in the quarterly and annual certifications required by NI 52-109, the Company has developed internal procedures and responsibilities throughout the organization for its regular periodic and timely reporting. These processes are designed to provide assurances that information that may constitute material information will reach the appropriate individuals who draft and/or review public documents and statements relating to the Company. Annually, we engage an external accounting firm to carry out a review of our internal controls over financial reporting.

These systems of corporate governance, internal control over financial reporting and disclosure controls and procedures are designed to ensure that, among other things, the Company has access to all material information about its subsidiaries.

Procedures of the Board of Directors of the Company

Oversight of the Company's Risks

We have adopted an enterprise risk management program which applies to all of our operations and corporate offices. Our executive team meets regularly with our Director, Risk Management and Insurance to review the risks applicable to the organization and each site, including country specific risks, and to review mitigation actions. The Risk Committee of the Board of Directors has oversight responsibilities in relation to the policies, processes and systems for the identification, assessment and management of the Company's principal strategic, financial, and operational risks. The members of the Risk Committee must include at least one member from each of the other standing committees of the Board, and the majority of members must be independent of the Company**.**

Fund Transfers from the Company's Subsidiaries to Centerra

Funds are transferred by the Company's subsidiaries to the Company by way of wire transfer for a variety of purposes, including: chargeback of costs undertaken on behalf of the subsidiaries via intercompany invoices by the Company; repayment of loans related to project funding; and dividend declaration/payment by the subsidiaries. The method of transfer is dependent on the funding arrangement established between the Company and the subsidiary. In some cases, loan agreements are established with corresponding terms and conditions. In other cases, dividends are declared and paid based on the profitability and available liquidity of the applicable subsidiary.

Records Management of the Company's Subsidiaries

The original minute books, corporate seal and corporate records of each of the Company's subsidiaries are kept at each subsidiary's respective registered office. All material documents are available in the local language of the subsidiary and in English.

2.5 Centerra's Business

We are a Canadian-based gold mining company focused on operating, developing, exploration and acquiring gold properties in North America, Asia, and other markets worldwide. We are one of the largest Western-based gold producer in Central Asia.

We operate two material properties: the Kumtor Mine in the Kyrgyz Republic and the Mount Milligan Mine in British Columbia, Canada. We also have a construction project in Turkey (Öksüt Project) and development projects in Ontario, Canada (Hardrock Project), and in British Columbia (Kemess).

We also have a molybdenum business which includes our TC Mine in Idaho, United States, and the Endako Mine (we own a 75% interest) in British Columbia, Canada. Both TC Mine and Endako Mine are currently on care and maintenance. We also operate the Langeloth Metallurgical Processing Facility in Pennsylvania.

For more information

You can find more information about Centerra on SEDAR at www.sedar.com .

See our 2018 financial statements and MD&A for additional financial information.

See our most recent management information circular for additional information, including how our directors and officers are compensated and any loans to them, principal holders of our securities, and securities authorized for issuance under our equity compensation plans.

We also have exploration interests in Canada and Turkey, which are owned (directly or indirectly) by Centerra, and properties in Mexico and Finland in which we are earning interests pursuant to option agreements with the respective properties owners.

Business Objectives

Our vision statement is to build a team-based culture of excellence that responsibly delivers sustainable value and growth.

Business Operations

Our principal business operations of gold/copper production span the six major stages of the mining cycle, from early-stage exploration to mine closure and reclamation.

Exploration	Our exploration programs are focused on increasing our mineral reserves and resources. These programs include drilling at or in the immediate vicinity of our operating mine(s) to replace mined reserves, drilling programs on advanced stage projects where gold mineralization has been identified, and grassroots exploration on projects where gold mineralization has not been identified. Our exploration and business development teams actively pursue new exploration project opportunities worldwide.
Development and Construction	If our exploration programs are successful in identifying a mineral resource, the prospects for economic extraction of the resource will be analyzed through a series of technical studies. These may include metallurgical studies, scoping studies, environmental studies, mine and processing design, preliminary assessment studies, pre-feasibility studies and feasibility studies. Pre-feasibility and feasibility studies may be undertaken concurrently with permitting for the project. Once feasibility and permitting are concluded, project financing may be arranged followed by detailed engineering and construction of the mine site and processing facilities.
Mining	Ore and waste rock are removed from deposits by open pit or underground methods (planned for Kemess). The ore is then transported to a processing facility to extract gold and/or copper (depending on the mine). The waste rock is placed on an engineered dump for subsequent rehabilitation or used in the construction of the tailings management facility ("**TMF**").
Processing	Mined ore is processed using different methods depending on its characteristics. This may include heap leaching, crushing, milling, flotation, roasting, and CIL or CIP methods for gold and copper extraction. After having extracted the gold and/or copper, the remaining processed materials are placed in a tailings facility for storage.
Refining and Gold Sales	At our Kumtor Mine, recovered gold is smelted at our mill into doré bars which are then sold and delivered to a refinery for further refining to market delivery standards. At our Mount Milligan Mine, we produce a copper/gold concentrate which is then sold to third parties including smelters and traders for further refining.
Closure and Reclamation	As a responsible mining company, we plan how we are going to rehabilitate the areas we mine before we start construction. In some cases, we reclaim at the same time as we extract to speed the process of recovery. In other cases, it is not possible to reclaim during the extraction process and therefore, efforts are deferred until after mining is completed. After mining has permanently stopped, we reclaim or continue to reclaim (as applicable) and monitor the land. We also regularly update our final closure plans to reflect any changes in operations. Our high standards for reclamation comply with both local and international standards.

Marketing and Distribution

Our principal products are gold, copper, and to a lesser extent, molybdenum and ferromolybdenum products. Our Kumtor Mine produces gold doré bars. Our Mount Milligan Mine produces a copper-gold concentrate, and our Langeloth Metallurgical Processing Facility provides tolling roasting services for customers and also purchases molybdenum concentrates from third parties to convert to upgraded products which are then sold into the metallurgical and chemical markets.

Gold Industry

The two principal uses of gold are bullion investment and product fabrication. A broad range of end uses is included within the fabrication category, the most significant of which is the production of jewelry. Other fabrication uses include official coins, electronics, miscellaneous industrial and decorative uses, medals and medallions.

Copper Industry

Copper is an excellent conductor of electricity and heat and these properties result in the principal applications for copper consumption. Refined copper is used in the generation and transmission of electricity as well as industrial machinery and consumer products that have electrical and electronic applications.

Gold Doré Produced at Kumtor Mine

All gold doré produced at the Kumtor Mine is purchased at the mine site by Kyrgyzaltyn for processing at its refinery in the Kyrgyz Republic pursuant to the Restated Gold and Silver Sale Agreement dated June 6, 2009 entered into between KGC, Kyrgyzaltyn and the Kyrgyz Government. Under these arrangements, Kyrgyzaltyn is required to pay for all gold delivered to it, based on the afternoon fixing of the price of gold on the London Bullion Market by the 12th calendar day following delivery of gold doré to it. As at December 31, 2018, $20,000 was outstanding under these arrangements. The obligations of Kyrgyzaltyn are partially secured by a pledge of 2,850,000 of Centerra shares owned by Kyrgyzaltyn. Subsequent to December 31, 2018, the balance receivable from Kyrgyzaltyn was paid in full. All gold doré produced by the mine to date has been purchased by Kyrgyzaltyn pursuant to these arrangements (or its predecessor arrangements) without incident. Kyrgyzaltyn owns approximately 26.5% of our issued and outstanding Common Shares and is the Company's largest shareholder.

Copper/Gold Concentrate Produced at Mount Milligan Mine

Concentrate Sales

Copper-gold concentrate produced by the Mount Milligan Mine in Canada is sold to various smelters and off-take purchasers. We are currently party to three multi-year concentrate sales agreements for the sale of copper-gold concentrate produced at Mount Milligan Mine. Pursuant to these agreements, we have agreed to sell an aggregate of approximately 150,000 tonnes in 2019, 40,000 tonnes in 2020, and 40,000 tonnes in 2021.

Pricing under these concentrate sales agreements is determined by reference to specified published reference prices during the applicable quotation periods. Payment for the concentrate is based on the price for the agreed copper and gold content of the parcels delivered, less smelting and refining charges and certain other deductions, if applicable. The copper smelting and refining charges are negotiated in good faith and agreed by the parties for each contract year based on terms generally acknowledged as industry benchmark terms. The gold refining charges are as specified in the agreements.

We intend to either extend our current multi-year agreements as the terms expire, or we may enter into additional multi-year sales agreements. To the extent that production is expected to exceed the volume committed under these agreements, we will sell the additional volume under short-term contracts or on a spot basis.

Mount Milligan Streaming Arrangement

We are also subject to a streaming arrangement with RGLD Gold AG and Royal Gold Inc. (collectively, "**Royal Gold**") pursuant to which Royal Gold is entitled to receive 35% of the gold produced and 18.75% of the copper production at our Mount Milligan Mine and under which Royal Gold pays $435 per ounce of gold delivered and 15% of the spot price per metric tonne of copper delivered (the "**Mount Milligan Stream Arrangement**"). The Mount Milligan Stream Arrangement was first put in place in 2010 and was subsequently amended, including in connection with Centerra's acquisition of Thompson Creek in October 2016. The original streaming arrangement required Royal Gold to make upfront payments totalling $781.5 million from 2010 to 2013 to Thompson Creek for the rights to receive future gold production. The arrangement was renegotiated by Centerra in conjunction with its acquisition of Thompson Creek. To satisfy our obligations under the Mount Milligan Stream Arrangement, after we finalize a copper and gold concentrate sale from the Mount Milligan Mine, we immediately purchase gold and copper in the market for delivery to Royal Gold based on a portion of the gold ounces and pounds of copper in the concentrate sold in accordance with the terms of the Mount Milligan Stream Arrangement.

Molybdenum Industry

Our principal molybdenum products are molybdic oxide (also known as roasted molybdenum concentrate) and ferromolybdenum. Other products we produce include high soluble technical oxide, pure molybdenum trioxide and high purity molybdenum disulfide.

Molybdenum is an industrial metal principally used for metallurgical applications as a ferro-alloy in steels where high strength, temperature-resistant or corrosion-resistant properties are sought. The addition of molybdenum enhances the strength, toughness and wear and corrosion-resistance in steels when added as an alloy. Molybdenum is used in major industries including chemical and petro-chemical processing, oil and gas for drilling and pipelines, power generation,

automotive and aerospace. Molybdenum is also widely used in non-metallurgical applications such as petroleum refining catalysts, lubricants, flame-retardants in plastics, water treatment and as a pigment.

2018 and 2017 Production and Revenue

	2018	2017
Total		
Gold sold (oz)	709,330	792,466
Payable copper sold ('000 lbs)	44,370	59,719
Revenue ($ millions)	1,129.3	1,199.0
Kumtor Mine – Gold		
Gold sold (oz)	530,448	550,134
Gold Sales ($ millions)	660.1	685.2
Mount Milligan Mine		
Payable Gold Sold (oz)	178,882	242,331
Payable Copper Sold ('000 lbs)	44,370	59,719
Gold Sales ($ millions)	173.4	242.9
Copper Sales ($ millions)	89.5	125.9
Langeloth – Molybdenum		
Molybdenum sold ('000 lbs)	15,726	14,946
Toll roasted and upgraded molybdenum ('000 lbs)	5,586	4,736
Sales from Molybdenum ($ millions)	197.1	136.8
Sales from Tolling and upgraded molybdenum ($ millions)	9.2	8.2

Our revenue from the sale of our products are dependent on the world market price of gold, copper and molybdenum. World market prices for our products have fluctuated historically and are affected by numerous factors beyond our control. See the sections of this AIF entitled "*Historic Metal Prices*" and "*Risks Factors*" for additional information.

2019 Outlook

Production, cost and capital forecasts for 2019 are forward-looking information and are based on key assumptions and subject to material risk factors that could cause actual results to differ materially. These risks are discussed herein under the headings "*Risk Factors*", "*Material Assumptions Used to Forecast Production and Costs for 2019*" and "*Forward-Looking Information*" in this document.

2019 Gold Production

Centerra's 2019 gold production is expected to be between 690,000 to 740,000 ounces. Kumtor Mine's gold production forecast is expected to be in the range of 535,000 ounces to 565,000 ounces. At the Mount Milligan Mine, mill throughput is expected to be reduced during the remainder of the 2018/2019 winter season to properly manage the water balance until the water flow increases in the spring, after which, mill throughput levels are expected to return to full capacity once the spring melt has commenced, typically in April. In the second half of 2019, the Company expects to achieve an average daily throughput of approximately 55,000 tonnes per calendar day. For the full year, we expect Mount Milligan Mine's total (streamed and unstreamed) payable gold production to be in the range of 155,000 to 175,000 ounces.

2019 Copper Production

Payable copper production is expected to be in the range of 65 million pounds to 75 million pounds.

Centerra's 2019 production is forecast as follows:

2019 Production Guidance	Units	Kumtor	Mount Milligan[1]	Centerra
Gold				
Unstreamed Gold Payable Production	(Koz)	535 – 565	101 – 114	636 – 679
Streamed Gold Payable Production[1]	(Koz)	–	54 – 61	54 – 61
Total Gold Payable Production[2]	(Koz)	**535 – 565**	**155 – 175**	**690 – 740**
Copper				
Unstreamed Copper Payable Production	(Mlb)	–	53 – 61	53 – 61
Streamed Copper Payable Production[1]	(Mlb)	–	12 – 14	12 – 14
Total Copper Payable Production[3]	(Mlb)	–	**65 – 75**	**65 – 75**

1. Royal Gold streaming agreement entitles Royal Gold to 35% and 18.75% of gold and copper sales, respectively, from the Mount Milligan Mine. Under the stream arrangement, Royal Gold will pay $435 per ounce of gold delivered and 15% of the spot price per metric tonne of copper delivered.
2. Gold production assumes at the Kumtor Mine 81.6% recovery and 60.0% recovery at the Mount Milligan Mine.
3. Copper production assumes 81.8% recovery for copper at Mount Milligan Mine.

2019 All-in Sustaining Unit Costs[1]

Centerra's 2019 all-in sustaining costs per ounce sold[1] are calculated on a by-product basis and are forecast as follows:

2019 All-in Sustaining Unit Costs[4]	Kumtor	Mount Milligan[2]	Centerra[2]
Ounces sold forecast	**535,000 – 565,000**	**155,000 – 175,000**	**690,000-740,000**
All-in sustaining costs on a by-product basis[1] [2]	**$666 - $703**	**$727 - $821**	**$723 – $775**
Revenue-based tax[3] and taxes[3]	171 – 180	21 - 24	135 – 145
All-in sustaining costs on a by-product basis, including taxes [1] [2] [3]	**$837 – $883**	**$748 – $845**	**$858 – $920**
Gold - All-in sustaining costs on a co-product basis ($/ounce) [1] [2]	**$666 - $703**	**$803 - $906**	**$741 - $795**
Copper - All-in sustaining costs on a co-product basis ($/pound) [1] [2]	–	**$1.93 - $2.23**	**$1.93 – $2.23**

(1) All-in sustaining costs per ounce sold, all-in sustaining costs per ounce sold on a by-product basis, all-in sustaining costs on a by-product basis including taxes per ounce sold and all-in sustaining costs on a co-product basis (gold and copper) on a per unit basis are non-GAAP measures and are discussed under "*Non-GAAP Measures*".

(2) Mount Milligan Mine payable production and ounces sold are presented on a 100% basis (the Mount Milligan Streaming Arrangement entitles Royal Gold to 35% and 18.75% of gold and copper sales, respectively). Unit costs and consolidated unit costs include a credit for forecasted copper sales treated as by-product for all-in sustaining costs and all-in sustaining costs plus taxes. The copper sales are based on a copper price assumption of $2.80 per pound sold for Centerra's 81.25% share of copper production and the remaining 18.75% of copper revenue at $0.42 per pound (15% of spot price, assuming spot at $2.80 per pound), representing the Mount Milligan Streaming Arrangement. Payable production for copper and gold reflects estimated metallurgical losses resulting from handling of the concentrate and payable metal deductions, subject to metal content, levied by smelters.

(3) Includes revenue-based tax at the Kumtor Mine and the British Columbia mineral tax at the Mount Milligan Mine based on a forecast gold price assumption of $1,200 per ounce sold.

(4) Results in chart may not add due to rounding.

2019 Exploration Expenditures

Planned exploration expenditures for 2019 are expected to be $30 million, including $20 million for brownfields exploration (Kumtor - $11 million, Mount Milligan - $3 million, Öksüt - $2.5 million and Kemess - $2 million) and the balance for generative and other exploration programs.

2019 Capital Expenditures

Centerra's projected capital expenditures for 2019, excluding capitalized stripping, are estimated to be $275 million, including $91 million of sustaining capital and $190 million of growth capital.

Projected capital expenditures (excluding capitalized stripping) include:

Projects	2019 Sustaining Capital(1) ($ millions)	2019 Growth Capital(1) ($ millions)
Kumtor Mine	45	14
Mount Milligan Mine	37	-
Öksüt Project	-	123
Kemess Underground Project(2)	-	40
Greenstone Gold Property	-	21
Other (TC Mine, Endako Mine (75%), Langeloth facility and Corporate)	9	-
Consolidated Total	**$91**	**$190**

(1) Sustaining capital and growth capital are non-GAAP measures and are discussed under "*Non-GAAP Measures*".
(2) Reflects an additional $8 million for growth capital which was approved in February 2019.

Kumtor

At Kumtor, 2019 total capital expenditures, excluding capitalized stripping, are forecast to be $59 million. Spending on sustaining capital of $45 million relates primarily to major overhauls and replacements of the heavy-duty mine equipment ($39 million).

Growth capital investment at Kumtor for 2019 is forecast at $14 million which includes capital expenditures for tailings dam construction ($6 million), pit dewatering projects ($2 million) and other projects ($6 million).

The cash component of capitalized stripping costs related to the development of the open pit is expected to be $88 million of the $108 million total capitalized stripping estimated in 2019.

Mount Milligan

At Mount Milligan, 2019 sustaining capital expenditures are forecast to be $37 million and relates primarily to tailing dam construction ($23 million), mine equipment rebuilds and replacements ($8 million) and water supply improvement projects ($3 million) and other projects ($3 million).

Öksüt Project

At Öksüt, 2019 planned capital spending is expected to be approximately $123 million. The total cost of construction is expected to be approximately $220 million (including contingency) to first gold pour which is anticipated in the first quarter of 2020. At December 31, 2018 construction activities at the Öksüt site are approximately 38% complete as noted above. In 2019, stripping is expected to commence in June and ore stockpiling in July.

Kemess Underground Project

In 2019, total spending at the Kemess Underground Project (KUG) is estimated at $40 million including $14 million for care and maintenance and $26 million on capitalized pre-construction activities. Most of the pre-construction costs are related to the construction of a water treatment plant and water discharge system. The Company has substantially all permits and approvals in place after receiving the amended Mines Act Permit and effluent discharge permit in 2018. In 2019, the Company plans to advance the water treatment plant and water discharge system construction, continue to maintain the Kemess site, progress detailed engineering and complete optimization studies on the project.

Greenstone Gold Property

Centerra's guidance for 2019 expenditures relating to the Greenstone Gold Property (50-50 joint venture with Premier Gold) including the Hardrock Project is approximately $41.6 million (Cdn$54 million), on a 100% basis, with objective to optimize the economics of the Hardrock Project and to continue to de-risk the project. The 2019 program includes detailed engineering ($13 million) on higher risk areas to confirm and optimize the capex, operating costs, mine plan updates and infill drilling to further improve accuracy of the resource model. The program will also advance and finalize long-term relationship agreements with local indigenous groups including community relations ($8.3 million),

environmental and permitting activities to complete the EA/EIA approvals ($2.2 million) and project support, property acquisitions and administration ($15.5 million).

The forecast spending for 2019 will be fully funded by Centerra with 50% of spending accounted for as pre-development project spending or exploration and expensed through Centerra's income statement. The remaining 50% of spending will be capitalized on Centerra's balance sheet and be accounted for as an acquisition cost of the Greenstone Gold Property.

2019 Corporate Administration

Corporate and administration expense for 2019 is forecast to be $31 million (including $6 million of stock-based compensation expense).

2019 Depreciation, Depletion and Amortization

Consolidated depreciation, depletion and amortization (DD&A) expense included in costs of sales expense for 2019 is forecasted to be in the range of $220 million to $240 million including Kumtor's DD&A expense of $170 million to $180 million, Mount Milligan's DD&A expense of $38 million to $45 million, and Langeloth and other properties' DD&A expense range of $12 million to $15 million.

2019 Taxes

Pursuant to the Restated Investment Agreement, Kumtor's operations are not subject to corporate income taxes. Instead, the Restated Investment Agreement imposes a tax of 13% on gross revenue (plus 1% for the Issyk-Kul Oblast Development Fund).

The Mount Milligan operations are subject to corporate income tax and British Columbia mineral tax. Corporate income tax for 2019 is forecast to be nil, while British Columbia mineral tax is forecast to be between $3.2 million and $4.2 million.

Sensitivities

Centerra's revenues, earnings and cash flows for 2019 are sensitive to changes in certain key inputs or currencies. The Company has estimated the impact of any such changes on revenues, net earnings and cash from operations.

	Change	Impact on *($ millions)*				Impact on *($ per ounce sold)*
		Costs	Revenues	Cash flows	Net Earnings (after tax)	AISC(3) on by-product basis
Gold Price(1)	$50/oz	5.4 – 6.0	32.5 – 34.5	26.7 – 28.7	26.7 – 28.7	2 – 2
Copper Price(1)	10%	4.5 – 5.5	18.0 – 20.0	13.0 – 14.5	13.0 - 14.5	16 – 19
Diesel Fuel	10%	8.9 – 10.4	-	8.9 – 10.4	8.9 – 10.4	12 – 14
Kyrgyz Som(2)	1 som	1.2 – 1.7	-	1.2 – 1.7	1.2 – 1.7	2 – 2
Turkish Lira(2)	1 lira	12.5 – 14.0	-	12.5 – 14.0	-	-

(1) Gold and copper price sensitivities include the impact of the hedging program set up to mitigate gold and copper price risks.
(2) Appreciation of currency against the U.S. dollar will result in higher costs and lower cash flow and earnings, depreciation of currency against the U.S. dollar results in decreased costs and increased cash flow and earnings.
(3) Non-GAAP measure. See discussion under "Non-GAAP Measures".

Material Assumptions Used to Forecast Production and Costs for 2019

Material assumptions or factors used to forecast production and costs for 2019 include the following:

- a gold price of $1,200 per ounce,
- a copper price of $2.80 per pound,
- a molybdenum price of $12 per pound,
- exchange rates:
- $1USD: $1.30 CAD

- $1USD: 69.0 Kyrgyz som
- $1USD: 5.00 Turkish lira
- $1USD: 0.79 Euro
- diesel fuel price assumption:
- $0.54/litre at Kumtor Mine
- $0.87/litre (CAD$1.13/litre) at Mount Milligan Mine

The assumed diesel price of $0.54/litre at Kumtor Mine assumes that no Russian export duty will be paid on the fuel exports from Russia to the Kyrgyz Republic. Diesel fuel for Kumtor Mine is sourced from separate Russian suppliers. The diesel fuel price assumptions were made when the price of oil was approximately $60 per barrel. Crude oil is a component of diesel fuel purchased by the Company, such that changes in the price of Brent crude oil generally impacts diesel fuel prices. We established a hedging strategy to manage changes in diesel fuel prices on the cost of operations at the Kumtor Mine. The diesel fuel hedging program is a 24-month rolling program. We target to hedge up to 50% of crude oil component of monthly diesel purchases exposure.

Competitive Conditions

The mining industry is intensely competitive, particularly in the acquisition of mineral reserves and resources. In comparison with diversified mining companies, our competitive position is subject to unique competitive advantages and disadvantages related to the price of gold and copper.

Mineral Reserves and Resources

Our mineral reserves and resources are fundamental to the Company and serve as the foundation for our future production and project development.

We have interests in a number of properties. The tables in this section show our estimates of the proven and probable reserves, measured and indicated resources and inferred resources at those properties.

We estimate and disclose mineral reserves and resources in five categories, using the definitions adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("**CIM**"), and in accordance with NI 43-101. You can find out more about these categories at www.cim.org. See the *"Glossary of Geological and Mining Terms"* for complete definitions of mineral reserves and mineral resources.

For a further discussion of the key assumptions, methodologies and parameters used in the estimation of mineral reserves and mineral resources, see the section of this AIF entitled *"Centerra's Properties"*.

About Mineral Resources

Mineral resources are not mineral reserves and do not have demonstrated economic viability, but do have reasonable prospect for economic extraction. They fall into three categories: measured, indicated, and inferred. Our reported mineral resources do not include mineral reserves. Measured and indicated mineral resources are sufficiently well-defined to allow geological and grade continuity to be reasonably assumed, and permit the application of technical and economic parameters in assessing the economic viability of the mineral resource. Inferred mineral resources are estimated on limited information not sufficient to verify geological and grade continuity or to allow technical and economic parameters to be applied. Inferred mineral resources are too speculative geologically to have economic considerations applied to them. There is no certainty that mineral resources of any category will be upgraded to mineral reserves.

Important Information About Mineral Reserve and Resource Estimates

Although we have carefully prepared and verified the mineral reserve and resource figures in this AIF, the figures are estimates based in part on forward-looking information.

Estimates are based on our knowledge, mining experience, analysis of drilling results, the quality of available data and management's best judgment. They are, however, imprecise by nature, may change over time, and include many variables and assumptions including geological interpretation, commodity prices and currency exchange rates, recovery rates, and operating and capital costs.

There is no assurance that the indicated levels of metal will be produced, and we may have to re-estimate our mineral reserves based on actual production experience. Changes in the metal price, production costs or recovery rates could make it unprofitable for us to operate or develop a particular site or sites for a period of time. See the sections of this AIF entitled *"Forward-looking Information"* and *"Risk Factors"*.

Table 1
Centerra Gold Inc. - 2018 Year-End Mineral Reserve and Mineral Resource Summary – Gold [1][5]
(as of December 31, 2018) (see additional footnotes page 28)

Proven and Probable Mineral Reserves									
	Proven			Probable			Total Proven and Probable		
Property	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)
Mount Milligan [4]	211,649	0.4	2,600	235,913	0.3	2,136	**447,562**	**0.3**	**4,736**
Kumtor - Open Pit	11,309	1.7	627	40,322	2.6	3,391	**51,631**	**2.4**	**4,018**
Öksüt	-	-	-	28,843	1.4	1,278	**28,843**	**1.4**	**1,278**
Hardrock - Open Pit	-	-	-	70,858	1.0	2,324	**70,858**	**1.0**	**2,324**
Kemess Underground	-	-	-	107,381	0.5	1,868	**107,381**	**0.5**	**1,868**
Total	**222,957**	**0.5**	**3,228**	**483,316**	**0.7**	**10,996**	**706,274**	**0.6**	**14,223**

Measured and Indicated Mineral Resources [2]									
	Measured			Indicated			Total Measured and Indicated		
Property	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)
Mount Milligan [4]	74,001	0.3	779	268,232	0.2	1,943	**342,233**	**0.2**	**2,722**
Kumtor - Open Pit	18,008	3.0	1,749	14,195	2.6	1,204	**32,203**	**2.9**	**2,953**
Öksüt	3,887	0.5	63	8,851	0.5	148	**12,738**	**0.5**	**211**
Hardrock - Open Pit	-	-	-	5,722	0.4	66	**5,722**	**0.4**	**66**
Hardrock – Underground	-	-	-	6,846	3.9	860	**6,846**	**3.9**	**860**
Brookbank - Open Pit	-	-	-	1,319	2.0	86	**1,319**	**2.0**	**86**
Brookbank – Underground	-	-	-	926	7.2	215	**926**	**7.2**	**215**
Key Lake - Open Pit	-	-	-	1,286	1.2	49	**1,286**	**1.2**	**49**
Key Lake – Underground	-	-	-	16	6.5	3	**16**	**6.5**	**3**
Kailey	-	-	-	4,315	1.0	133	**4,315**	**1.0**	**133**
Kemess Underground	-	-	-	173,719	0.3	1,737	**173,719**	**0.3**	**1,737**
Kemess East	-	-	-	177,500	0.4	2,305	**177,500**	**0.4**	**2,305**
Total	**95,896**	**0.8**	**2,591**	**662,926**	**0.4**	**8,747**	**758,822**	**0.5**	**11,338**

Inferred Mineral Resources [2][3]			
Property	Tonnes (kt)	Grade (g/t)	Contained Gold (koz)
Mount Milligan [4]	40,984	0.3	411
Kumtor - Open Pit	2,970	1.6	149
Kumtor - Underground	14,477	7.3	3,409
Öksüt	2,229	0.7	50
Hardrock - Open Pit	85	0.9	2
Hardrock - Underground	10,754	3.6	1,235
Brookbank - Open Pit	86	2.4	7
Brookbank - Underground	202	4.1	27
Key Lake - Open Pit	673	1.3	28
Key Lake - Underground	29	3.6	3
Kailey	1,844	1.0	58
Kemess Underground	47,700	0.3	529
Kemess East	29,300	0.3	283
Total	**151,331**	**1.3**	**6,191**

(1) Centerra's equity interests as of this document is as follows: Mount Milligan Mine 100%, Kumtor Mine 100%, Öksüt Project 100%, Kemess Underground Project and Kemess East Project 100% and Greenstone Gold Properties (Hardrock, Brookbank, Key Lake, Kailey) 50%.

(2) Mineral resources are in addition to mineral reserves. Mineral resources do not have demonstrated economic viability.

(3) Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred mineral resources will ever be upgraded to a higher category.

(4) Production at Mount Milligan Mine is subject to a streaming agreement with Royal Gold which entitles Royal Gold to 35% of gold sales from the Mount Milligan Mine. Under the stream arrangement, Royal Gold will pay $435 per ounce of gold delivered. Mineral reserves for the Mount Milligan Mine property are presented on a 100% basis.

(5) Numbers may not add up due to rounding.

Table 2
Centerra Gold Inc. - 2018 Year-End Mineral Reserve and Mineral Resource Summary - Other Metals [1] [5]
(as of December 31, 2018) (see additional footnotes page 28)

Property	Tonnes (kt)	Copper Grade (%)	Contained Copper (Mlbs)	Moly Grade (%)	Contained Molybdenum (Mlbs)	Silver Grade (g/t)	Contained Silver (koz)
Proven Mineral Reserves							
Mount Milligan[4]	211,649	0.183	853	-	-	-	-
Probable Mineral Reserves							
Mount Milligan [4]	235,913	0.189	983	-	-	-	-
Kemess Underground	107,381	0.266	630	-	-	1.99	6,878
Total Proven and Probable Mineral Reserves							
Mount Milligan [4]	447,562	0.186	1,836	-	-	-	-
Kemess Underground	107,381	0.266	630	-	-	1.99	6,878
Total	**554,943**	**0.202**	**2,465**	**-**	**-**	**0.39**	**6,878**
Measured Mineral Resources [2]							
Mount Milligan [4]	74,001	0.092	150				
Berg	176,384	0.358	1,391	0.034	132	3.02	17,152
Kemess Underground	-	-	-	-	-	-	-
Kemess East	-	-	-	-	-	-	-
Thompson Creek	57,645	-	-	0.072	92	-	-
Endako	47,100	-	-	0.046	48	-	-
Indicated Mineral Resources [2]							
Mount Milligan[4]	268,232	0.148	878	-	-	-	-
Berg	220,284	0.270	1,311	0.033	161	3.08	21,799
Kemess Underground	173,719	0.182	697	-	-	1.55	8,632
Kemess East	177,500	0.360	1,410	-	-	1.97	11,240
Thompson Creek	59,498	-	-	0.065	85	-	-
Endako	122,175	-	-	0.044	118	-	-
Total Measured and Indicated Mineral Resources [2]							
Mount Milligan [4]	342,233	0.136	1,028	-	-	-	-
Berg	396,668	0.309	2,702	0.034	293	3.05	38,951
Kemess Underground	173,719	0.182	697	-	-	1.55	8,632
Kemess East	177,500	0.360	1,410	-	-	1.97	11,240
Total Copper	**1,090,120**	**0.243**	**5,836**	**0.01**	**293**	**1.68**	**58,823**
Thompson Creek	117,143	-	-	0.068	177	-	-
Endako	169,275	-	-	0.045	166	-	-
Inferred Mineral Resources [2][3]							
Mount Milligan[4]	40,984	0.127	115	-	-	-	-
Berg	13,982	0.256	79	0.017	5	4.40	1,971
Kemess Underground	47,700	0.200	210	-	-	1.65	2,530
Kemess East	29,300	0.314	203	-	-	2.00	1,880
Total Copper	**131,966**	**0.209**	**607**	**0.002**	**5**	**1.50**	**6,381**
Thompson Creek	806	-	-	0.045	1	-	-
Endako	47,325	-	-	0.042	44	-	-

(1) Centerra's equity interests as of this document are as follows: Mount Milligan Mine 100%, Kemess Underground 100%, Kemess East 100%, Berg 100%, Thompson Creek 100%, and Endako 75%.

(2) Mineral resources are in addition to mineral reserves. Mineral resources do not have demonstrated economic viability.

(3) Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred mineral resources will ever be upgraded to a higher category.

(4) Production at Mount Milligan Mine is subject to a streaming agreement which entitles Royal Gold to 18.75% of copper sales from the Mount Milligan Mine. Under the stream arrangement, Royal Gold will pay 15% of the spot price per metric tonne of copper delivered. Mineral resources for the Mount Milligan Mine property are presented on a 100% basis.

(5) Numbers may not add up due to rounding.

Table 3
Centerra Gold Inc. - Reconciliation of Mineral Reserves and Mineral Resources [1] [4] - Gold Contained (koz)
(including disposition of Mongolian segment) (see additional footnotes page 28)

	December 31, 2017[1]	2018 Throughput[2]	2018 Addition (Deletion)[3]	December 31, 2018
Proven and Probable Mineral Reserves				
Mount Milligan	5,138	309	(92)	4,736
Kumtor - Open Pit[5]	4,489	668	197	4,018
Gatsuurt[6]	1,316	-	(1,316)	-
Öksüt [7]	1,187	-	91	1,278
Hardrock - Open Pit	2,324	-	-	-
Kemess Underground	1,868	-	-	1,868
Total	**16,321**	**977**	**(1,120)**	**14,223**
Measured and Indicated Mineral Resources				
Mount Milligan	1,862	-	860	2,722
Kumtor - Open Pit[5]	2,623	-	330	2,953
Boroo[6]	242	-	(242)	-
Gatsuurt[6]	678	-	(678)	-
Ulaan Bulag[6]	73	-	(73)	-
Öksüt[7]	176	-	35	211
Hardrock - Open Pit	66	-	-	66
Hardrock - Underground	860	-	-	860
Brookbank - Open Pit	86	-	-	86
Brookbank - Underground	215	-	-	215
Key Lake - Open Pit	49	-	-	49
Key Lake - Underground	3	-	-	3
Kailey	133	-	-	133
Kemess Underground	1,460	-	277	1,737
Kemess East	1,680	-	625	2,305
Total	**10,204**	**-**	**1,134**	**11,338**
Inferred Mineral Resources [8]				
Mount Milligan	374	-	38	411
Kumtor - Open Pit	141	-	8	149
Kumtor - Underground	3,409	-	-	3,409
Boroo[6]	235	-	(235)	-
Gatsuurt[6]	263	-	(263)	-
Ulaan Bulag[6]	13	-	(13)	-
Öksüt[7]	108	-	(58)	50
Hardrock - Open Pit	2	-	-	2
Hardrock - Underground	1,235	-	-	1,235
Brookbank - Open Pit	7	-	-	7
Brookbank - Underground	27	-	-	27
Key Lake - Open Pit	28	-	-	28
Key Lake - Underground	3	-	-	3
Kailey	58	-	-	58
Kemess Underground	277	-	252	529
Kemess East	640	-	(357)	283
Total	**6,820**	**-**	**(629)**	**6,191**

(1) Mineral reserves and mineral resources reported in Centerra's Annual Information Form filed in March 2018. Centerra reports mineral reserves and mineral resources separately. The amount of reported mineral resources does not include those amounts identified as mineral reserves. Mineral resources do not have demonstrated economic viability. Numbers may not add due to rounding.

(2) Corresponds to mill feed at Mount Milligan Mine and Kumtor Mine.

(3) Changes in mineral reserves or mineral resources, as applicable, are attributed to: (i) changes to metal price and FX assumptions, 2018; and (ii) information provided by drilling and subsequent reinterpretation and reclassification of mineral reserves or mineral resources.

(4) Centerra's equity interests as of this news release are as follows: Mount Milligan Mine 100%, Kumtor Mine 100%, Öksüt Project 100%, Kemess Underground Project and Kemess East Project 100% and Greenstone Gold Properties (Hardrock, Brookbank, Key Lake, Kailey) 50%. The Company's Mongolian assets Gatsuurt, Boroo, and Ulaan Bulag were sold in 2018.

(5) Kumtor Mine open pit mineral reserves and mineral resources include the Central Pit and the Southwest and Sarytor Pits.

(6) Mongolian business unit sold on October 12, 2018.

(7) Öksüt Project open pit mineral reserves and mineral resources include the Keltepe and Guneytepe deposits.

(8) Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred mineral resources will ever be converted to a higher category.

Additional Footnotes for Tables 1, 2, 3

General

- A conversion factor of 31.1035 grams per troy ounce of gold is used in the mineral reserve and mineral resource estimates.

Kumtor Mine

- The mineral reserves have been estimated based on a gold price of $1,250 per ounce, diesel fuel price of $0.55/litre and an exchange rate of 1USD:65KGS.
- The open pit mineral reserves are estimated based on a cut-off grade of 0.85 grams of gold per tonne for the Central Pit and 1.0 grams of gold per tonne for the Southwest and Sarytor deposits.
- The mineral resources have been estimated based on a gold price of $1,450 per ounce.
- Open pit mineral resources are constrained by a pit shell.
- The open pit mineral resources are estimated based on a cut-off grade of 0.85 grams of gold per tonne for the Central Pit and 1.0 grams of gold per tonne for the Southwest and Sarytor deposits.
- Underground mineral resources occur below the open pit mineral resources shell and are constrained by underground mineable shapes based on a cut-off grade of 4.9 grams of gold per tonne.
- Further information concerning the Kumtor Mine deposit, including key assumptions, parameters and methods used to estimate mineral resources and mineral reserves, as well as, political, environmental and other risks are described elsewhere in this AIF and in the Kumtor Technical Report, dated March 20, 2015, which has been filed on SEDAR.

Mount Milligan Mine

- The mineral reserves have been estimated based on a gold price of $1,250 per ounce, copper price of $3.00 per pound and an exchange rate of 1USD:1.25CAD.
- The open pit mineral reserves are estimated based on an NSR cut-off of C$8.12 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs, smelter treatment charges and royalty and streaming arrangements in determining economic viability.
- The mineral resources have been estimated based on a gold price of $1,450 per ounce, copper price of $3.50 per pound and an exchange rate of 1USD:1.25CAD.
- The open pit mineral resources are constrained by a pit shell and are estimated based on an NSR cut-off of C$8.12 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs, smelter treatment charges and royalty and streaming arrangements in determining economic viability.
- Further information concerning the Mount Milligan Mine deposit, including key assumptions, parameters and methods used to estimate mineral resources and mineral reserves, as well as, political, environmental and other risks are described elsewhere in this AIF and in the Mount Milligan Technical Report, North Central British Columbia dated March 22, 2017, which has been filed on SEDAR at www.sedar.com.

Öksüt Project

- The mineral reserves have been estimated based on a gold price of $1,250 per ounce and an exchange rate of 1USD:3.5TL.
- The open pit mineral reserves are estimated based on a 0.3 grams of gold per tonne cut-off grade.
- Open pit optimization used a LOM recovery of 77%.
- The mineral resources have been estimated based on a gold price of $1,450 per ounce.
- Open pit mineral resources are constrained by a pit shell and are estimated based on a 0.2 grams of gold per tonne cut-off grade.
- Further information concerning the Öksüt Project deposit, including key assumptions, parameters and methods used to estimate mineral resources and mineral reserves, as well as, political, environmental and other risks are described elsewhere in this AIF and in the Öksüt Technical Report, dated September 3, 2015, which has been filed on SEDAR.

Kemess Underground Project

- The mineral reserves have been estimated based on a gold price of $1,250 per ounce, copper price of $3.00 per pound and an exchange rate of 1USD:1.25CAD.
- The underground mineral reserves are estimated based on an NSR cut-off of C$17.30 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs and smelter treatment charges in determining economic viability.
- The underground mineral resources have been estimated based on a gold price of $1,450 per ounce, copper price of $3.50 per pound and an exchange rate of 1USD:1.25CAD.
- The underground mineral resources are estimated based on an NSR cut-off of C$15.00 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs and smelter treatment charges.
- Further information concerning the Kemess Underground deposit is described elsewhere in this AIF and in the Kemess Technical Report dated July 14, 2017 and filed on SEDAR at www.sedar.com by AuRico. The Kemess Technical Report describes the exploration history, geology and style of gold mineralization at the Kemess Underground deposit. Sample preparation, analytical techniques, laboratories used and quality assurance-quality control protocols used during the exploration drilling programs are done consistent with industry standards and independent certified assay labs.

Kemess East Project

- The mineral resources have been estimated based on a gold price of $1,450 per ounce, copper price of $3.50 per pound and an exchange rate of 1USD:1.25CAD.
- The mineral resources are estimated based on an NSR cut-off of C$17.30 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs and smelter treatment charges.
- Further information concerning the Kemess East project is described elsewhere in this AFI and in the Kemess Technical Report dated July 14, 2017 and filed on SEDAR at www.sedar.com by AuRico. The Kemess Technical Report describes the exploration history, geology and style of gold mineralization at the Kemess East project. Sample preparation, analytical techniques, laboratories used and quality assurance-quality control protocols used during the exploration drilling programs are done consistent with industry standards and independent certified assay labs.

Greenstone Gold Property

Hardrock

- The mineral reserves have been estimated based on a gold price of $1,250 per ounce and an exchange rate of 1USD:1.30CAD
- The open pit mineral reserves are estimated based on a 0.33 grams of gold per tonne cut-off grade.

- The mineral resources have been estimated based on a gold price of C$1,625 per ounce.
- Open pit mineral resources are constrained by a pit shell and are estimated based on a 0.3 grams of gold per tonne cut-off grade.
- Underground mineral resources occur below the open pit mineral resources shell and are constrained by underground mineable shapes based on a cut-off grade of 2.0 grams of gold per tonne.
- Further information concerning the Hardrock deposit, including key assumptions, parameters and methods used to estimate mineral resources and mineral reserves, as well as, political, environmental and other risks are described elsewhere in this AIF and in the Hardrock Technical Report, dated December 21, 2016, which has been filed on SEDAR.

Brookbank, Key Lake
- The mineral resources have been estimated based on a gold price of $1,455 per ounce and an exchange rate of 1USD:1.18CAD.
- The unconstrained open pit mineral resources are estimated based on a 0.50 grams of gold per tonne cut-off grade.
- The unconstrained underground mineral resources are estimated based on a 2.8 grams of gold per tonne cut-off grade.

Kailey
- The mineral resources have been estimated based on a gold price of $1,455 per ounce and an exchange rate of 1USD:1.18CAD.
- The unconstrained open pit mineral resources are estimated based on a 0.50 grams of gold per tonne cut-off grade.

TC Mine
- The mineral resources have been estimated based on a molybdenum price of $14.00 per pound.
- The open pit mineral resources are constrained by a pit shell and are estimated based on a 0.030% molybdenum cut-off grade.

Endako Mine
- The mineral resources have been estimated based on a molybdenum price of $14.00 per pound and an exchange rate of 1USD:1.25CAD.
- The open pit mineral resources are constrained by a pit shell and are estimated based on a 0.025% molybdenum cut-off grade.

Berg
- The mineral resources have been estimated based on a copper price of $3.50 per pound, molybdenum price of $14.00 per pound, silver price of 21.00 per ounce and an exchange rate of 1USD:1.25CAD.
- Open pit mineral resources are constrained by a pit shell and are estimated based on a 0.25% copper equivalent cut-off that takes into consideration metallurgical recoveries, concentrate grades, transportation costs, and smelter treatment charges in determining economic viability.

Sources, Pricing and Availability of Materials, Parts and Equipment

Our operations are affected by the availability of diesel fuel, mining equipment and parts, mill equipment and parts, cyanide (Kumtor Mine) and other reagents used in our processing operations at the Kumtor Mine and Mount Milligan Mine.

Kumtor Mine sources its fuel from Russia either directly or through Kyrgyz distributors.

In 2016, we established a hedging strategy using derivative instruments to manage the risk associated with changes in diesel fuel prices on the cost of operations at the Kumtor Mine.

We use expensive, large mining and milling equipment that is internationally sourced and requires a long time to procure, build, and install. Cyanide (used at our Kumtor Mine) and other reagents used at both mine sites are sourced locally and internationally based on availability and the required specifications. Pricing for all supplies is based on competitive market pricing.

In addition, our Kumtor Mine is located in a remote area and any interruption to our supply of the foregoing materials, parts, and equipment could have an adverse impact on our future cash flows, earnings, results of operations, and financial condition. Access to our Kumtor Mine has been restricted on several occasions by illegal roadblocks and labour disruptions.

Financial and Operational Effects of Environmental Protection Requirements

We are subject to strict environmental regulation in connection with our exploration, development, construction, mining, and reclamation activities in each of the jurisdictions in which we operate. Our policy is to conduct business in a way that safeguards public health and the environment.

The financial and operational effects of our environmental protection requirements are significant. Future legislation, regulations, policies, guidance or other events could cause additional operating expense, capital expenditures, restrictions or delays in the development and continued operation of our properties, the extent of which cannot be predicted with certainty. For further information of risks associated with environmental matters, see the section entitled *"Risk Factors"*.

Reclamation Costs and Financial Assurances

All our operations, projects and care & maintenance sites have closure plans in place. We adopt a strict regime for mine closure including annual mine cost updates and we review our conceptual closure plans on a regular cycle to include both environmental and social impacts of closure. We align with the ICMM Mine Closure framework and financial surety is in place.

Our conceptual closure plans and relates costs will change over time as a result of, among other things, changes in environmental legislation, changes in international best practices, and changes in our understanding of the types of reclamation activities that each site will require. For example, in 2018 we added an additional reclamation expense of $41.8 million, mainly for additional water treatment costs at Thompson Creek Mine, as a result of the Company's decision in 2018 to not pursue, in the current molybdenum pricing environment, the final development phase of the mine. The Thompson Creek Mine is currently on care and maintenance.

At the Kumtor Mine, a trust fund has been set up for final reclamation measures. The reclamation trust fund is restricted for use and controlled by an independent trustee. We annually contribute funds to the Kumtor Mine reclamation trust fund based on projected gold production in the year. As at December 31, 2018, the balance in the fund was $30.8 million. As part of the settlement reached with the Kyrgyz Government which is still pending closing, Kumtor Mine agreed to increase the rate of funding of the reclamation trust fund to a minimum of $6 million per year until the fund reaches $69 million. This amount of $69 million was determined by an independent assessment of Kumtor Mine's current reclamation costs and is broadly in line with our estimated reclamation costs for the Kumtor Mine.

For our operations in North America, as at December 31, 2018 we provide financial assurance (surety bonds) for reclamation costs of approximately C$37.6 million for Mount Milligan Mine, C$39.1 million for Kemess, C$11.5 million at Endako Mine (reflects our 75% interest in the Endako Mine Joint Venture) and US$36 million at TC Mine.

Environmental laws and regulations generally have become more stringent and restrictive over time, including requirements for companies to account for capital expenditures and to provide additional financial security to cover reclamation expenses, even if the reclamation activities may not occur for a significant amount of time. If this trend continues, our reclamation obligations and the related financial assurances we are required to provide may increase. For further information of risks associated with environmental matters, see the section entitled "*Risk Factors*".

General Description of Financial and Operational Effects for Environmental Protection

The financial and operational effects for environmental protection relate primarily to the following countries where we have operations:

- in the Kyrgyz Republic, where we operate the Kumtor Mine,
- in Canada, where we operate the Mount Milligan Mine, own 100% of the Kemess project, own a 75% in the Endako Mine which is currently on care and maintenance and own a 50% interest in the Greenstone Gold Property.
- in the USA, where we own the TC Mine which is currently on care and maintenance, and the Langeloth Facility.
- in Turkey, where we own the Öksüt Project.

Each of our operations have an Environmental Management System ("**EMS**") that generally aligns with ISO 14001 environmental management systems, and an environmental management action plan which sets out the activities need to fulfill the site's EMS. They are designed to address the effects of operations on the environment, to monitor compliance with permits and other requirements, and to provide for scheduled monitoring, engineering controls, reporting and audits. We conduct an internal auditing and monitoring program to ensure compliance with the Kumtor EMS and Environmental Management Action Plan ("**EMAP**").

All of our operations are different – they present different environmental protection concerns, and are subject to differing legislation. As such, the nature of the environmental protection activities and the resulting costs cannot be compared. During the financial year ending December 31, 2018, the approximate expenditures by site on environmental programs is as follows: $5.8 at Kumtor Mine; $2.4 at the Mount Milligan Mine; $0.9 million at the Endako Mine; $1.6 million at the Kemess Mine; $1.5 million at the TC Mine; and $0.3 million at the Öksüt Project.

For further information on the environmental program at each of our operations, please see the relevant disclosure under the heading "*Centerra's Properties*".

2.6 Responsible Mining

We endeavour to work in a responsible way to meet or exceed our stakeholders' expectations. At Centerra, integrity and ethics are the foundation for everything we do. As a team, we are results-focused and strive for continuous improvement without compromising safety or the environment. As an international company, we respect the different needs and values of people and their cultures and operate with transparency to promote stakeholder confidence.

We strive to:

- Meet our targets by ensuring we run safe, efficient, cost-effective mines and projects
- Maximize the value of our existing assets and properties
- Lead our peer group in the areas of workplace safety, shareholder value, business ethics, environmental protection, community development, transparency and governance
- Minimize the potential for harmful impacts from our operations to the lowest levels we reasonably can
- Improve our engagement with potentially impacted Indigenous groups and stakeholders to better respond to their needs and concerns

Centerra's life-cycle approach to mining

Before we open a mine, we plan for every stage of its life cycle. We think about how to minimize the impact of our operations on the environment at each stage, from breaking ground to extracting ore and processing gold through to final closure and remediation. For example, where possible, we practise progressive remediation – setting aside topsoil before mining to remediate areas we have cleared and minimizing the amount of natural land we disturb. We also work with local stakeholders to generate environmental offsets by planting trees or participating in other local offset programs. At the end of the reclamation process, we plan to return the rehabilitated land back to the local government as the last step in our responsible mining life cycle.

Our Approach

We have adopted formal policies on health, safety, environment and sustainability which reflects our commitments as an organization. We approach our commitment to responsible mining by engaging with potentially impacted indigenous groups and all of our stakeholder groups who influence, or are influenced, by our activities or performance. Our key stakeholders include employees, contractors, vendors, communities, shareholders, local and national governments, investors and non-governmental organizations.

Putting our corporate responsibility principles into practice at Centerra means:

- Being transparent about our mining activities.
- Respecting the rights of all potentially impacted Indigenous groups, and stakeholders, including our employees, contractors and local communities.
- Operating in a way that minimizes adverse environmental and other impacts.
- Continually improving the management of our operations so that we can respond to the economic, environmental and social expectations of our stakeholders and local Indigenous groups.
- Assigning clear management responsibilities for environmental, social and health and safety performance.
- Providing adequate staffing and resources for sustainable development at each operation.
- Focusing on distributing benefits such as jobs, contracts, community investments, and infrastructure improvements across potentially impacted parties and stakeholders, and also ensuring accountability for any negative direct and indirect impacts from our operations.
- Offering our employees competitive compensation and the opportunity to learn and excel.
- Aligning our activities with international "Good Practice" and going beyond regulations and requirements.
- Maximizing local procurement by encouraging competitive entrepreneurship among potential local suppliers of goods and services to our sites.
- Promoting local hiring and where qualified candidates for available vacancies are equally skilled we give first priority to those living in the area directly affected by our mining operations.
- Engaging in regular, consistent and meaningful interactions with local communities.

Governance

Board Oversight

The Sustainable Operations Committee of our Board of Directors reviews performance against our goals, policies and systems to ensure we are fulfilling our objectives relating to safety, health, environmental management, and social responsibility. The Committee also oversees the process we adopt for donations, sustainable development, investments, and our monitoring and evaluation measurement.

Management Systems

We manage safety, health and environmental issues at every site with formal safety, health and environmental management systems that are based on "Good International Industry Practice" ("**GIIP**"). Managing our risks and mining responsibly require that we plan before we do work, check by monitoring progress against our plan and act on what we have learned through audits and other forms of verification.

Assurance Program

From time to time, internal and external audits are performed by auditors to make sure our facilities comply with our safety, health and environmental policies, applicable laws and regulations, and generally accepted GIIP. These risk-based programs identify concerns and help us improve.

Employee Health and Safety

We recognize the protection of the health and safety of our employees, contractors, and the public as vital to our existence and continued development. We are committed to conducting all of our activities including exploration, development, construction, operations and decommissioning in a responsible manner, providing a safe and healthy environment for our employees, contractors, visitors and to the general public. To prevent injuries and safety incidents, we use proactive measures, such as job hazard identification, training, competency reviews, job task analysis, workplace and field inspections, and safety risk assessments. To avoid recurrence, we investigate all incidents to identify the root causes and proper mitigation efforts. The information is shared among all of our operations and projects. All operations and projects are staffed with skilled and competent emergency personnel and equipped with emergency response equipment.

Our collective agreements cover health and safety topics such as preventing injuries and diseases, safety equipment supply and workplace monitoring to ensure employees are protected against hazards. We engage systematically with unions and employees to promote safety everywhere we work. Our approach is the same with our contractors and vendors.

Work Safe, Home Safe Program

In 2016, we introduced a safety leadership initiative, Work Safe, Home Safe, which forms the foundation of our safety culture at Centerra. The Work Safe, Home Safe program was developed following extensive input from all levels of the organization throughout our global business units, and assistance from third party consultants. The focus of the program is to build a Company-wide culture of safety and safety leadership by providing employees with information which will lead to changes in safety related behaviour, deliver an emotional element to build commitment to change, and encouraging communication to improve operational practices related to health and safety matters. Substantially all of our employees in the organization have undergone our Work Safe, Home Safe training. Throughout 2018, we rolled out a second phase of the Work Safe, Home Safe initiative which focused on supervisor leadership development training program based on our key values and Work Safe, Home Safe.

Environmental Protection

Environmental stewardship is vitally important to us, the local communities and potentially impacted Indigenous groups. We focus on improving our practices so that we inform, prevent, reduce or mitigate damage to the natural habitats that provide essential resources to our employees and surrounding communities.

Spills	• We act to prevent spills and ensure that safeguards are in place in order to minimize the environmental impacts associated with any unforeseen incidents. • Through our emergency response plan and our Environmental Management System, we seek to go beyond compliance in identifying risks and hazards so we can prevent foreseeable incidents and emergencies. We also use root cause analysis to identify the causes of incidents when they do occur.
Cyanide	• Cyanide is used to recover gold from ore and is an essential part of our Kumtor Mine operations, and will be used in our Öksüt Project operations when they commence. • Our approach to cyanide management at all of our operations which use cyanide reflects the International Cyanide Management Code ("**ICMC**"), which is recognized as an international best practice. This code helps protect human health and reduce the potential for environmental impacts.

Water and mine waste	• To ensure effective water and mine waste management, we measure and monitor water quantity and quality and mine waste stability. • Our approach to water management takes public safety, community health and environmental protection into consideration. • Our water and mine waste management design, layout and closure plans also consider the risks associated with climate change, including increased storm intensity, drought and receding glaciers.
Air	• We monitor air quality at our operations and take actions to control air borne pollutants from mining activities.
Biodiversity	• Biodiversity conservation is an important part of our reclamation process management strategy and, in keeping with our zero harm goal, we look for innovative ways to promote biodiversity wherever we operate.
Waste Management (non-mining)	• We have established industrial waste segregation at our projects, and we continue to review plans to introduce organic composting at our mines and projects.

Social Performance

We understand that partnering with local communities and Indigenous groups for social and economic development creates value for us and the local areas in which we operate. We work to establish and maintain the trust of local communities and Indigenous groups by acting as a good corporate citizen.

We have a fully accessible and active grievance management and resolution process for each of our operations and development projects. We believe this is a powerful mechanism to improve communication with local communities and Indigenous groups.

Community Engagement, Development and Social Investment

For all our operational sites and projects, we draft a specific Community Development Plan ("**CDP**") that includes our approaches to participatory assessment, delivery, community ownership, and monitoring, and the criteria for philanthropic donations.

We adopt an International Finance Corporation ("**IFC**") Guideline approach to strategic community investment and economic development wherever possible, with annual budgets based on both impact mitigation needs and benefit sharing (sustainable development opportunities to minimize dependency).

We believe it is important to provide assistance to local communities and Indigenous groups in reaching their goals to develop the local economy, and for the well-being of local residents. Taking into account that mine closure will have a direct impact on the region's economy, it is a priority to have a structured and planned approach in community investment projects.

The following describes how the Company engages in the communities in which it operates, and its approach to development and social investments at each site. The investments discussed below are in addition to the millions of dollars paid by the Company pursuant to the revenue based tax paid in respect of the Kumtor Mine, taxes at the Mount Milligan Mine, local procurement undertaken at each operation, and payments and other benefits made pursuant to formal agreements with potentially impacted Indigenous groups.

Kumtor Mine

Kumtor believes that effective stakeholder communication is essential for it to manage social responsibility and to provide assistance to the local communities in which it operates. Kumtor's local engagement is maintained through four regional information centres, established in the Jeti-Oguz and Ton districts, and in the Balykchy town. The main objective of these centres is to provide information about Kumtor Mine to local residents. This includes information relating to Kumtor Mine's hiring procedures, human resources policies and job vacancy information. Community relations officers attend local community events, monitor the implementation of development projects funded by KGC, and act as a point of first contact for members of local communities. In addition to these structured activities, other types of formal and informal engagements occur on a regular basis across the local communities, with a range of other stakeholders such as community leaders, community organizations, local small businesses, and farmers. To ensure partnerships based on consensus we initiated the establishment of Regional Committees in Jeti-Oguz, Ton and Balykchy. Committee members are local authorities, heads of village councils, representatives of civil society organizations,

members of different unions. In these meetings, KGC management raise issues about operations and define plans for investment projects in liaison with local communities. Decisions are made together with the representatives of each Committee so that KGC's investments meet the expectations and needs of communities.

On a regular basis, we host one-day visits to the Kumtor Mine and at the Balykchy Marshalling Yard for interested parties, including representatives of state bodies, local authorities, partner organizations, and teachers and students from various educational institutions.

Kumtor has established a Kumtor Ambassador Corporate Volunteering Program where Kumtor Mine employees work with local communities on various charitable initiatives.

Kumtor's contributions to the community and social investments take a variety of forms. Kumtor contributes 1% of gross annual revenues to the Issyk-Kul Development Fund. This fund is governed by an oversight and steering committee (independent of KGC), which includes local government representatives and non-governmental organizations. The fund is designed to develop the socioeconomic infrastructure of the Issyk-Kul Region in accordance to local and regional government priorities. Since the creation of the fund in 2009, KGC has invested more than $60 million into projects as diverse as kindergartens, schools, sports clubs, and irrigation infrastructure across the Issyk-Kul region. KGC has a seat at the Supervisory Board of the Issyk-Kul Development Fund and has a right to coordinate 50% of overall funds to ensure a transparent and fair spending of the selected projects in the interests of social and economic development of the Issyk-Kul region, especially of communities located on the southern coast of Lake Issyk- Kul, including Balykchy town.

In addition, Kumtor Mine carries out its own community investment projects, which is focused on providing support in the following main areas: (i) business growth and diversification, particularly small businesses and entrepreneurs; (ii) providing support to development of the agricultural sector; (iii) Youth and educational projects; and (iv) environmental protection. Occasionally, Kumtor Mine partners with international and local organizations to maximize the impact of our community investments.

We support the development of local businesses in a number of ways. The most important one is based on our policy of supporting local procurement and encouraging new local suppliers to supply goods and services. Another important initiative is our micro-financing and credit program, which was founded by KGC and supports and enables local microcredit agencies in Jeti-Oguz, Ton, and Balykchy by offering favorable lending rates for small enterprises and farming businesses. The interest rates of these programs are the lowest in Kyrgyzstan. KGC remains on the supervisory board of each microcredit agency to oversee their day-to-day operations.

Another community investment project, which focuses on youth and education is the Kumtor Regional Scholarship Program. This program provides students completing high school and wishing to pursue a vocational career the opportunity to apply for one of 20 scholarships. The successful applicants are under full scholarship that includes tuition, accommodation, meals and a monthly stipend while they attend Technical Vocational School #27 or Technical School #91 in Bishkek. Technical School #27 has worked closely with KGC to establish a program that incorporates school based instruction with practical training in the heavy-duty workshop or the Mill Maintenance area at the Kumtor Mine.

Other key community investment projects carried out in 2018 include irrigation improvement program carried out in cooperation with regional authorities which support agricultural businesses, and improves access to potable water.

In addition to the sustainable community development projects discussed above, Kumtor also provides on-off donations, usually in the form of in-kind equipment or services. Kumtor receives many requests for support from across the country. It has established a Kumtor donations committee to review and approve donations. KGC conducts follow up monitoring visits on a regular basis to ensure that the donations are used for the intended purposes. Most of the donations were provided for purchase of furniture for schools and kindergartens, food baskets for identified vulnerable groups, support of sports tournaments, scholarships for promising students from vulnerable families, and Kyrgyz cultural events.

In 2018, KGC was also the largest financial supporter of the 3rd World Nomad Games hosted by the Kyrgyz Republic. The Games started on a modest scale in 2014 when about 600 athletes from 19 countries took part. In 2018 the Games gathered more than 3,000 athletes from over 70 countries, and attracted thousands of spectators to its matches. Millions of people watched 37 types of traditional nomad games on television all around the world.

Mount Milligan Mine

To facilitate community input on Mount Milligan Mine's activities, including community programs, the Mount Milligan Community Sustainability Committee ("**CSC**") has been operating since 2008. The CSC is comprised of representatives from the communities and Indigenous groups of McLeod Lake Indian Band, Nak'azdli Whut'en, Mackenzie, Fort St. James, Vanderhoof and Prince George. The CSC meets 3-4 times each year, including an annual summer meeting held at the mine site.

In addition to providing input on mine activities and updates on community developments, a primary responsibility of the CSC since 2016 has been allocating the funding provided through the Mount Milligan Community Project Fund. This fund is a component of the Mount Milligan Legacy Program, which was set up in 2014. The Legacy Program contributes to healthy communities and supports regional sustainability by focusing on people through such things as health and education programs and attempting to promote a diverse post-mining economy by doing business locally where competitive and practical. The Community Project Fund provides financial support to local organizations working to build capacity at the community level in one or more of the following priority areas: education and training, health, environment, community (including economic development) and literacy.

In addition to the Community Project Fund, Centerra also runs a British Columbia-wide Donation Program to facilitate the Company's support of local community-based events and organizations. Each year, the Company provides funds in excess of $30,000 to support youth sports teams, arts organizations, health and education-focused initiatives and recreation clubs in our local communities. In addition to this program, each year Mount Milligan Mine supports a number of continuing education programs through the local community college, such as First Aid certification and computer skills.

To advance our commitment to education and training, since 2015 Mount Milligan Mine has been running a Mining Education Program each spring which consists of educational mine tours for local elementary and high school students as well as classroom presentations made by mine employees. Mount Milligan Mine also provides a number of academic bursaries each year to high school graduates from the mine's local communities, and in 2018 made a 3-year, $45,000 commitment to support a Water Stewardship and Ecosystem Health Program run by the local School District.

Each summer, Mount Milligan Mine hosts mine tours for members of our local communities at no cost. Participants are able to see the details of the mine's operations and learn about the Company's environmental management, health & safety programs and community partnerships. On the tour, community members have an opportunity to speak with mine employees from a number of different departments, and ask any questions they might have about mine activities. In 2018, we ran 8 community tours that saw over 140 visitors to the mine site.

In 2015, we entered into a partnership with the local community college to run Community Offices in Fort St. James and Mackenzie. At the two college campuses, information on our operations and activities in British Columbia are available, including community programs and current job postings. Front desk staff receive training so that they are able to field questions or concerns by phone, email or in-person as well as assist community members with online employment applications. Contact information for Centerra Gold's regional Sustainability Department is also available for those who wish to contact the Company directly with a questions or concern.

Öksüt Project

Construction activities began in March 2018 at the Öksüt Project. In 2018, we continued to focus on consistent and transparent stakeholder engagement to help us with our sustainable development and capacity building programs. We commenced stakeholder consultations regarding participatory community investments in the second quarter of 2018 with good success. We commenced the important livelihood restoration projects for displaced shepherds in the local region, including providing them with alternative means to continue with their activities. This included such projects as renovating access roads for shepherds and farmers.

We also continued to develop our capacity building plans to maximize local employment and local procurement. Our social investment activities in local communities continued throughout 2018 with a focus on education, health and agricultural development.

Indigenous Relations

Our Mount Milligan Mine, Endako, Kemess Project, and Greenstone Gold Property are located on the territory of, or in close proximity to Indigenous communities. Our objective is to have mutually respectful and meaningful relationships with all such Indigenous groups.

Mount Milligan Mine

Mount Milligan Mine has strong relationships with the Indigenous groups surrounding the mine site, built on trust and open dialogue. Formal agreements are in place with two Indigenous groups, McLeod Lake Indian Band and Nak'azdli Whut'en, that outline a number of provisions concerning employment and training, environmental management and business opportunities. In 2010, the first of Mount Milligan Mine's two agreements was signed with McLeod Lake Indian Band, and in 2016 a second agreement was entered into with Nak'azdli Whut'en. Both agreements include financial payments made by Centerra to the Indigenous groups and implementation committees, composed of Company and community representatives, meet regularly to oversee agreement management.

In addition to implementation committees, both Indigenous groups have created liaison positions to facilitate a close working relationship with the Company. These liaisons visit the mine site to provide support to Indigenous employees and work with Mount Milligan Mine's Human Resources department on training and recruitment initiatives. Representatives from the McLeod Lake Indian Band and Nak'azdli Whut'en also sit on the Mount Milligan Community Sustainability Committee.

To advance Indigenous employment at Mount Milligan Mine and build capacity within our local communities, in 2018 Centerra, McLeod Lake Indian Band and Nak'azdli Whut'en partnered with the local community college to develop and run a customized pre-employment training program. The program's curriculum was developed based upon the specific skills and core competencies required for employment at the mine as well as the valued components of the Indigenous groups, such as health and wellness education. Upon completion of the program, students had the opportunity to apply for dedicated 8-month contract positions at the mine. The program ran throughout the spring of 2018 with great success. All but one student who entered the program graduated and Mount Milligan Mine employed more students than originally expected, with 78% percent of those hired still employed at the mine beyond their original contract term.

Across the region, Mount Milligan Mine regularly participates in career fairs and seminars hosted by Indigenous groups communities, and provides academic bursaries to local Indigenous students graduating high school. For many years, Mount Milligan Mine has provided an Indigenous cultural heritage course to all employees as part of orientation and throughout 2018 worked closely with McLeod Lake Indian Band and Nak'azdli Whut'en to update this course with additional, community-specific local Indigenous content. In addition, to support cross-cultural understanding and relationship-building, each year, Centerra participates in cultural celebrations, community events and trips run by our local Indigenous groups.

Endako

Endako Mine is located in close proximity to two Indigenous groups, Stellat'en First Nation and Nadleh Whut'en. In 2018, Centerra began negotiations on an Impact Benefit Agreement with the two communities, significantly advancing the formal relationship between the Company and the communities through the discussion of benefits-sharing from the project.

Even though the Endako Mine is not operating at present, engagement on the project still takes place. A regional Community Liaison Committee annually brings together members of local government, community-based organizations and Indigenous groups to review and discuss mine activities. Annual environmental reports are also shared with the local Indigenous communities and the Company continues to support, and participate in, local community events and celebrations.

Kemess Project

The Kemess Project is located within the traditional territories of the Tsay Keh Dene and Takla Lake First Nation and adjacent to, and downstream from, Kwadacha First Nation. Together these three nations are referred to as Tsay Keh Nay ("**TKN**"). Establishing and maintaining honest and meaningful relationships with TKN is a priority for the Kemess Project. An Impact Benefit Agreement, signed on May 17, 2017 allows for continued collaboration and consultation with TKN. The Company is active in TKN communities, participating in annual career fairs and community visits.

Greenstone Gold Property

The Greenstone Gold Property is located in Northeastern Ontario within the traditional territories of several Indigenous communities. We are actively engaged with these communities and are committed to dealing with them in a fair and transparent manner such that they are fully aware of the benefits and potential social and environmental impacts of the proposed mine development, and to receive their comments and input into the development of the project. In June 2018, the Greenstone Partnership entered into a definitive agreement with Long Lake #58 First Nations. In December 2018, the Greenstone Partnership also entered into an long-term relationship agreement with The Métis Nation of Ontario Secretariat Inc.

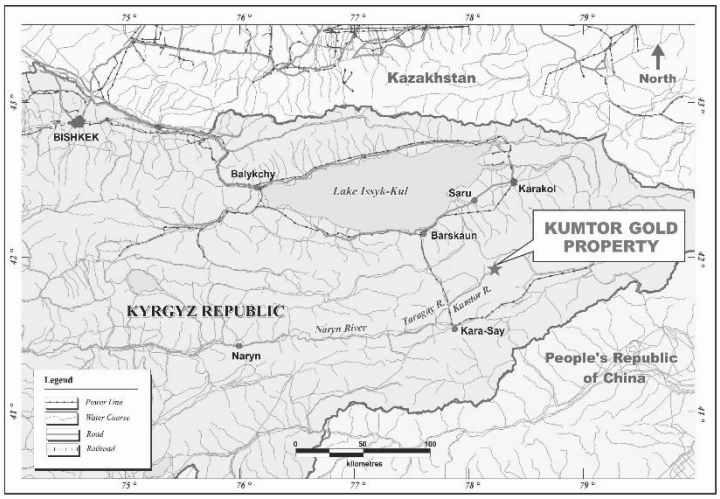
3. CENTERRA'S PROPERTIES

A general overview of our properties and their stage of development is described in "*Section 2.1 – Our Properties*".

3.1 Producing Mines

Our two producing gold mines are Kumtor Mine and Mount Milligan Mine.

Kumtor Mine



Quick Facts

The Kumtor Mine, located in the Kyrgyz Republic, is the largest gold mine in the former Soviet Union operated by a non-domestic producer.

The Kumtor Mine has been in operation since 1997.

In 22 years, Kumtor Mine has produced approximately 12 million ounces of gold.

Location	Kyrgyz Republic
Ownership	100%
Business Structure	Our wholly-owned subsidiary, Kumtor Gold Company CJSC (defined above as KGC), is the holder of the rights to the Kumtor Mine
End Product	Gold doré
Mine Type	Open pit
Estimated Mineral Reserves (as at December 31, 2018)	4,018 koz of contained gold (proven and probable) average grade – 2.4 g/t tonnage – 51,631 k tonnes
Estimated Mineral Resources (as at December 31, 2018) Mineral resources are in addition to reserves. Mineral resources do not have demonstrated economic viability.	2,953 koz of contained gold (measured and indicated) – open pit average grade – 2.9 g/t tonnage – 32,203 k tonnes
Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be	149 koz of contained gold (inferred) – open pit average grade – 1.6 g/t tonnage – 2,970 k tonnes

assumed that all or part of the inferred resources will ever be upgraded to a higher category.	3,409 koz of contained gold (inferred) –Underground average grade – 7.3 g/t tonnage – 14,477 k tonnes
Processing Method	Milling, flotation, ultrafine grinding and CIL
Total Production to December 31, 2018	12 million ounces of gold
2018 Production	534,563 ounces of gold
2019 Forecasted Production	535,000 – 565,000 ounces of gold
2019 Forecasted All-in Sustaining Costs on a by-Product Basis(1)	$666 - 703 per ounce of gold sold
2019 Forecasted All-in Sustaining Cost on a by-Product Basis Including Taxes(1)	$837 - 883 per ounce of gold sold
Estimated Mine Life	2026
Employees (excluding long term contractors)	2,641

(1). All-in sustaining costs per ounce sold, all-in sustaining costs per ounce sold on a by-product basis, all-in sustaining costs on a by-product basis including taxes per ounce sold and all-in sustaining costs on a co-product basis (gold and copper) on a per unit basis are non-GAAP measures and are discussed under "*Non-GAAP Measures*".

History

Intermittent exploration in the general Kumtor Mine area dates back to the late 1920s.

1978	• Debris from the Sarytor deposit is discovered by a geophysical expedition of the state Kyrgyz Geology department sampling float from the frontal moraine of the Sarytor Glacier. • The sole outcrop of what is now called the Central deposit was found during follow-up prospecting.
1979 to 1989	• A systematic evaluation of the Central deposit, and to a lesser extent of the Southwest deposit, was carried out consisting of several phases of surface trenching and geological mapping, diamond drilling and underground development on three levels culminating in a detailed sampling program of the central upper part of the Central deposit.
1990	• An initial reserve statement is issued by the Soviet Union State Committee on Reserves.
1991	• Soviet Union breaks up and Kyrgyz Republic emerges as an independent country. • Cameco Corporation ("**Cameco**"), Centerra's former parent company becomes aware of the project.
1992	• Centerra's former parent company concludes an agreement with the Kyrgyz Republic regarding the project, and retains a third-party consultant to undertake a feasibility study of the project (the "**Kumtor Feasibility Study**").
1992-1993	• The Kumtor Feasibility Study is completed. The feasibility work program included data verification (by re-sampling parts of the underground openings and re-assaying of original sample rejects), additional and definitive metallurgical test work, and a re-estimation of mineral resources and reserves using geostatistical methods, a block model and pit optimization software.
1994	• An update to the Kumtor Feasibility Study is completed.

1994	• A project development agreement is finalized with the Kyrgyz Government. Pursuant to this agreement, Cameco Gold Inc. ("**Cameco Gold**"), through its wholly-owned subsidiary Kumtor Mountain Corporation, held a one-third interest in KGC, a Kyrgyz joint stock company that owned the concession giving it exclusive rights to develop the Kumtor Mine. Kyrgyzaltyn held the remaining two-thirds interest in KGC. KOC, then a wholly-owned subsidiary of Cameco Gold, acted as operator of the Kumtor Mine. We are the successor to substantially all of the gold business previously carried on by Cameco Gold, which was a wholly owned subsidiary of Cameco.
1995	• A further update to the Kumtor Feasibility Study is completed.
1995	• Financing arrangements for the Kumtor Mine are concluded.
1996	• Project construction is completed.
1997	• After capital expenditures of approximately $452 million, mining of the Central pit commences and commercial production is achieved.
2004	• Kyrgyzaltyn and Cameco Gold sells us all of their shares in KGC (and KOC) effective June 22, 2004 in exchange for, among other consideration, common shares in Centerra. Accordingly, we now hold a 100% interest in the Kumtor Mine.
2006	• Ore deliveries from the Southwest deposit commence.
2009	• Project agreements from 2004 are amended and restated and approved by the Kyrgyz Republic Parliament.
2017	• Mining and ore deliveries from the Sarytor deposit commence. • Comprehensive settlement agreement reached to resolve substantially all outstanding issues affecting the Kumtor Mine (September 11, 2017). Closing of this agreement is still pending.
2018	• Exploration activities re-started.

Significance to the Kyrgyz Republic

The Kumtor Mine plays a particularly important role in the economic and political life of the Kyrgyz Republic. It is one of the largest private sector employers of Kyrgyz citizens, is the largest foreign investment in the country and represents a significant portion of the country's gross domestic product, export earnings and total industrial production. The importance of Kumtor Mine to the Kyrgyz economy means that it has a very high profile within the country. Accordingly, Kumtor Mine continues to be at the centre of political and public attention in the Kyrgyz Republic.

Disputes and Threats of Nationalization

The Kumtor Mine has been the subject of numerous disputes in the past, including lawsuits and legislation that challenged the validity of the decrees, agreements and licences that govern the title, operation and taxation of Kumtor Mine, and calls for nationalization of the Kumtor Mine. See the *"Risk Factors"* section of this AIF.

Labour and Employment Matters

As of December 31, 2018, the Kumtor Mine had 2,641 permanent employees (excluding long-term contractors), of which approximately 97.5% are Kyrgyz citizens. The Kumtor Mine is unionized and all of our national employees in the Kyrgyz Republic (including at the regional head office) are subject to our collective agreement with the Trade Union Committee. The current collective bargaining agreement, which was ratified in December 2018, expires on December 31, 2020. A prolonged work stoppage at any time during 2019 or any subsequent year could have a significant impact on Kumtor Mine achieving its forecasted production. See the "*Risk Factors*" section of this AIF.

Property Description, Location and Concession

The Kumtor Mine is located in the Tien Shan Mountains, some 350 km to the southeast of the national capital Bishkek and about 60 km to the north of the international boundary with the People's Republic of China, at 41°52' North and 78°11' East.

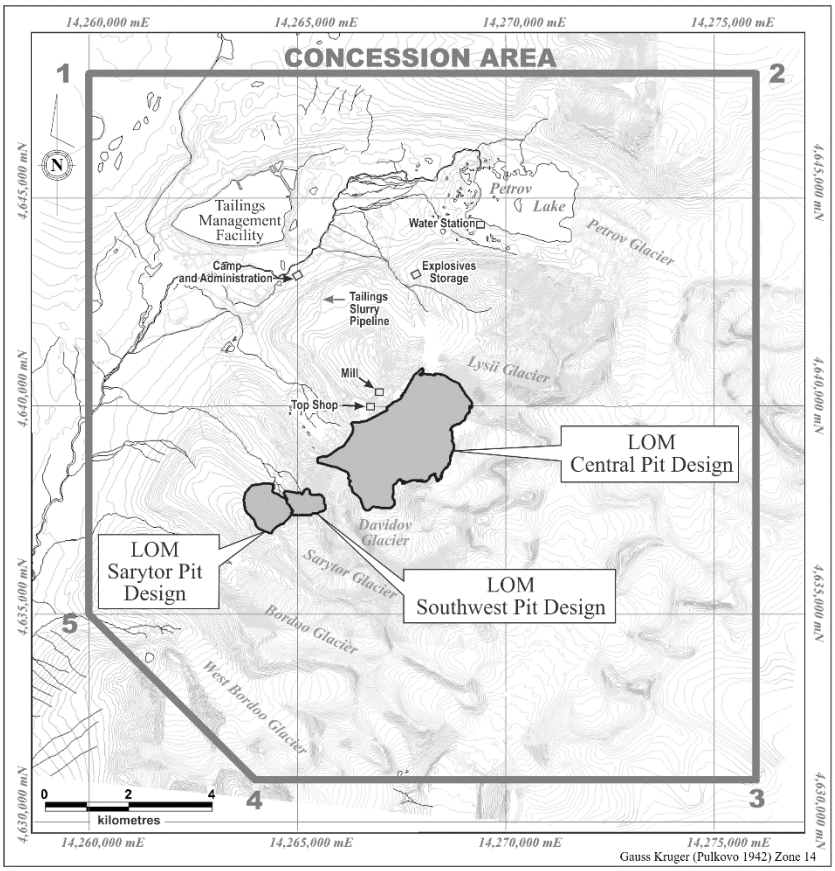
Under our Restated Concession Agreement with the Kyrgyz Republic, effective June 6, 2009 (the "**Restated Concession Agreement**"), we were granted a concession with exclusive rights to all minerals within an area of approximately 26,000 hectares ("**ha**") centered on the Kumtor Mine gold deposit (the "**Concession Area**") and with an expiry date of December 4, 2042. As of June 6, 2009, when the Restated Concession Agreement came into effect, all of the prior existing mining and exploration licenses and associated agreements held by us terminated and were superseded by the Restated Concession Agreement.

Other than taxes and fees described below under the heading "*Mining operations – Taxes*", there are no royalties, payments or other agreements or encumbrances related to the Kumtor Mine.

The Kumtor Mine is comprised of the main Central deposit (consisting of the Stockwork and SB Zones) and two smaller satellite deposits known as the Sarytor deposit and the Southwest deposit.

All of the mineral deposits, the TMF, waste dumps and the processing plant are located within the Concession Area.

Concession Area



Restated Investment Agreement

Our Restated Investment Agreement with the Kyrgyz Republic dated as of June 6, 2009 (the "**Restated Investment Agreement**") provides the following guarantees with respect to the Kumtor Mine operations:

- such access to the Kumtor Mine, including all necessary surface lands, together with access to water, power and other infrastructure, as is necessary or convenient for the operation of the Kumtor Mine;
- that the Kyrgyz Government will support further and additional exploration activity by us in the Kyrgyz Republic by inviting us to consider opportunities to acquire additional exploration and mining licenses; and
- all licences, consents, permits and approvals of the Kyrgyz Government necessary for the operation of the Kumtor Mine.

Site Accessibility, Climate, Local Resources, Infrastructure and Physiography

Site Accessibility

Access to the Kumtor Mine is by a main road that runs between Bishkek and Balykchy, on the western shore of Lake Issyk-Kul, a distance of 180 km. A secondary road running along the south shore of the lake leads to the town of Barskaun for another 140 km, and a final 100 km must be traversed on a narrow, winding road leading into the Tien Shan Mountains that climbs to an elevation of 3,700 metres ("**m**") through 32 switch backs to reach the Kumtor Mine. The Kumtor Mine has done considerable work to maintain this access road and, despite occasional avalanches and movements of gravel and till down steep slopes during heavy rains, there has not been any extended period during which the road has been out of service.

Most employees work a two-week rotation, and are transported between the mine site from Bishkek and the Issyk-Kul region using a company-owned commuter bus service. Supplies are transported by rail to the Kumtor Mine marshalling yard in Balykchy at the west-end of Lake Issyk-Kul and then trucked 250 km to the mine site. A helicopter pad is available at the mine site for emergency use.

Elevation

The Kumtor mill is situated in alpine terrain at an elevation of approximately 4,016 m, while the highest waste and glacial mining excavations occur above an elevation of 4,400 m. The main camp, administration and maintenance facilities are at about 3,600 m.

Climate, Physiography and Vegetation

The climate is continental with a mean annual temperature of minus eight degrees Celsius. Extreme recorded temperatures vary from plus 23 to minus 49 degrees Celsius, with short summers that last from June to September. Precipitation is low at 300 millimetres ("**mm**") per annum, with the majority falling in the summer months, and annual snow accumulation of 600 mm. The Kumtor Mine operates 365 days per year.

Local valleys are occupied by active glaciers that extend down to elevations of 3,800 m to 3,900 m and permafrost in the area can reach a depth of 250 m.

Reflecting the harsh climate and high elevation, sparse, low vegetation is restricted to the valley floors and lower mountain slopes, with a total absence of trees or shrubs.

Seismic Activity

As the area is seismically active, all facilities at the Kumtor Mine, including the process plant and tailings storage dam, have been designed in accordance with recommended seismic standards for the area.

Power and Water

The mine site is connected to the Kyrgyz national power grid with a 110 kilovolt overhead power line running parallel to the access road. The mine maintains two standby generator stations in case of power outages. Fresh water is taken from Petrov Lake, situated five km northeast of the mill site. The minimum water inflow into the lake is estimated to be in excess of 1,000 cubic metres per hour or approximately twice the average project demand.

Tailings Management Facility

The TMF is located in the Kumtor River valley and consists of twin tailings pipelines (each approximately 6.5 km in length, one is the standby line), a downstream tailings dam, an effluent treatment plant and two diversion ditches around the area to prevent runoff and natural watercourses from entering the tailings basin. These facilities received approval from the Kyrgyz Government in 1999 to be constructed to an ultimate dam crest elevation of 3,670.5 m.

The existing TMF will reach its permitted capacity in 2020, and the existing tailings dam will need to be raised to a final height of 3,677.5m to accommodate the tailings to be processed for the current LOM plan. The tailings dam will be raised in two phases to the ultimate height. Each increase will require that KGC obtain necessary permits. We obtained the necessary permits from Kyrgyz Republic authorities in March 2017 and commenced construction activities for the first phase of the tailings dam raise in April 2017. We expect this phase to be completed in 2020. This will raise the tailings dam to an elevation of 3674.0 m.

The second phase of the tailings dam raise is expected from 2021 to 2024 which will raise the dam to an elevation of 3,677.5 m. We received in January 2018 approval to raise the tailings dam to this elevation, subject to the approval of the final detailed design which is scheduled to be submitted in 2020.

Since the time of its construction, the dam foundation has experienced horizontal deformations, with the Kyrgyz Republic Institute of Rock Mechanics initially raising concerns in 1999. A shear key and toe berm were added to the TMF and have been effective in controlling the rate of horizontal deformations. The dams and appurtenances are regularly inspected by KGC personnel during routine work at the facility and have been visually inspected on an annual basis since 2007 by independent geotechnical consultants. The consultants reported the dam appurtenances to be in good condition and functioning as required.

Geological Setting

The Kumtor Mine gold deposit occurs in the middle of the Tien Shan metallogenic belt, a Hercynian fault and thrust belt that traverses Central Asia from Uzbekistan in the west through Tajikistan and the Kyrgyz Republic into northwestern China, a distance of more than 2,500 km. This belt hosts a number of important gold deposits including Muruntau, one of the world's largest gold deposits, as well as Zarmitan, Jilau and our Kumtor Mine.

The mine geology is dominated by several major thrust slices and fault zones which strike north-easterly and dip to the southeast at varying but moderate angles. Each thrust sheet contains older rocks than the sheet it structurally overlies. The slice hosting the gold mineralization is composed of meta-sediments of Vendian age (youngest Proterozoic or oldest Palaeozoic) that are strongly folded and schistose. In most areas, the Kumtor Fault Zone ("**KFZ**"), a dark-grey to black, graphitic gouge and schist zone forms the footwall of this structural segment. The KFZ has a width of up to several hundred metres. The adjacent rocks in its hanging wall are strongly affected by folding, shearing and faulting for a distance of up to several hundred metres. The rocks in the structural footwall of the KFZ are Cambro-Ordovician limestone and phyllite, thrust over Tertiary sediments of possible continental derivation which in turn rests, with apparent unconformity, on Carboniferous clastic sediments.

Given its location astride a major fault of regional importance and owing to the strong association of gold mineralization with a multi-phased metasomatic system at relatively high temperatures, the Kumtor Mine gold deposit, with its satellite deposits, is a member of the class of structurally controlled meso-thermal gold replacement deposits.

Mineralization

Gold mineralization of economic importance occurs where the Vendian sediments have been hydrothermally altered and mineralized based on structural controls. Gold mineralization is developed over a strike distance of more than 12 km. The Central deposit is the most important accumulation identified to date and has considerable dimensions with a strike length of 2.4 km, a vertical extent of one km and a width of up to 300 m. Other known occurrences along the mineralized trend are the Southwest deposit and Sarytor deposit.

Mineralization took place in four main pulses. An initial pulse resulted primarily in pervasive quartz-carbonate-albite-chlorite-sericite-pyrite alteration, with little gold of economic consequence being deposited. The next two pulses deposited all of the economically significant gold at the Kumtor Mine. Feldspars makes up nearly 20% of the ore, carbonates (calcite, dolomite, ankerite and siderite) collectively 25% to 30%, pyrite 15% to 20%, quartz 5% to 10% and the remainder are host rock inclusions.

The mineralization is most intense, and the gold grade is the highest, where the metasomatic activity was continuous through mineralization phases two and three. This is the case for the Stockwork and SB Zones and explains the higher-than-average gold grades in these zones. The last pulse created planar carbonate-pyrite metasomatic rocks that are associated with zones of intense deformation of previously altered phyllites.

Native gold and the gold-silver tellurides are intimately associated with pyrite to the extent that gold grade and pyrite content generally correlate. The gold and the gold-bearing minerals occur as very fine inclusions in the pyrite, with an average size of only 10 microns. This, together with the poor cyanide leach response of the gold tellurides, accounts for the partly refractory nature of the Kumtor Mine mineralization. The refractory characteristics are reflected in the relatively low historic and forecasted gold recovery of approximately 80%, despite the very fine grind applied to the pyrite flotation concentrate from which most of the gold at Kumtor Mine is recovered. However, the fine grain size of the gold also renders assaying of this mineralization relatively reliable, with only a small nugget effect.

Most of the mineralization takes the form of veins, veinlets and breccia bodies in which the mineralization forms the matrix. In the more intensely mineralized areas, the surrounding host rock has also been altered. Post-ore faulting is generally parallel to, or at low angles with, the mineralized sequence. These faults often carry significant quantities of graphite and other carbonaceous components, which constitute the sources for the preg-robbing character of some of the mineralization.

The Central Deposit

Within the Central Deposit, three general sectors of gold mineralization have been delineated. For the purposes of resource modelling, these sectors have been sub-divided into separate zones and domains based on mineralization and alteration characteristics. The three general sectors are described below.

- Two parallel sectors of alteration and gold mineralization strike northeasterly and dip to the southeast at 45 degrees to 60 degrees, separated by 30 m to 50 m of barren or poorly mineralized rock. The South sector, with a length of 700 m to 1,000 m and a horizontal width of 40 m to 80 m, is reasonably well mineralized throughout its entire length, with an average gold grade of 3 to 4 grams of gold per tonne. The North sector, somewhat more extensive along strike but with a similar width, has lesser gold grade continuity and splits into a number of individual lenses that have average gold grades in the range of 2 to 3.5 grams of gold per tonne.
- At their northeastern end, the North and South sectors coalesce into the Stockwork sector. Its dimensions in the upper part of the deposit are 400 m to 500 m long by 50 m to 200 m wide, with an average gold grade of 5 to 6 grams of gold per tonne. The Stockwork sector plunges northeasterly at 40 degrees to 50 degrees, and diminishes in size below an elevation of 3,700 m. Geographically, the Stockwork sector is located closest to the pit highwall and thus has a large effect on the overall strip ratio of the pit. Drilling further extended the Stockwork sector down dip and outlined a higher-grade core beneath the bottom of the planned open pit.
- In the southwestern part of the Central Deposit, the SB Zone (structurally a part of the South sector) tops out at an elevation of 3,900 m. The discovery of the SB Zone gave rise to a large increase in the mineral reserves of the Central deposit in 2005. Drilling since 2008 has extended the SB Zone along strike to the southwest and northeast increasing the current known strike extent to 1,000 m, a vertical extent of 650 m, and a width that ranges from 6 m to 75 m, with grades in the range of 5 grams of gold per tonne.
- The Stockwork and SB Zones are separated by the Saddle Zone, a narrow but consistent zone of moderate grade mineralization generally located along the hanging wall contact of a broader zone of lower grade mineralization up to 200 m in width.

The Southwest and Sarytor Deposits

The Southwest deposit is located three km to the southwest of the Central deposit across the Davidov glacier, along the Kumtor fault. Exploration drilling carried out in the past has defined the southwestern limit of the SB Zone and the northeastern limit of the SW Deposit below the glacier, with a barren gap of approximately 600 m. To the southwest, the Southwest Deposit is covered by the Sarytor Glacier, beyond which additional mineralization is known as the Sarytor Deposit.

The structural/lithological framework of the Sarytor and Southwest deposits is identical to those of the Central deposit with structural dips generally at angles ranging from 20 degrees to 50 degrees, somewhat shallower than at the Central deposit.

The Sarytor deposit is located further southwest from the Southwest Deposit. The two deposits are interpreted as being contiguous below the Sarytor Glacier. The main geological structures are common for the Southwest and Sarytor Deposit. Drill results indicate that the mineralized section in the Sarytor Deposit strikes east-west and dips south at 20 degrees to 30 degrees. The thickness of the overall mineralized package is relatively consistent and varies from 80 m to 120 m, with the strike length of the known mineralization being approximately 800 m.

Host rocks are structurally disturbed slates and phyllites with lenses of till-like conglomerates and dolomitic slates. Development of background alteration is weak and represented mainly by vein-type silicification. Unaltered host rocks do not carry any elevated gold values. The mineralized package has been traced by drilling for 200 m to 300 m down dip.

The mineralized package is composed of stacked lenses varying in thickness from 2 m to 60 m, with an average thickness of approximately 20 m. The mineralized lenses are typically separated by approximately 2 m to 15 m of poorly mineralized host rocks. Alteration intensity and zone thickness increase southward. Metasomatism is represented by banded albite-carbonate-quartz alteration with 3% to 5% pyrite. Barite and siderite are well developed in the southern part of Sarytor. As a rule, pyrite content generally correlates with the gold grade.

Historical Exploration and Drilling

The principal exploration data acquisition method at the Kumtor Mine is diamond drilling. There is a large historical drill hole database (augmented by underground exploration results) dating back to Soviet times. To a large extent, this information is no longer relevant to the current mineral reserve estimate, since the upper parts of the Central Deposit,

to which the historical information pertained, have now been mined out. Models for the Southwest and Sarytor Deposits use very little historical Soviet era data. There are only small areas in the current mineral reserves that rely on Soviet data, and these old data is progressively being verified by in-fill or replacement drilling.

As a result of the lack of sufficiently detailed information in the Central Deposit below an elevation of 3,950 m, about 28% of the Kumtor Feasibility Study open-pit mineral reserves, which contain one-quarter of the total gold to be mined, had been substantially less well documented than the upper part of the deposit. To fill this information gap, and to explore for extensions to the known mineralization, Kumtor Mine undertook a large in-fill diamond drill program in the years 1998 to 2013, comprised of 879 holes in the Central Deposit totalling 308,183 m and 613 holes on other targets totalling 115,770 m. Drilling was undertaken from various pit benches and setups outside of the pit, including setups on the waste piles. The drilling has increased the density of the drill pattern in the lower part of the deposit to equal to or better than that available at the time of the Kumtor Feasibility Study for the above the 3,950 m elevation. The cut-off grade utilized in the Central Deposit is 0.85 g/t Au and 1.0 g/t Au for the Southwest and Sarytor Deposits.

In the Central, Southwest, and Sarytor Deposits, the drill holes are now generally spaced 30 m to 40 m along strike and 40 m to 80 m down-dip in geologically complex areas, and at 80 m along strike and 60 m to 80 m down-dip in other areas.

The majority of the Kumtor Mine diamond drill holes are steeply inclined HQ-size core, except when ground conditions necessitate a reduction in core size to NQ. For all of the holes, drill collars are surveyed and down-hole deviations are measured at intervals of 20 m to 30 m using a reflex single shot camera. Limitations on set-ups dictate that a certain number of off-section holes are drilled. Drill cores are logged for geological and geotechnical information, and are photographed prior to sampling. Drill-collar coordinates, down-hole deviation surveys, assay results, and information on lithology, alteration and mineralization are recorded in the mine or exploration drilling database.

Drill core recovery typically varies from 80% to 100%, averaging greater than 95%. In certain cases where the core recovery from mineralized intervals is low, the hole is stopped and re-drilled to achieve better core recovery. There is no evidence that core recovery issues impact the reliability of the gold assay data used for mineral resource and reserve estimation. The angle of intersections between the drill holes and the mineralization is generally such that the true width of the mineralization is equivalent to 70% to 95% of the length of mineralized drill-hole intervals.

Sample Preparation, Analysis and Security

All sample collection, preparation and assaying from the 1998 to March 2013 drilling programs were performed by Kumtor Mine personnel at the Kumtor Mine owned site laboratory, which is not certified but is subjected to periodic calibration and operations checks by the Kyrgyz National Accreditations agency. Sample collection protocols are monitored by the Kumtor Mine Quality Assurance/Quality Control ("**QA/QC**") geologist. Laboratory preparation and assay protocols are supervised by the chief assayer at the Kumtor Mine.

Quality control procedures have evolved over time. Prior to 2008, the internal quality control measures at the Kumtor Mine laboratory consisted of the routine insertion of internally prepared standards and a blank at a combined rate of one standard and one blank per 22 samples. Quality control checks were routinely performed on reject duplicates. In addition, a minimum of 20% of the total samples from the Kumtor Mine drill programs have been re-assayed using the fire assay method with a gravimetric finish.

In early 2008, the mine laboratory introduced four standards and a blank from CDN Resource Laboratories and re-assaying of all batches that fail the internal QA/QC limits became automatic. The mine laboratory routinely re-assayed duplicate pulps at a rate of 20% as an internal check on assay precision. The revised protocols introduced in 2008 have resulted in a significant reduction in duplicate assaying of waste material and a marked improvement of the reliability of assays within mineralized zones.

From 2008 to early 2013, all external check assaying on reject duplicates had been undertaken at Alex Stewart Assayers and Environmental Laboratory ("**ALS**") located in Kara Balta, which has had ISO 9001 accreditation since 2007 and participates in an international laboratory round-robin organized by Geostats Pty Ltd.

In late 2012, an audit of the KGC laboratory and QA/QC procedures was conducted by Lynda Bloom of Analytical Solutions Laboratory. Based on recommendations of this independent audit, QA/QC protocols were modified and primary exploration drill sample analysis was moved from the mine site to ALS effective April 2013.

The QA/QC program was modified to include the insertion of a coarse blank three in every 100 samples and the insertion of reference material two in every 100 samples. The selection of reference material was reduced from forty-four to ten.

Samples were dispatched from the mine site to ALS twice weekly by Cher SGB Company. As the drill holes are located within the Central, Southwest and Sarytor pits and transported directly to the ALS laboratory, the validity and integrity of

the samples along the chain of custody is assumed and additional security of samples is not required in this mining environment.

The assay method used was fire assay with atomic absorption finish. Gold grades over 100 ppm were re-analyzed via fire assay with ICP MS. The results were reported back to the mine site within two days after receipt of samples by the laboratory.

The Central Scientific Research Laboratory ("**CSRL**") in Kara-Balta was used as a check lab to ALS. Although CSRL is not a certified lab, it was deemed adequate for use as a check lab. Checks were routinely made on a twice quarterly basis with four pulps randomly selected from one hundred, including low and high gold materials. Blanks and standards were similarly inserted as in the primary analysis.

There are no drilling, sampling or recovery factors that could have a material impact on the accuracy or reliability of the current mineral reserve and resource estimate.

Kumtor Mine Mineral Resource and Reserve Estimates

All Mineral Resource and Mineral Reserve estimates were prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards for Mineral Resource and Mineral Reserves (2014) as incorporated into NI 43-101 and were prepared, reviewed, verified and compiled by Centerra's geological and mining staff under the supervision of Gordon Reid, Professional Engineer and Centerra's Vice-President and Chief Operating Officer, who is the qualified person for the purpose of NI 43-101.

The table below summarizes open pit and underground Mineral Resources exclusive of Mineral Reserves as of December 31, 2018, based on a $1,450/oz gold price. The 2018 year-end open pit Measured and Indicated Mineral Resources total 32.20 million tonnes averaging 2.9 g/t Au and contain 2,953 million ounces of gold. In addition, the 2018 year-end open pit Inferred Mineral Resources total 2.97 million tonnes averaging 1.6 g/t Au and contain 149,000 ounces of gold. As well, the 2018 year-end underground Inferred Mineral Resources total 14.48 million tonnes averaging 7.3 g/t Au and contain 3.41 million ounces of gold. The potential quantity and grade of the indicated mineral resources and the inferred mineral resources are conceptual in nature, as there has been insufficient exploration to define a mineral reserve and it is uncertain if further exploration will result in the target being delineated as a mineral reserve.

The resource model update for the Central, Sarytor and Southwest Deposits were prepared in December 2016, using all of the drill holes available as of that date, by the Centerra Technical Services department. ARANZ Leapfrog software was used to update the principal mineralized domains throughout the Central Deposit and values for gold were interpolated into blocks using inverse distance squared (ID2) in GEMS. For the Sarytor and Southwest Deposits, values for gold were interpolated into blocks using inverse distance cubed (ID3) in GEOVIA GEMS software.

The underground resource model for the SB and Stockwork Zones of the Central Deposit was prepared in December 2016 subsequent to the development of the open pit resource model, and including all drill holes available as of that date.

Centerra reviewed the resource assumptions, input parameters, geological interpretation, and block modelling procedures and is of the opinion that the Mineral Resource estimates are appropriate for the style of mineralization and that the resource models are reasonable and acceptable to support the Mineral Resource and Mineral Reserve estimates.

We are not aware of any known metallurgical, environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the resource estimate at the time of this report, other than as discussed in the Kumtor Technical Report or this AIF.

For the Kumtor Mine, updated pit designs were created in 2016 and were selected from a number of alternatives investigated, with particular emphasis on geotechnical considerations The economic studies undertaken by KGC and the LOM plan subsequently adopted by Centerra demonstrate that the Kumtor Mine Mineral Reserves are the economically mineable part of a Measured and/or Indicated Mineral Resource as defined by the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014) as incorporated into NI 43-101.

In the Central Pit KS-2016Q1 block model, the grades have been diluted out from the mineralized domains to the full size of the blocks. The model has been calibrated to the blasthole model, so it is assumed that this process has adequately accounted for external mining dilution. In the Southwest and Sarytor Deposits SRSW-2016YE block model, the grades have been diluted out from the mineralized domains to the full size of the blocks. Blocks that were diluted below the cut-off grade are not included in the Mineral Reserves.

Mineral Resources as of December 31, 2018 are:

KUMTOR MINE MINERAL RESOURCE ESTIMATE SUMMARY – AS OF DECEMBER 31, 2018[2][5][6]

	Classification[1]	Tonnes (kt)	Grade Au (g/t)	Contained Gold (koz)
Kumtor Open Pit[3]	Measured	18,008	3.0	1,749
	Indicated	14,195	2.6	1,204
	Measured and Indicated	**32,203**	**2.9**	**2,953**
Kumtor Open Pit[3]	Inferred	2,970	1.6	149
Kumtor Underground[4]	Inferred	14,477	7.3	3,409

Notes:
(1) CIM definitions were followed for classification of Mineral Resources.
(2) Mineral Resources are in addition to Mineral Reserves.
(3) The open-pit mineral resources are constrained by a pit shell. Open Pit Mineral Resources are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0 g/t Au for the Sarytor and Southwest Deposits.
(4) Underground mineral resources occur below the open pit mineral resources shell and are constrained by underground mineable shapes based on a cut-off grade of 4.9 grams of gold per tonne.
(5) Mineral Resources are estimated using a long-term gold price of US$1,450 per ounce.
(6) Numbers may not add due to rounding.

Mineral resources that are not mineral reserves have no demonstrated economic viability. Additionally, inferred mineral resources have a large degree of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the inferred resources can be upgraded to a higher resource category.

Mineral Reserves as of December 31, 2018 are as follows:

MINERAL RESERVE SUMMARY AS OF DECEMBER 31, 2018 [1][2][3][4]

Proven Mineral Reserves			Probable Mineral Reserves			Total Proven and Probable Mineral Reserves		
Tonnes (kt)	Grade Au (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade Au (g/t)	Contained Gold (koz)	Tonnes (kt)	Grade Au (g/t)	Contained Gold (koz)
11,309	1.7	627	40,322	2.6	3,391	51,631	2.4	4,018

Notes:
1. CIM definitions were followed for classification of Mineral Reserves.
2. Open Pit Mineral Reserves are estimated at a cut-off grade of 0.85 g/t Au for the Central Pit and 1.0. g/t Au for the Southwest and Sarytor Deposits.
3. The mineral reserves have been estimated based on a gold price of $1,250 per ounce, diesel fuel price of $0.55/litre and an exchange rate of 1USD:65KGS.
4. Numbers may not add due to rounding.

Mineral Reserves could be materially affected by the risk factors described under the heading *"Risk Factors"*.

Mining Operations

Mining

Mining operations at the Kumtor Mine use conventional open pit mining methods. Mining in the Central Pit is done on 10 m benches. Ore at the smaller Southwest and Sarytor pits will be mined on nominal 8 m benches for better mining selectivity of the smaller ore zones.

Blast holes are drilled using five diesel-powered Sandvik DR-460 rig and five Drilltech D55SP rotary-percussion drill rigs, with a hole diameter of 200 mm. Charging the holes is undertaken by special bulk explosives trucks delivering either ammonium nitrate with fuel oil, or emulsion explosives for wet holes. The explosives consumption is about 0.21 kg per tonne of ore or waste.

Milling

The current Kumtor Mill flowsheet reflects the fine-grained nature of the gold and its intimate association with pyrite and consists of crushing, grinding, pyrite flotation and double re-grinding of the flotation concentrate. Two separate carbon-in-leach circuits recover the gold from the re-ground concentrate and from the flotation tails, with final gold recovery accomplished by carbon stripping, electrowinning and refining. The mill throughput in 2018 was approximately 6.325 million tonnes.

The ore to be milled is managed through a number of stockpiles that receive ore of different metallurgical character and of different grade ranges as determined by grade-control data and thus allow blending of the mill feed for optimum gold recovery. A gyratory crusher reduces run-of-mine ore to minus 200 mm. The ore is then fed to a coarse ore stockpile from which it is reclaimed for grinding, first to a semi-autogenous ("**SAG**") mill and then to a ball mill, which together reduce the grain size to 80% passing 140 microns. A bulk sulphide concentrate representing 7% to 11% of the original mill feed is then produced with a grade of 30 to 50 grams of gold per tonne and a gold recovery of 87% to 92% into the concentrate.

The flotation concentrate is re-ground in a ball mill to approximately 90% passing 20 microns. After thickening to 50% solids, it is once more re-ground to 95% to 98% passing 20 microns in an ultra-fine grinding mill ("**IsaMill**"). The IsaMill was commissioned in October 2005 and provides additional incremental liberation of the fine gold (2-5 microns) enclosed in pyrite. The concentrate is diluted to 45% solids, pre-aerated for 40 hours and leached for 80 hours in the concentrate CIL circuit consisting of six agitated tanks in series.

The flotation tailings are thickened to 50% solids in the flotation tailings thickener and leached in the flotation tailings CIL circuit, which consists of three agitated tanks in series. Cyanide additions and carbon concentrations are lower in the tailings CIL circuit compared to the concentrate CIL circuit. Overflow from all four thickeners is recycled through the process.

The carbon in both CIL circuits is moved forward counter-current to the slurry flow, and the loaded carbon from the first flotation tailings CIL tank is pumped to the third concentrate CIL tank to continue loading. Loaded carbon from the first concentrate CIL tank is pumped to the gold recovery plant. The loaded carbon is stripped and the gold subsequently recovered by electro-winning. Gold flake is washed from the cathodes, dried and smelted in an induction furnace and cast into doré bars.

Gold recovery is affected by the preg-robbing character of some of the ore due to active graphite. This negative effect is moderated by adding diesel fuel, as a masking agent, to the SAG and the re-grind mills, and through blending to control the percentage of ore with preg-robbing characteristics in the Mill feed.

Historically, the overall Mill recovery is 78% to 80%, averaging 79.4%. Based on the experience to date, future annual recoveries can be expected to range from 54% to 83%, averaging 78% depending on the head grade, ore source, and ore characteristics.

Concentrate CIL tailings and flotation CIL tailings are combined and discharged by gravity to the tailings disposal area through a slurry pipeline system.

Geotechnical Issues Affecting the Kumtor Open Pit

Pit Wall Stability

The final open pit walls of Central pit will have a vertical extent of up to 620 m in the SB Zone (up to 960 m if the natural slope above is considered) and up to 750 m in the Stockwork Zone. In general, there is a higher risk associated with increasing wall heights that could result in a reduction of planned slope angles as the open pit deepens.

In the past, operations at Central Pit have been negatively affected as a result of two substantial failures of the bedrock highwall that forms the northeastern limit of Central Pit in the Stockwork Zone. While less severe deformations have occurred in other parts of the open pit these two failures are the most significant.

The first northeast highwall failure in the Stockwork Zone occurred on July 8, 2002 and resulted in the temporary suspension of operations leading to a shortfall in 2002 production because the Stockwork Zone was rendered temporarily inaccessible. A second failure of similar magnitude occurred on July 13, 2006, in an area above the Stockwork Zone that was planned to be mined in 2006 and 2007.

Following the second ground wall movement, KGC, Golder and Centerra continued to assess the causes of the pit wall failure and developed remedial measures and long-term pit slope design criteria that would reduce the possibility of a recurrence. This work provided insight into the mechanisms of failure through a comprehensive program of structural mapping, geotechnical drilling and modelling. As a result of this work, in 2010, the northeast highwall design was

revised from a slope angle of 36 degrees to a slope angle in the order of 30 degrees. This design decreases the probability that the known structures that gave rise to the two wedge failures will undercut the reconfigured slope design (reducing the potential for another wall failure). Mining from the area has since been deferred and has concentrated on the southern part of the Central Pit to exploit the SB Zone discovered in 2005. Since 2006, the inactive highwall has been stable based on the monitoring data collected from the pit wall monitoring systems.

Mining activities have re-entered the northeast highwall area during 2018 and will continue over the coming years as part of pre-stripping and mining activities associated with cutback #20. The safety of the highwall design depends on the state of its depressurization. If the highwall is not or cannot be sufficiently depressurized and proves to be unstable at the current slope angles, the Mineral Reserves and LOM plan for this part of the Central Pit would be adversely affected. The portion of the Lysii Glacier providing meltwater to the northeast highwall was mined out in 2018 and should help to mitigate against most surface water entering the highwall.

Based on the 2014 slope design angles completed by Golder a reduction of the pit walls to generally between 26 degrees and 34 degrees has been incorporated in the open pit design. The design slope angles assume that the pit walls are depressurized, and drilling to accomplish depressurization is part of the mine plan. KGC plans to maintain an active drilling depressurization program throughout the open pit and continue with its surface dewatering efforts. Over 2016, Golder completed a review of the site dewatering and depressurization plans and provided recommendations that are considered in mine planning activities. In 2018, Golder Associates reviewed the pit wall design of cut-back#20 to be developed in the northeast wall and provided recommendations for enhancing the cutback's stability and dewatering measures.

The southern part of the Central Pit which exploits the SB Zone has undergone several revisions to its slope design angles. The slope angles of 36˚ originally specified in 2006 were revised to approximately 30 to 34 degrees for most sectors (excluding the northwest wall sector that is 26 degrees) as part of Golder's 2014 update. These revisions were required as a result of raveling and deformation of the rock slopes during previous mining activities and determined using a substantial amount of geotechnical drilling and structural interpretation work completed after 2006. The southeast wall showed the largest deformation over 2016 and 2017. Geotechnical drilling, laboratory testing, and structural mapping has been completed with focus on this sector. Advanced stability modelling has been run to optimize the wall configuration and confirm design slope angles with Golder's 2014 recommendations. Geotechnical stability modelling for the northeast highwall area has been undertaken in 2018 and will continue into 2019 to optimize the wall configuration and confirm the slope design angles with Golder's 2014 recommendations.

In 2019 mining works in cutback #19 will continue to undercut a portion of the northwest wall sector that has resulted in the pit crest being located 90 m from the Mill, assuming an overall slope angle of 26 degrees. This assumption is based on the current understanding of pore water pressures, rock mass conditions, and the structural geology interpretation in this pit sector. In early 2019, a localised wall deformation was observed in cutback #19. The deformation has occurred in a sector where it was not possible to change the inter-ramp slope angle due to the presence of upper laying major haul road. The deformation process was stopped by implementing remedial measures such as leaving 50m wide step-in at the toe of the deformation and amending pit wall configuration to recommended parameters.

The additional geotechnical information gathered to date has shown that the structural features causing slope instability dip into the pit at relatively shallow angles (more or less parallel to the pit slopes) in two major sectors (northwestern and eastern walls). The pit walls are now designed to avoid undercutting of these structures. The safety of the walls depends on the accuracy of the structural geological model, which is being continuously refined and updated, as well as the ability to depressurize water-bearing faults and structures. KGC conducts regular geotechnical site visits throughout each year to validate the structural geology model, geotechnical model assumptions, and to inspect the general behavior of the pit slopes versus long term predications.

Glacier Ice

In order to access the Mineral Reserve, KGC is required to mine glacial ice. There is uncertainty in predicting the rate at which Davidov Glacier ice mining has to be accomplished to develop the southern part of Central Pit. The volume of ice mining and the additional mining equipment required to accomplish this are therefore subject to upward revision, possibly in a substantial way. In 2014, high deformation rates of the South Arm of Davidov Glacier required the construction of a 90 m high toe buttress constructed of waste rock mined from the Central Pit to provide for safe mining below. Should ice mining not keep up with the forward ice movement, or a similar toe buttress be ineffective for managing glacier ice movements from future cutbacks, interruptions to the LOM plan with respect to mining of the SB Zone would occur, with negative implications for the mine plan and the project cash flow.

Waste Dumps

The LOM plan requires waste rock to be deposited in waste rock dumps located in the Davidov, Sarytor, and Lysii Valleys. The waste dumps are on top of permafrost, fine-grained moraine soils, with high ground ice content within the Davidov and Sarytor Valleys and to a lesser extent, the Lysii Valley. Based on performance monitoring to date of the three waste dumps, continued deformation of the waste dumps has been incorporated into the waste-dump design. However, should the dumps become sufficiently unstable, their use will have to be reduced or stopped entirely. Such circumstance would adversely impact the LOM plan and economic performance of the Kumtor Mine operation.

We constantly monitor the movement of the waste dumps and have undertaken several studies, including numerical modelling, to increase our understanding of the factors contributing to their movement. Where necessary and prudent, we have taken additional action to reduce the rates including changes in where waste rock is placed on the various waste dumps (i.e.: using a "bottom-up strategy" of waste placement, dewatering ditches, and other dewatering strategies).

Petrov Lake

Petrov Lake is a glacier lake that has formed with the retreat of Petrov Glacier and is located approximately 5 km upstream of the tailings dam. The lake has formed due to glacier meltwaters being dammed by a natural terminal moraine which is mostly frozen and likely contains buried glacier ice. Thawing of the moraine dam, to an extent that it allows for piping or overtopping of the dam, may lead to a dam breach and the uncontrolled release of lake water that can potentially erode a section of the tailings dam and damage other downstream facilities. KGC considers any damage to the tailings dam a serious threat. Climate change is considered the most likely mechanism for initiating thawing. While the risk of an uncontrolled release occurring during the life of the mining operation is considered low, this is a future event that needs to be considered for mine closure. An early warning system has been installed to determine structural changes in flow and possible acceleration in seepage through the moraine dam. The water level behind the moraine dam is being managed to an historically low level substantially reducing the possibility of an uncontrolled release of water.

Taxes

The Restated Investment Agreement establishes a comprehensive tax regime for the Kumtor Mine effective January 1, 2008 and continuing until the termination of the Restated Concession Agreement. Except for the payments set out below, the Kumtor Mine is exempt from all other present and future taxes.

Except as expressly provided in the Restated Investment Agreement, the rates, amounts and other terms of any taxes or other payments are not subject to any future change in legislation or treaty provisions which would be more burdensome to the Kumtor Mine or Centerra. The Kumtor Mine and Centerra are entitled to benefit from any generally applicable future change in legislation or treaty provisions with respect to taxes or other payments payable under (b), (g), (h), (j) and (k) below which is beneficial to any of them. To the extent any rates that are capped by the provisions of (b), (g), (h), (j) and (k) below are decreased due to a change in legislation, such rates can be increased by a future change in legislation, provided that any such increased rates from time to time shall not exceed the rates in effect on April 24, 2009.

The taxes provided for in the Restated Investment Agreement are as follows:

(a) a tax on gross revenue of 13%, payable monthly (the "**Gross Proceeds Tax**");

(b) customs administration fees at generally applicable rates, which are not to exceed those rates in effect on April 24, 2009;

(c) a contribution of 1% of gross revenue to the Issyk-Kul Oblast Development Fund (the "**Issyk-Kul Contribution**")

(d) an annual payment of 4% of gross revenue against which all capital and exploration expenditures in the Kyrgyz Republic are fully credited, with expenditures not required for credit in any particular year carried forward for credit in future years;

(e) an environmental pollution charge of $310,000 per year;

(f) a land use and access fee of $1,250,000 per quarter, against which the Gross Proceeds Tax and Issyk-Kul Contribution are credited in full;

(g) sales tax at generally applicable rates on goods and services purchased in relation to the Kumtor Mine;

(h) value added tax at generally applicable rates on goods and services purchased by KGC and KOC, except for goods and services imported in relation to the Kumtor Mine;

(i) generally applicable fees for licenses, registrations, travel visas and other fees for discrete government services, provided that such fees shall not exceed those in effect on April 24, 2009;

(j) payroll deductions for all employees subject to Kyrgyz income tax and contributions to the Social Fund of the Kyrgyz Republic in respect of employees who are Kyrgyz citizens, in each case at generally applicable rates; and

(k) excise taxes at generally applicable rates except on goods imported in relation to the Kumtor Mine.

In addition, the Restated Investment Agreement provides that the Kumtor Mine is exempt from certain other obligations, including:

(a) all withholding obligations with respect to payments to third parties, but such third parties are not exempt from the relevant taxes to which the withholding would otherwise relate, subject to the benefits provided to such third parties in any applicable international treaties;

(b) paying taxes with respect to intra-group transactions, including for services, dividends, interest and other distributions or transactions; and

(c) customs duties in relation to goods imported into the Kyrgyz Republic.

Effective June 6, 2009, a management fee fixed at $1 per ounce of gold sold, inclusive of any taxes, is payable by Centerra to Kyrgyzaltyn.

In September 2011, KGC signed a protocol with the State Tax Service pursuant to which KGC agreed to voluntarily administer withholding taxes as provided in the Kyrgyz Tax Code (as modified by applicable tax treaties) with respect to payments made by KGC to its foreign service providers who are domiciled in countries that do not have a tax treaty with the Kyrgyz Republic. In addition, KGC voluntarily agreed to pay an amount of $0.7 million in 2011, being the amount not withheld since the effective date of the Restated Investment Agreement to September 2011.

Exploration and Development

Exploration Activities

Exploration activities restarted at Kumtor Mine in 2018, a two-year 60,000 m drill program to test potential extensions of gold mineralization along the Kumtor Mine trend, with a focus on prioritizing near-mine exploration opportunities and increasing mineral resources. The program is focused within the Central, South-West and Sarytor pits and the North-East Target area. A budget of $18 million has been allocated to the program with $6.5 million for 2018 and $11.5 million budgeted for 2019.

In 2018, we spent $6.1 million on exploration activities at Kumtor Mine. A total of 24,381 m in ninety-two drill holes were completed in 2018, including 2,308 m of infill drilling in the SB zone for the Kumtor Underground Project. Exploration drilling focused on testing zones of mineralization near the surface for additional open pit resources on the north-east side of the Central Pit, at the corridor between the Central and Southwest pits, and on the flanks of the Northeast target area.

Underground Mining

Previous efforts were made from 2006-2012 to develop and ultimately mine by underground methods those high-grade portions of the SB and Stockwork Zones that fell outside of the ultimate pits of earlier Central Pit mine designs. Due to changes in the final pit design for the Central deposit that were approved in 2012, much of the underground infrastructure was consumed and accordingly, Centerra derecognized approximately $180 million in costs relating to the underground development.

No changes were made to the Kumtor Mine underground in 2018. In 2016, we reviewed our underground resource model and reinterpreted the mineralized structures and their along strike and down dip extents. We also applied a lower cut-off grade of 4.9 g/t (compared to the 6.0g/t used for resource estimates as at December 31, 2015). This led to our estimates for underground mineral resources at Kumtor Mine which remain unchanged as at the year ended 2018.

Environmental Conditions

During the financial year ending December 31, 2018, we spent approximately $5.8 million in connection with our environmental programs relating to our Kyrgyz Republic operations. If the environmental laws and regulations relating

to our operations in the Kyrgyz Republic were to change, or the enforcement of such laws and regulations were to become more rigorous, we may be required to incur additional capital and operating expenditures to comply. Such changes could have a material adverse effect on our financial position. See the section of this AIF entitled "*Risk Factors*" for further information.

The Kumtor Mine has a formal EMS in place as well as an EMAP which are designed to address the Kumtor Mine's environmental related legal requirements. The Kumtor EMS aligns with the ISO-14001 standards for determining and managing environmental aspects associated with its activities. The Kumtor EMS addresses impacts of the operation on the environment and monitors compliance with the various permits issued by the Kyrgyz authorities. The system provides scheduled monitoring, engineering controls and reporting on the following areas:

- effluent treatment plant
- mill site and mine waste dumps runoff
- tailings management facility
- acid generation potential testing and recommendations
- dust control
- spill incidents on site and off site
- hazardous materials handling
- environmental impact monitoring
- planning for site decommissioning and rehabilitation
- potable water treatment system
- sewage treatment
- landfill operation and waste inventory

The EMAP outlines Kumtor Mine's environmental and safety commitments, including the regulations applicable to the Kumtor Mine. Under the EMAP, Kumtor Mine is obligated to comply with the most stringent of the following standards on any particular environmental aspect:

- the environmental laws of the Kyrgyz Republic and the current KGC Occupational Health and Safety guidelines
- Canadian federal laws
- Saskatchewan provincial laws

In addition to internal auditing and monitoring, external audits of environmental aspects are conducted on a regular basis; the results and recommendations (if any) of which are reviewed by us and implemented where possible. Recent external audits include:

- In April 2017, European Bank for Reconstruction and Development ("**EBRD**") conducted a monitoring visit to the Kumtor Mine. This visit was in response to EBRD's monitoring commitments under our corporate credit facility with EBRD at that time and followed a monitoring and review visit by EBRD and an independent consultant in 2015. The objective of the 2017 visit was to obtain an update on operational activities at Kumtor Mine, review current environmental and social performance, and determine the implementation status of the Environmental and Social Action Plan agreed for Kumtor Mine under the credit facility in 2016.
- In March 2017, the State Agency of Environmental Protection and Forestry of the Kyrgyz Republic ("**SAEPF**") engaged the same international consultant that conducted the audits for AMEC in 2013 and 2014, to undertake an independent review of Kumtor Mine's compliance with the previous AMEC recommendations.

Each Kyrgyz enterprise with activities that have a potential negative impact on the environment must develop and maintain an ecological passport ("**Ecological Passport**") providing for the basic levels of impact on the environment, including the level of maximum allowable emission ("**MAE**") and maximum allowable discharge ("**MAD**"). The Ecological Passport is developed every five years and must be approved by the Kyrgyz Government authority responsible for environment protection (currently SAEPF).

The Ecological Passport identifies some of the permits and approvals required by Kumtor Mine for its operations, with annual permits required for MAE norms, MAD norms and water usage limits. The MAE norms and permits define the release of emissions into the air. There are two MAD norms and two permits regulating the discharge of treated effluents into surface water bodies, one to operate the tailings area treatment plant and the other to operate the sewage treatment plant. There are also water usage limits for the Kumtor Mine and for the Balykchy marshalling yard. The MAE and MAD norms and permits are designed to ensure that the water quality standards for communal use streams are met at the mixing zone in the Kumtor River just outside the mine site. Water usage limits must also be renewed on an annual basis. The Kumtor Mine has obtained its MAE and established its water usage limits for 2019. The MAD norms and permits are not required by KGC until spring, and KGC is currently in the progress of submitting designs and applications for such norms and permits.

The Ecological Passport for the Kumtor Mine was obtained in December 2017 and is valid until December 2022. Kumtor Mine's Ecological Passport for the Balykchy marshalling yard is valid until October 2019.

A number of other certificates, permits and licenses are required by various departments of the Kyrgyz Government with respect to the use of potentially toxic chemicals, transportation of dangerous goods, importing of blasting materials and sodium cyanide. All such approvals are currently valid and in good standing.

See the section of this AIF entitled "*Risk Factors*".

Emergency Response Plan and Handling of Hazardous Materials

The Kumtor Mine has an Emergency Response Plan (the "**Kumtor ERP**") and hazardous material transportation procedures. We conduct quarterly mock exercises to test different aspects of the Kumtor ERP, including response time, effective communications and the skills of the emergency response team and we have updated the Kumtor ERP to ensure notification protocols remain valid and improvements from the mock exercises are incorporated in the plan. The update remains valid and meets all Kyrgyz legal requirements and follows international standards.

The Kumtor Mine's cyanide transporation operation from the Balykchy Marsalling Yard to the Kumtor Mine was initially certified in compliance with the Cyanide Code in April 2012, recertified again in September 2015, and most recently again in December 2018.

In November 2011, and again in September 2015, the Kumtor Mine operations (with respect to transportation of cyanide) were audited against the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold. The audit was conducted by an independent consultant and on both occasions the operation was deemed to be in substantial compliance with the Code.

Decommissioning and Reclamation

We update Kumtor Mine's conceptual closure plan ("**CCP**") every three years. The CCP was last updated by an independent consultant in 2016. This approach of reviewing the CCP every three years allows for the development and adaptation of the CCP, and provides a period for testing and monitoring of several years to evaluate the various options contemplated by the CCP. The CCP will be reviewed again in 2019. The CCP will be followed by the development of a final closure plan closer to the end of mine life that will consider the results of the testing and monitoring as well as any changes to the environmental, regulatory and social environment that may have occurred over the life of the mine.

Under the Restated Investment Agreement, all immovable infrastructure items will become the property of the Kyrgyz Government at the end of the mine life. This includes roads, buildings including the mill building, accommodations and any other related facilities but not the operating machinery.

The CCP covers all aspects of the Kumtor Mine, including (but not limited to) the Central pit (which will become a lake), mill complex and surrounding area, tailings basin, stockpiles and other surface facilities. Equipment, building and other structures will be salvaged to the maximum extent possible. The data presented in the CCP indicates that the acid rock drainage potential of both waste dumps and tailings is very low and is unlikely to be a concern in the long term. The CCP makes recommendations for further data collection and monitoring of the various aspects important for the closure plan.

A trust fund has been set up for final reclamation measures. The reclamation trust fund is restricted for use and controlled by an independent trustee. As at December 31, 2018, the balance in the fund was $30.8 million. Historically, we have contributed funds annually to the reclamation trust fund based on the annual gold production in the previous year. As part of the settlement reached with the Kyrgyz Government which is pending closing, Kumtor Mine agreed, on the terms and subject to the conditions contained in the Kumtor Strategic Agreement, to increase the rate of funding of the reclamation trust fund to a minimum of $6 million per year until the fund reaches $69 million. This amount of $69 million was determined by an independent assessment of Kumtor Mine's current reclamation costs and is broadly in line with our estimated reclamation costs for the Kumtor Mine.

Community Sustainability

We endeavour to work in a responsible way to meet or exceed stakeholders' expectations. See *"Responsible Mining – Our Approach"* above.

Kumtor Strategic Agreement and Outstanding Legal and Regulatory Matters Impacting the Kumtor Mine

This section summarizes the current status of the outstanding legal and regulatory matters impacting the Kumtor Mine and the Kumtor Strategic Agreement which was entered into by Centerra and the Kyrgyz Government on September 11, 2017. The Kumtor Strategic Agreement is meant to provide a road map for the resolution of substantially all outstanding

matters affecting KGC and the Kumtor Mine; however, the conditions precedent to completion have not all been satisfied yet and the Strategic Agreement has not yet become effective.

The outstanding legal and regulatory claims affecting the Kumtor Mine date back to 2012 with the formation of the Kyrgyz Parliamentary and State Commission. A brief summary of the claims is set out below following the discussion of the Kumtor Strategic Agreement.

Kumtor Strategic Agreement

As previously disclosed, Centerra and its Kyrgyz subsidiaries (KGC and KOC) entered into the Kumtor Strategic Agreement with the Kyrgyz Government on behalf of the Kyrgyz Republic on September 11, 2017. The Kumtor Strategic Agreement includes, among other things:

- Full and final reciprocal releases and resolution of all arbitral and environmental claims, disputes, proceedings and court orders, and releases of the Company and its Kyrgyz subsidiaries from future claims covering the same subject matter as the environmental claims arising from approved mine activities;
- The termination of the Kyrgyz Republic interim court order which, among other things, restricted KGC's ability to transfer cash to Centerra. On September 4, 2017, the Bishkek Inter-District Court lifted the interim court order and, as a result, KGC transferred cash balances over and above its ordinary working capital requirements to Centerra on September 15, 2017, when the lifting of the interim court order became effective;
- An acknowledgement that there will be no restrictions on the ability of KGC to distribute funds to Centerra in the future;
- All restrictions are lifted on the free movement of KGC's employees;
- No admission on the part of Centerra or its Kyrgyz subsidiaries of: (i) any environmental wrongdoing, (ii) any non-compliance with Kyrgyz law or the Kumtor Project Agreements (as defined below) or (iii) any pre-existing obligation to make additional environmental or Reclamation Trust Fund payments or environmental remediation efforts;
- The existing 2009 agreements governing the Kumtor Mine (the "**Kumtor Project Agreements**") remain in full force and effect, including the tax and fiscal regime thereunder;
- No changes to current or planned operations at the Kumtor Mine are required;
- KGC has agreed to make a one-time lump sum payment totaling US$57 million to a new, government-administered Nature Development Fund (US$50 million) and to a new, government-administered Cancer Care Support Fund (US$7 million) and within 12 months of closing make a further one-time payment of US$3 million to the Cancer Care Support Fund;
- Annual payments of US$2.7 million to the new Nature Development Fund, conditional on the Kyrgyz Government continuing to comply with its obligations under the Kumtor Strategic Agreement;
- KGC has agreed to accelerate its annual payments to Kumtor Mine's Reclamation Trust Fund in the amount of US$6 million a year until the total amount contributed by KGC reaches the total estimated reclamation cost for the Kumtor Mine (representing the independent assessment of Kumtor Mine's current reclamation costs) subject to a minimum total reclamation cost of US$69 million (which is broadly in line with KGC's current estimated reclamation cost for the Kumtor Mine); and
- KGC would consider, together with the Kyrgyz Government, other potential investment opportunities in the Kyrgyz Republic and at the Kumtor Mine.

The releases of liability and outstanding payments are subject to a range of initial conditions precedent designed to protect Centerra, KGC and KOC, including (i) the approval by the Kyrgyz Government of various outstanding items, including the Kumtor Mine LOM plan, official reserves report and the tailings dam expansion, (ii) compliance by the Kyrgyz Government with its obligations under the Kumtor Project Agreements, (iii) continued operation of the Kumtor Mine by KGC and KOC with all necessary permits, (iv) no expropriatory action having been taken by the Kyrgyz Government, and (v) termination of the environmental disputes and the civil and criminal proceedings instigated by the Kyrgyz General Prosecutor's Office on terms satisfactory to Centerra. The Kyrgyz Government approvals noted in (i) above have all been obtained. In addition, Kyrgyz Republic regulator authorities have continued to issue normal course permits since 2017 in order to allow for the continued operations of the Kumtor Mine.

The Company understands that certain Kyrgyz Government officials have made public statements suggesting a desire to enhance the terms of the Kumtor Strategic Agreement. The Company is continuing to work closely with the Kyrgyz Government to expeditiously satisfy the remaining conditions precedent to the Kumtor Strategic Agreement, including the termination of certain legal proceedings. The initial longstop date for the satisfaction of all of the conditions precedent to completion of the Kumtor Strategic Agreement has been extended by agreement of all the parties to May 31, 2019.

Kyrgyz Parliamentary and State Commissions

Formation of Parliamentary Commission

On February 15, 2012, the Kyrgyz Parliament established an interim parliamentary commission (the "**Parliamentary Commission**") to inspect and review: (i) Kumtor Mine's compliance with Kyrgyz operational and environmental laws, as well as community standards, and (ii) state regulation over the Kumtor Mine's activities.

The Parliamentary Commission issued a report (defined as the "**Parliamentary Commission Report**") on June 18, 2012 and made a number of assertions regarding the operation of the Kumtor Mine, including:

- challenging the legal validity of the Kumtor Project Agreements;
- alleging non-compliance by Kumtor Mine with Kyrgyz environmental and other laws, particularly at Kumtor Mine's tailings facility, the Davidov glacier and the Sarychat-Ertash State Reserve which is in the vicinity of the Kumtor Mine. The Parliamentary Commission alleged that the violations have resulted in substantial monetary damages; and
- alleging inefficient or improper management of Kumtor Mine, particularly with respect to customs practices, tax and Social Fund payments, operational decisions, procurement practices and mill efficiencies (gold recoveries), the latter of which is alleged by the Parliamentary Commission to result in very substantial losses.

The Parliamentary Commission proposed to the Kyrgyz Parliament a form of decree (the "**Draft Decree**") which called for the cancellation of the Kumtor Project Agreements and the creation of a new state-owned Kyrgyz Republic entity to assume control over Kumtor Mine. If the Draft Decree had been approved and given full effect by the Kyrgyz Government, it would have, in substance, resulted in the nationalization of the Kumtor Mine.

When the Kyrgyz Parliament met in late June 2012 to consider the Parliamentary Commission Report, it voted against the Draft Decree and instead adopted an alternative resolution (Resolution 2117-V) that took note of the Parliamentary Commission Report and declared the Kumtor Project Agreements to be contrary to the interests of the Kyrgyz Republic. Resolution 2117-V also: (i) called for the formation of a State Commission to assess the environmental, industrial and social damage caused by the Kumtor Mine and to initiate the renegotiation of the Kumtor Project Agreements in order to protect economic and environmental interests; (ii) called for the cancellation of various government decrees and orders, including Kyrgyz Government Decree #168 dated March 25, 2010 which provided land use rights over the surface of the Kumtor Mine concession area; and (iii) recommended that the State Agency for Geology and Mineral Resources (now the State Committee for Industry, Energy and Subsoil Use of the Kyrgyz Republic) cancel certain licenses granted to Kumtor Mine, including the exploration license for the Karasay and Koendy licensed area.

Formation of the State Commission

In response to Resolution 2117-V, the Kyrgyz Government established a state commission (the "**State Commission**") for the purpose of reviewing the Parliamentary Commission Report as well as inspecting and reviewing Kumtor Mine's compliance with Kyrgyz operational and environmental laws and community standards. The State Commission was comprised of three working groups with responsibility for environmental and mining matters, legal matters (including a review of all prior and current agreements relating to the Kumtor Mine) and socio-economic matters (including a review of financial, taxation, procurement and employment related issues).

In December 2012, the State Commission issued its final report (the "**State Commission Report**"), following five months of study and several visits to the Kumtor Mine, and over 120 written requests for information on a wide variety of matters going back to 1993 when the original agreement regarding the Kumtor Mine was executed.

The State Commission Report included a large number of allegations in regard to prior transactions relating to the Kumtor Mine and the mine's operations and management, including the following:

(i) that the Kumtor Mine violated Kyrgyz Republic legislation relating to corporate, environment, and subsoil legislation at various times since project activities began in 1993, including allegations relating to the tender process for the deposit in 1993, the approval process for the initial development of the Kumtor Mine, the

placing of waste rock on glaciers, and causing environmental damage to water and land resources in the area of the Kumtor Mine;

(ii) that Kumtor Mine management is ineffective;

(iii) that incorrect valuation of assets occurred during the 2003/2004 restructuring process, which purportedly led to significant losses sustained by the Kyrgyz Republic; and

(iv) that the Kumtor Project Agreements executed in 2009 were improperly approved and violated the Kyrgyz Republic constitution.

The State Commission Report recommended that the Kyrgyz Government open negotiations of the arrangements under which the Kumtor Mine is governed. The State Commission Report's recommendations included requiring Kumtor Mine to accept the current tax regime and pay higher environmental charges; changes in the management of Kumtor Mine and Centerra including greater representation by Kyrgyzaltyn on the Board and greater representation of Kyrgyz citizens in management of the Kumtor Mine; and additional charges and fees to be paid by the Kumtor Mine including for land use, and for those items raised by SIETS (as discussed below). The State Commission Report also recommended various actions to be taken by Kyrgyzaltyn, by the Kyrgyz Government (including revisions to Kyrgyz law) and the Kyrgyz Republic General Prosecutor's Office with respect to investigating the personal liability of parties who were involved in negotiating previous agreements governing the Kumtor Mine for violations of Kyrgyz legislation and for inflicting losses to the Kyrgyz Republic's interests. The State Commission recommended the establishment of a working group to give effect to the recommendations, in particular the opening of negotiations with Centerra and Kumtor Mine.

We received the final copy of the State Commission Report on January 18, 2013. We believe that the conclusions and claims in the State Commission Report are exaggerated or without merit. While we have responded in detail in writing to such conclusions and claims, we also make the following general responses:

(i) We operate in accordance with Kyrgyz and international standards, and this has been proven over the years in systematic audits conducted by Kyrgyz and international experts. In particular, in August 2012, the Safety, Health and Environment Committee of our Board (now the Sustainable Operations Committee) engaged an independent, internationally recognized consultant to carry out a due diligence review of Kumtor Mine's performance on environmental matters. The report issued in October 2012 concluded that no major or materially significant environmental issues were identified.

(ii) The Kumtor Project Agreements provide for a full regime of all payments to the Kyrgyz Government including a comprehensive revenue-based tax and specified fees and payments for other matters including environmental charges. The Kumtor Project Agreements were negotiated at arm's length, and reviewed and approved by the Kyrgyz Government and Parliament. The agreements were the subject of a positive decision by the Kyrgyz Constitutional Court and a legal opinion of the Kyrgyz Republic Ministry of Justice. We believe these agreements are legal, valid and enforceable obligations of the parties.

(iii) Centerra, KGC, KOC and the Kyrgyz Government, among other parties, entered into a release agreement (the "**Release Agreement**") on June 6, 2009, as part of Kumtor Project Agreements. The Release Agreement provides that parties agreed to release each other from any claims, including any legal, tax and fiscal matters, in respect of any matter arising or existing prior to June 6, 2009, whether such matters were known or unknown as of June 6, 2009, subject to certain exemptions which are not applicable in the circumstances. Accordingly, the conclusions and recommendations relating to alleged wrongdoings prior to June 6, 2009, including matters relating to the 1993 Master Agreement and the 2003 Restructuring Agreement have been released by all parties.

State Commission Report Received by Parliament

In connection with its consideration of the State Commission Report, the Kyrgyz Parliament adopted decree #2805-V (Decree 2805-V) on February 21, 2013 regarding the Kumtor Mine. Decree 2805-V recommended that the Kyrgyz Government ensure the continuous operation of the Kumtor Mine, and within three months of the date of Decree 2805-V, conduct negotiations with Centerra with a view to revising the Kumtor Project Agreements to return to conditions that existed prior to the restructuring of the project in 2003, but subject to the application of current Kyrgyz legislation, and to enter into new agreements on these terms.

Decree 2805-V provided that if the parties could not agree on mutually acceptable terms within such three-month time period, the Kyrgyz Government was instructed by the Parliament to (among other things) take certain actions with respect to the Kumtor Mine, including to:

(i) invalidate the legislation enacted by Parliament in 2009 approving the Kumtor Project Agreements, and to unilaterally terminate the Kumtor Project Agreements;

(ii) invalidate the legislation enacted by Parliament in 2009 amending the Kyrgyz Republic Tax Code (which provides for the tax regime set out in the Kumtor Project Agreements);

(iii) confiscate land plots in connection with the adoption of Kyrgyz Government Decree, on abolition of the Government Decree on allocation of lands to KGC dated March 25, 2010, approved by the Kyrgyz Government Decree dated July 5, 2012. (This March 25, 2010 Decree #168 granted Kumtor surface rights in relation to the Kumtor Mine);

(iv) authorize SIETS to take measures to have Kumtor pay fines and other charges for violations of environmental, mining and geological and subsoil legislation. *(See below "Environmental Claims".)*

Decree 2805-V also requests that the Kyrgyz Government develop and submit to the Parliament for consideration certain matters, including the following:

(i) draft amendments to existing legislation or draft new legislation relating to biosphere territories, the protection and preservation of glaciers, and prohibiting the placement of pollutants on glaciers;

(ii) provide for the obligation of KGC to develop a technical plan on reclamation of the Kumtor Mine in accordance with Kyrgyz legislation and to determine funding for reclamation based on such plan and to enforce this obligation;

(iii) for the entire period of the Kumtor Mine, to invoice KGC for the use of water and make KGC pay for changes in the glacial regime and disposal of waste; and

(iv) when negotiating with Centerra and KOC, to require that goods and services be purchased for the Kumtor Mine in the domestic market.

Discussions to Resolve Outstanding Matters

Following extensive negotiations between Centerra, the Kyrgyz Republic and Kyrgyzaltyn in 2013, we announced on September 9, 2013 that we had entered into a non-binding memorandum of understanding (the "**MOU**") with the Kyrgyz Government and Kyrgyzaltyn in connection with a potential restructuring transaction under which Kyrgyzaltyn would receive a 50% interest in a joint venture company that would own the Kumtor Mine in exchange for its equity interest in Centerra and $100 million which would be provided to us by way of an adjustment to joint venture distributions otherwise due to Kyrgyzaltyn. The Kyrgyz Government submitted the MOU to the Kyrgyz Parliament. The Kyrgyz Parliament passed a decree on October 23, 2013 which rejected the MOU and instructed the Kyrgyz Government to continue negotiations with us with a view to, among other things, increasing the Kyrgyz Republic shareholding in the joint venture to no less than 67%.

Following further discussions, we entered into a non-binding heads of agreement on December 24, 2013 which superseded the MOU, and was subsequently re-signed on January 18, 2014 after making non-material changes (the "**HOA**"). The HOA retained most of the material terms of the MOU, including that Kyrgyzaltyn would receive a 50% interest in the joint venture company that would own the Kumtor Mine in exchange for its equity interest in Centerra.

The parties negotiated at length throughout 2014 and 2015 to reach definitive agreements to reflect the material terms in the HOA. Unfortunately, the parties were not able to agree on all outstanding matters and the Kyrgyz Government announced in December 2015 that it was withdrawing from the HOA.

We continued discussions with the Kyrgyz Government from 2016 until a final resolution was agreed upon in the form of the Kumtor Strategic Agreement. As noted earlier, the Kumtor Strategic Agreement is subject to a range of initial conditions precedent which are still being satisfied. Certain of the conditions precedent have been satisfied, including the granting of certain regulatory approvals required for the operation of the Kumtor Mine, the termination of civil and criminal proceedings, and the issuance of a new land use certificate. With respect to the conditions precedent that are still outstanding, we continue to work closely with the Kyrgyz Government. The longstop date for the satisfaction of all of the conditions precedent to completion of the Kumtor Strategic Agreement has been extended numerous times, most recently to May 31, 2019.

Environmental Claims

As described above, KGC was subject to various Kyrgyz court proceedings commenced by SIETS and SAEPF alleging that KGC did not comply with applicable Kyrgyz environmental legislation. As noted above, the Kumtor Strategic

Agreement provides a pathway for the resolution of all such claims. For completeness, we set out below a brief description of the claims.

Claims Commenced by SIETS

In December 2012, we received four claims from SIETS relating to alleged environmental damages at the Kumtor Mine. The claims are for an aggregate amount of approximately $150 million (at the then exchange rate) and include:

- a claim for approximately $142 million for alleged damages in relation to the placement on waste dumps of waste rock from mining operations (2000 to 2011).
- a claim for approximately $4 million for use of water resources for the period of 2000 to 2011.
- a claim for approximately $0.03 million for unaccounted industrial and household waste.
- a claim for approximately $2.3 million for alleged damages caused to land resources at the time of initial construction of Kumtor Mine.

The claims reference the review of the Kumtor Mine carried out by the environmental and technical working group of the State Commission. We believed the claims were exaggerated or without merit.

Centerra and KGC disputed these environmental claims through 2012 and 2013. In 2013, SIETS commenced four separate court proceedings in the Kyrgyz Republic seeking to enforce their environmental claims. At such hearings before the Kyrgyz courts, KGC argued (among other things) that the court lacked jurisdiction to hear the dispute due to the existence of an arbitration provision in the Kumtor Project Agreements.

From May 24 to June 3, 2016, the Bishkek Inter-District Court in the Kyrgyz Republic issued four decisions in relation to these environmental claims. The court orders total approximately 7 billion Kyrgyz soms (approximately $102 million, using an exchange rate of 69 KgSoms to $1.00). We repeatedly denied these allegations and appealed all decisions.

On March 27, 2018, and as contemplated by the Kumtor Strategic Agreement, these environmental claims commenced by Kyrgyz regulatory agencies in the Kyrgyz courts were terminated/abandoned by the relevant Kyrgyz regulatory authorities. However, in April 2018, SIETS successfully appealed the decisions to terminate these claims and the claims have been returned to the court of first instance for further consideration. Despite this, the Company expects these claims to be resolved in connection with the Kumtor Strategic Agreement.

Claim by the Kyrgyz State Agency for Environmental Protection and Forestry

On February 21, 2013, we announced the receipt of a claim from SAEPF for the amount of approximately $315 million (at then current exchange rates) for alleged damage in relation to waste placed in the TMF, waste rock dumps, and for the generation, management and treatment of other types of wastes. The claim covers the period from 1996 to 2011.

Despite our efforts to draw the court's attention to the arbitration provisions in the Restated Investment Agreement, the Inter-district Court rejected our appeal to dismiss the claim and, on June 3, 2016 the Interdistrict Court granted an interim order in the claim which prohibited KOC and KGC from taking any actions relating to certain financial transactions including, transferring property or assets, declaring or paying dividends, pledging assets or making loans (previously defined as the "**KR Interim Court Order**").

On September 4, 2017, the Bishkek Inter-District Court terminated this claim made by SAEPF and lifted the KR Interim Court Order. As a result, KGC transferred cash balances over and above its ordinary working capital requirements to Centerra on September 15, 2017, when the lifting of the interim court order became effective.

On September 4, 2017, the Bishkek Inter-District Court also terminated a claim made by the Chui-Bishkek-Talas Local Fund of Nature Protection and Forestry Development of SAEPF which sought compensation for alleged environmental pollution in the amount of 40,340,819 Kyrgyzstani soms (approximately $580,000 based on the exchange rate of 69.6105 Kyrgyz soms per US$1.00).

Other Claims and Proceedings in the Kyrgyz Republic

Criminal Investigation into Environmental Matters

KGC is also aware of an outstanding criminal investigation by the General Prosecutor's Office of the Kyrgyz Republic ("**GPO**") which concerns the same subject matter as the SIETS claims described above. The Company expects that this investigation will be terminated in connection with the Kumtor Strategic Agreement.

Land Use Claim

On November 11, 2013, KOC received a claim from the Kyrgyz Republic GPO requesting the Inter-District Court of the Issyk-Kul Province invalidate its land use certificate and seize certain lands within Kumtor Mine's concession area. We disputed these purported invalidation and believe that our land use rights continue. On August 28, 2017, the Bishkek Inter-District Court terminated the proceeding commenced by the GPO in respect of Kumtor Mine's land use rights over the Kumtor Mine concession area.

The Company received new land use certificates on January 24, 2019.

Kyrgyz State Tax Orders

In August 2018, KGC commenced a claim in the Kyrgyz courts (refiled on September 26, 2018) seeking to invalidate orders of the Kyrgyz Republic State Tax Service which reassessed taxes (including sanctions and penalties) owing from KGC for the period from 2016 to 2017 in the amount of 1,377,709,739.44 Kyrgyz Soms (approximately $20 million), primarily in relation to the alleged failure to pay taxes on high altitude premiums paid to employees at the Kumtor Mine. The Kyrgyz court held a hearing in December 2018 and satisfied KGC's claim to invalidate the orders. This court decision came into effect on January 10, 2019 after the customary appeal period expired.

2013 KGC Dividend Civil and Criminal Investigation

On June 3, 2016, the Inter-District Court renewed a claim previously commenced by the GPO seeking to unwind the $200 million dividend paid by KGC to Centerra in December 2013 (the "**2013 Dividend**"). On September 14, 2017, the Bishkek Inter-District Court determined to leave the claim without review and, accordingly, the claim has been terminated.

On March 20, 2018, and as contemplated by the Kumtor Strategic Agreement, we received notification that the GPO terminated a criminal investigation into executives of the Company and KGC relating to the 2013 Dividend.

Criminal Proceedings Against Unnamed KGC Managers

On May 30, 2016, a criminal case was opened by the GPO against unnamed KGC managers alleging that such managers engaged in transactions that deprived KGC of its assets or otherwise abused their authority, causing damage to the Kyrgyz Republic. Specifically, the case appears to be focused on the reasonableness of certain of KGC's commercial transactions and in particular, the purchase of goods and supplies in the normal course of its business operations and the expenses relating to the relocation of the Kumtor Mine's camp in 2014 and 2015. Further to such investigation, the GPO has carried out searches of KGC's offices and seized documents and records. We strongly disputed the allegation that any such commercial transactions or the actions of KGC managers were in any way improper.

On March 20, 2018, and as contemplated by the Kumtor Strategic Agreement, we received notification that the GPO had terminated its criminal investigation against these unnamed KGC managers.

KGC Employee Movement Restrictions

In connection with certain of the foregoing criminal investigations, restrictions were imposed on certain KGC managers and employees, which prohibited them from leaving the Kyrgyz Republic. We understand that all such movement restrictions have now been lifted.

GPO Review of Kumtor Project Agreements

On June 14, 2016, according to reports in the Kyrgyz Republic, the Kyrgyz Republic President instructed the GPO to investigate the legality of the agreements relating to the Kumtor Mine which were entered into in 2003, 2004 and 2009. The 2009 Restated Investment Agreement governing the Kumtor Mine which was entered into in 2009 superseded entirely the 2003 and 2004 agreements. The 2009 Restated Investment Agreement was negotiated with the Kyrgyz Republic government, Kyrgyzaltyn JSC and their international advisers, and approved by all relevant Kyrgyz Republic state authorities, including the Kyrgyz Republic Parliament and any disputes under the 2009 Restated Investment Agreement are subject to resolution by international arbitration. The Company understands that this investigation has been closed with respect to certain individuals.

Criminal Charges Regarding 2016 Casualty at Kumtor Mill

On June 16, 2016, the Investigator of the Jety-Oguz District Department of Interior Affairs initiated criminal proceedings against two KGC managers in relation to the previously disclosed death of a KGC employee due to an industrial accident which occurred in January 2016. On July 11, 2017, the criminal proceedings were dismissed by the Kyrgyz courts but were later sent for new consideration by the courts upon the request of the deceased's family. On August 17, 2018,

the criminal proceedings were terminated by Kyrgyz courts due to a settlement being reached with the deceased family, as permitted under Kyrgyz law.

International Arbitration Proceedings

We commenced an arbitration proceeding against the Kyrgyz Republic and Kyrgyzaltyn on July 12, 2016 in relation with certain ongoing disputes relating to the Kumtor Mine and filed a Statement of Claim on February 23, 2017. The Kumtor Strategic Agreement provides for the termination of the arbitration proceeding.

In connection with the Strategic Agreement, the arbitration previously commenced by Centerra, KGC and KOC against the Kyrgyz Government and Kyrgyzaltyn has been suspended until May 31, 2019. During the suspension, the parties will work towards completing the Strategic Agreement and the resolution of all outstanding matters affecting the Kumtor Mine.

On January 12, 2017, Centerra filed with the PCA a request for partial award, or in the alternative, interim measures, against the Kyrgyz Republic. The Company is seeking an award ordering that the Kyrgyz Republic withdraw or stay (suspend) its claims relating to previously disclosed environmental, dividend and land use claims, and related decisions and court orders. On July 19, 2017, we announced that the PCA issued an order which provided certain interim relief to Centerra. Specifically the PCA ordered that the Kyrgyz Republic was to provide 30 days' prior notice to the arbitrator and Centerra in the event of resumption of the claims brought by Kyrgyz Government entities in Kyrgyz courts relating to alleged environmental harm, dividends and land use, in order to allow Centerra to seek appropriate relief from the arbitrator; (ii) directs the Kyrgyz Republic to give immediate notice to the arbitrator and Centerra if any procedural action is taken in the Kyrgyz court proceedings; and (iii) orders the Kyrgyz Republic to use its best efforts to ensure that public officials, authorities, agencies, and instrumentalities of the Kyrgyz Republic comply with her decision. In addition, the arbitrator found that Centerra had made out both (i) a prima facie case for the arbitrator to take jurisdiction over the arbitration proceeding; and (ii) a prima facie case on the merits of the case. Such findings relating to jurisdiction and merits support Centerra's long-standing view that the Kyrgyz court proceedings are disputes that should be brought in international arbitration and may not be brought before the courts of the Kyrgyz Republic.

Under Centerra's Restated Investment Agreement with the Kyrgyz Republic dated as of June 6, 2009, the arbitration will be determined by a single arbitrator and conducted under UNCITRAL Arbitration Rules in Stockholm, Sweden. Disputes arising out of the 2009 Restated Investment Agreement will be governed by the law of the State of New York, USA and the conduct and operations of the parties will be governed by the 2009 Restated Investment Agreement, the 2009 Restated Concession Agreement and the laws of the Kyrgyz Republic.

Even if the Company receives an arbitral award in its favour against the Kyrgyz Republic and/or Kyrgyzaltyn, there are no assurances that it will be recognized by the Kyrgyz Republic or enforced in the Kyrgyz Republic. Accordingly, the Company may be obligated to pay part of or the full amounts of, among others, the environmental claims regardless of the action taken by the arbitrator. The Company does not have insurance or litigation reserves to cover these costs. If the Company were obligated to pay these amounts, it would have a material adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Management's Assessment

As noted above, the Kumtor Strategic Agreement contained no admission on the part of Centerra or its Kyrgyz subsidiaries of: (i) any environmental wrongdoing, (ii) any non-compliance with Kyrgyz law or the Kumtor Project Agreements or (iii) any pre-existing obligation to make additional environmental or Reclamation Trust Fund payments or environmental remediation efforts.

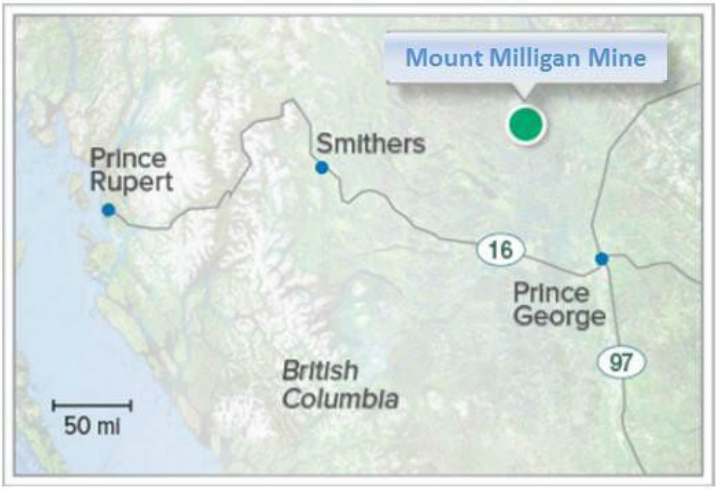
While the Kumtor Strategic Agreement provides a pathway for the resolution of substantially all outstanding matters affecting the Kumtor Mine, there are no assurances that all of the conditions precedent to the completion of the settlement contained in the Kumtor Strategic Agreement will be satisfied. If the settlement contained in the Kumtor Strategic Agreement is not completed, there are no assurances that (i) the Company will be able to successfully resolve any or all of the outstanding matters affecting the Kumtor Mine or that any future discussions between the Kyrgyz Government and Centerra will result in a mutually acceptable resolution; or (ii) the Kyrgyz Government and/or Parliament will not take actions that are inconsistent with the Kyrgyz Government's obligations under the Kumtor Strategic Agreement or Kumtor Project Agreements, including adopting a law "denouncing" or purporting to cancel or invalidate the Kumtor Project Agreements or laws enacted in relation thereto which have the effect of nationalization of the Kumtor Mine.

The inability to successfully resolve all such matters, whether through the Kumtor Strategic Agreement or otherwise, could lead to suspension of operations of the Kumtor Mine and would have a material adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Technical Report

The Kumtor Technical Report, with an effective date of December 31, 2014 was filed on March 20, 2015 on www.sedar.com.

Mount Milligan Mine



Quick Facts

Centerra acquired the Mount Milligan Mine in October 2016.

The Mount Milligan Mine has been in commercial production since 2014. To date, it has produced approximately 1 million oz of gold and 306 million lbs of copper.

Location	British Columbia, Canada
Ownership	100%
Business Structure	Our wholly-owned subsidiary, Centerra B.C. Holdings Inc., directly owns 100% of Thompson Creek Metals Company Inc., the holder of the rights to the Mount Milligan Mine.
End Product	Copper-gold concentrate
Mine Type	Open pit
Estimated Mineral Reserves (as at December 31, 2018) See "*Mount Milligan Streaming Arrangement*" below.	Gold 4,736 koz of contained gold (proven and probable) average gold grade – 0.3 g/t tonnage – 447,562 k tonnes Copper 1,836 Mlbs of contained copper (proven and probable) average copper grade – 0.186% tonnage – 447,562 k tonnes
Estimated Mineral Resources (as at December 31, 2018) See "*Mount Milligan Streaming Arrangement*" below. Mineral resources are in addition to reserves. Mineral resources do not have demonstrated economic viability.	Gold 2,722 k oz of contained gold (measured and indicated) average grade – 0.2 g/t tonnage – 342,233 k tonnes Copper 1,028 M lbs of contained copper (measured and indicated) average copper grade – 0.136% tonnage – 342,233 k tonnes
Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that	Gold 411 k oz contained gold (inferred) average grade – 0.3 g/t tonnage – 40,984 k tonnes

all or part of the inferred resources will ever be upgraded to a higher category.	Copper 115 M lbs of contained copper (inferred) average copper grade – 0.127% tonnage – 40,984 k tonnes
Processing Method	Crushing, grinding, flotation, gravity circuit
2018 Production	194,993 oz of payable gold production 47.1 million pounds of payable copper
Mount Milligan Streaming Arrangement	The Mount Milligan Mine in Canada is subject to a streaming arrangement whereby Royal Gold is entitled to receive 35% of the gold produced and 18.75% of the copper production. Royal Gold will pay Centerra $435 per ounce of gold delivered and will pay 15% of the spot price per metric tonne of copper delivered.
Employees	507

History

Limited exploration activity on Mount Milligan was first recorded in 1937. In 1984, prospector Richard Haslinger and BP Resources Canada Limited located claims on the site. In 1986, Lincoln Resources Inc. ("**Lincoln**") optioned the claims and in 1987 completed a diamond drilling program that led to the discovery of significant copper-gold mineralization. In the late 1980s, Lincoln reorganized, amalgamated with Continental Gold Corp. ("**Continental**") and continued ongoing drilling in a joint-venture with BP Resources.

In 1991, Placer Development Ltd. (which became Placer Dome Inc.) ("**Placer**") acquired Lincoln's interest in the Mount Milligan property, resumed exploration drilling, completed a pre-feasibility study and applied for provincial and federal approvals to develop the project. These approvals expired in 2003.

Barrick Gold Corporation purchased Placer in 2006 and sold its Canadian assets to Goldcorp Inc., which then in turn sold its interest in the Mount Milligan Mine to Atlas Cromwell. Atlas Cromwell then changed its name to Terrane Metals Corp. ("**Terrane**") and initiated a comprehensive work program.

In October 2010, Thompson Creek acquired Terrane and the Mount Milligan Mine.

On February 18, 2014, the Mount Milligan Mine reached commercial production, which is defined as operation of the mill at 60% of design capacity mill throughput for 30 days.

We acquired the Mount Milligan Mine effective October 20, 2016 through the acquisition of all the issued and outstanding shares of Thompson Creek. The total consideration paid for the acquisition was $1.03 billion. In addition to the Mount Milligan Mine, we also acquired interests in several molybdenum assets held by Thompson Creek. As part of the acquisition, Terrane was amalgamated with Thompson Creek effective October 18, 2016.

Project Description and Location

The Mount Milligan Mine is a conventional truck-shovel open-pit copper and gold mine and concentrator. The copper flotation processing plant has a nominal throughput rate of 62,500 tpd. The Mount Milligan Mine is currently permitted by the Province of British Columbia to operate at an average of 60,000 tpd over a calendar year.

The Mount Milligan Mine is located within the Omenica Mining Division in North Central British Columbia, Canada, approximately 155 km northwest of Prince George (population approximately 72,000), 86 km north of Fort St. James (population approximately 1,900) and 95 km west of Mackenzie (population approximately 5,200). All distances are by air.

The Mount Milligan Mine includes 109 claims and one mining lease with a combined area of 51,078.3 ha. The single mining lease expires on September 9, 2029 and requires a lease payment of approximately $102,000, due annually on September 9. Mineral claims are subject to exploration expenditure obligations, or we may choose to pay annual fees to the Province of British Columbia in lieu of exploration expenditures. All mineral claims are in good standing with expiry dates from 2019 to 2020. We expect to renew such mineral claims in the ordinary course.

A 2% net smelter return royalty is payable to a previous owner of the property, H.R.S. Resources Corp. (successor in interest to Richard Haslinger), which royalty payments commenced in 2016, the third year of the Mount Milligan Mine's production.

We have also agreed to make certain payments to the McLeod Lake Indian Band and Nak'azdli Whut'en band over the life of the mine. The terms of the agreements under which we make these payments are confidential.

As described herein, we have entered into the Mount Milligan Streaming Arrangement with Royal Gold which provides that 35% of the gold and 18.75% of the copper production at the Mount Milligan Mine will be sold to Royal Gold and that Royal Gold will pay $435 per ounce of gold delivered and will pay 15% of the spot price per metric tonne of copper delivered.

Accessibility, Climate, Local Resources, Infrastructure and Physiology

The Mount Milligan Mine is accessible by commercial air carrier to Prince George, British Columbia, then by vehicle from the east via Mackenzie on the Finlay Philip Forest Service Road and the North Philip Forest Service Road, and from the west via Fort St. James on the North Road and Rainbow Forest Service Road. Road travel to the Mount Milligan Mine is 770 km from Prince Rupert and 253 km from Prince George. The communities of Mackenzie and Fort St. James are within daily commuting distance of the Mount Milligan Mine, and both of these communities are serviced by rail. The infrastructure at the Mount Milligan Mine includes a concentrator, a TSF and reclaim water ponds, an administrative building and change house, a truck shop/warehouse, a permanent operations residence, a first aid station, an emergency vehicle storage, a laboratory and sewage and water treatment facilities. The power supply is provided by B.C. Hydro via a 91 km hydroelectric power line. Concentrate is transported by truck from the project site to Mackenzie, transferred onto railcars of the Canadian National Railway to existing port storage facilities of Vancouver Wharves in North Vancouver and loaded as lots into bulk ore carriers. Concentrate is then shipped to customers via ocean transport.

Geological Setting

The Mount Milligan Mine is within Quesnel Terrane, part of the Intermontane Belt, a composite of low metamorphic grade magmatic arc segments of mixed oceanic and continental affinities, and oceanic plates, which accreted onto North America in the Early Jurassic Period. The Mesozoic phase of the Quesnel Terrane is characterized by a Late Triassic to Early Jurassic magmatic arc complex that formed along or near the western North American continental margin. To the east, this complex contacts Proterozoic and Paleozoic carbonates and siliciclastics of the Cassiar platform, representing part of the ancestral North American continental margin (miogeocline). In places, the Quesnel terrane and Cassiar platform are separated by an intervening assemblage of Late Paleozoic oceanic rocks assigned to Slide Mountain Terrane. The boundary between the Quesnel terrane and Cassiar platform is a complex structural zone that includes late Early Jurassic east-directed thrust faults that juxtapose Quesnel Terrane above Cassiar platform. These east-directed faults and related folds are locally overprinted by somewhat younger west-directed structures that reverse this stacking order, as well as by dextral strike-slip and normal faults that formed in Cretaceous and early Tertiary time.

Exploration

In 2011, a 5,590 m core drilling program was completed to follow-up previous holes drilled into the footwall of the WBX and other stocks, where potential copper-gold mineralization was indicated at depth. A total of eight holes were drilled, testing primarily for down-faulted blocks of mineralized rock below the western portion of the current deposit and pit limits. An additional 867 m of core was drilled in ten holes to provide new samples for metallurgical test work.

In 2014, exploration work was conducted on the mining claims and consisted of soil sampling, geological mapping, ground geophysical surveying (induced Polarization and magnetics) along with detailed follow-up mapping.

In 2015, a 1,786 m core drilling program was completed to follow-up coincident soil geochemical, IP, and magnetic anomalies targeted from previous exploration work northwest of the main WBX deposit. A total of five holes were drilled.

In 2016, a 1,795 m, four hole continuation drill program was carried out.

In 2017, geometallurgical and near-pit infill and expansion drilling programs were completed (see "*Drilling*" section below for more detail). Additionally, a ground geophysics program was conducted from August to November on the Fugro-Rain target area (south of the mine lease) and KC target area (east of the mine lease) comprising 72 line-km of brushed lines, 67.6 line-km IP survey (23 lines) at 400 m spacing, and 309 line-km of magnetic survey at 100 m spacing.

In 2018, drilling included, (i) a 51-hole, 18,656 m near-pit infill and expansion drilling program in two phases, (ii) a 12-hole, 6668 m brownfield exploration drilling program west of the ultimate pit boundary and within the mine lease, and (iii) a 13-hole, 5616 m greenfield exploration drilling program outside of the mine lease to the north, west and south. See "*Drilling*" section below for more details. In addition, a 15.5 line-km IP geophysical survey (six lines) was completed

in May-June in the KC target area east of the Tailings Storage Facility. Finally, a five-hole (567 m) Phase-1 scout drilling program for groundwater exploration east and north of the TSF was completed in December. This followed up results of NMR and TEM geophysical surveys conducted between August and November.

Mineralization

the Mount Milligan Mine is a near-surface, silica-saturated alkalic porphyry Au-Cu deposit located in the Quesnel volcanic arc terrane of northcentral British Columbia, Canada. The deposit is hosted by mafic-intermediate volcanic and pyroclastic rocks of the Takla Group and by Early Jurassic monzonite porphyry stocks. It is a ~2.0 x 1.5 km orebody that dips moderately west and extends to vertical depth greater than 500 m. It consists of two principal zones, the Main Zone and Southern Star Zone. The Main Zone includes four contiguous sub-zones: MBX, WBX, DWBX and 66, all of which are spatially associated with the MBX composite monzonite stock and a sheet intrusion called the Rainbow Dyke. The Southern Star Zone is centered on a composite monzonite stock of the same name and lies about a kilometre south of the Main Zone. Between the Main Zone and SS Zone is the recently identified Saddle Zone centered on the Unnamed stock. Disseminated and vein/veinlet-hosted mineralization is related to the composite monzonite stocks, their brecciated margins and variably altered volcanic host rocks. Core zones of auriferous chalcopyrite-pyrite mineralization with magnetite rich potassic alteration transition laterally and vertically to pyrite rich high-gold-low-copper zones within the inner propylitic (albitic) and carbonate-rich phyllic alteration shells; the latter appear to be late stage and exhibit strong structural control. A pyrite rich outer propylitic alteration shell forms a broad halo several hundred metres outboard of the potassic-altered core of the deposit. Brownfield target areas west of the mine have mainly peripheral alteration and mineralization signature, but there are shallow high-gold-low-copper zones proximal to structures (faults, shear zones, lithological contacts). Narrow intrusive units, small stocks, dykes or pencil porphyries are common and are locally Cu-Au mineralized. The Heidi target farther west and outside the mine lease is a shallow copper prospect with low gold.

Drilling

Diamond drilling at the property was designed to test and delineate mineralized material, to obtain metallurgical samples, to sterilize areas planned for infrastructure and to gather geotechnical and environmental information. A total of 237,440 m from 1,051 drill holes were drilled by Lincoln, United Lincoln, Continental, Placer Dome, Terrane and Thompson Creek (pre- Acquisition) between February 1987 and October 20, 2016. Following Centerra's acquisition of Thompson Creek, it carried out additional drilling which resulted in an increase is resources and reserves.

Geotechnical information was collected for all drill holes subsequent to drill hole 87-70, and geological information was collected for all drilling conducted at the property. Placer's 2004 drill program was conducted to obtain core for metallurgical test work, with drill holes located within the MBX, 66, and SS Zones. Holes were twinned with or drilled near existing holes, with a total of 2,184 m drilled in 14 holes. In early September 2006, Terrane commenced a four-phase diamond drilling program. The first phase was designed to acquire samples for metallurgical test work. Initiated in late 2006, the second phase targeted mineralization on the west side of the MBX stock. The third phase commenced in March 2007, and was designed to gather geotechnical information across the Main deposit. The fourth phase commenced in June 2007, and was designed to gather geological and geotechnical information on the margins of the SS deposit, and in the vicinity of proposed infrastructure. Cyr Drilling International Ltd. of Manitoba conducted all four drill phases using a skid-mounted machine and HQ diameter drill rods.

In 2010-2011, 17 drill holes (10-1003 to 10-1012 and 11-1013 to 11-1019), totaling 10,535 m, were planned and executed to extend in depth the expression of the DWBX zone towards the west part of the deposit and north of the King Richard Creek. Good copper and gold intercepts were defined from the core samples. In 2011, an additional 10 holes were drilled for metallurgical characterization of the material to be mined within the Phase 3 pit envelope defined in 2009. During June 2013, 20 holes were drilled to define the thickness of the overburden in the east part of the Main and 66 zones.

In 2015 and 2016, 9 holes were drilled to test coincident magnetic, chargeability, and geochemical anomalies in the Snell Creek and Mitzi Lake area.

In 2017, an eight-hole (1081 m) geometallurgical drilling program was completed in May in the MBX and 66 zones. This was followed in August to December by a 13-hole (6610 m) near-pit infill and expansion drilling program in the WBX, DWBX, MBX and Saddle zones within the ultimate pit boundary. The 2017 drilling demonstrated that economic mineralization continues below the ultimate pit shell and all holes intersected economic mineralization in all zones. The results for four of the 2017 exploration drill holes were included in the year-end resource update along with eight 2017 geometallurgical drill holes and five historical drill holes. The additional drilling helped convert indicated to measured resources and increased inferred resources.

In 2018, the 33-hole (12,167 m) Phase-1 near-pit infill and expansion (NPI) drilling program ran from February to July in multiple zones within the ultimate pit including DWBX, WBX, MBX, Saddle, Southern Star, EMBX and 66 zones. The 18-hole (6489 m) Phase-2 program ran from September to November in the Saddle and Southern Star zones. Results continue to demonstrate continuity of economic mineralization both within and below the ultimate pit shell. Exploration drilling programs included the 12-hole (6,668 m) brownfield (within mine lease) program that ran from June to August in the Goldmark, North Slope and Saddle West zones, west of the ultimate pit boundary. The greenfield (outside mine lease) helicopter-supported drilling program ran from June to August and comprised 5,616 m in 13 drill holes in the Mitzi East, Heidi, D2 and Fugro zones located north, west and south of the mine lease. Results show two zones of shallow high-gold-low-copper mineralization in the combined Goldmark-North Slope zone and the Saddle West zone, as well as indications of potential deep porphyry Cu-Au mineralization. A shallow copper target was identified in the Heidi zone west of the mine lease. A total of 46 holes from the NPI and brownfield programs were included in the estimation of the long-term block model resulting in an expansion of the Resource Shell (at $8.12 NSR cut-off) to the west and at depth. The drilling helped upgrade resources to the measured category, and increased the year-end indicated and inferred resources. A five-hole (567.23 m) Phase-1 scout drilling program for groundwater exploration east and north of the TSF was conducted in December. This program followed up on results of nuclear magnetic resonance and transient electromagnetic geophysical surveys completed between August and November and was designed to support water well targeting efforts for Mill Operations. Three of the five drill holes in two target areas (Alpine Lake and Lower Rainbow) produced low flow water.

Sampling and Analysis, Data Verification, and Security of Samples

Pre-2004, samples for drill holes were prepared by Acme Analytical Laboratories Ltd., Mineral Environments Laboratories Ltd. and the Placer Dome Research Centre, each located in Vancouver, British Columbia; the 2004 Placer sample were prepared and by Eco-Tech Laboratories Ltd. in Kamloops, British Columbia; Terrane's 2006-2007 samples were initially prepared by Terrane employees (initial splitting of drill core at project site only) and ALS Chemex in North Vancouver, British Columbia; and TC Mine's 2010-2016 samples were sent to the ALS Chemex sample preparation in Terrace, British Columbia. In 2017, TC Mine's drill samples were cut at the project site and sent for preparation to Activation Laboratories in Kamloops, British Columbia and Bureau Veritas Laboratory ("**BV Labs**") in Vancouver, British Columbia. In 2018, TC Mine's samples were cut at the project site and sent to BV Labs in Vancouver, British Columbia for sample preparation and pulverization.

Pre-2004, gold was assayed by the primary labs (Acme Analytical Laboratories Ltd., Mineral Environments Laboratories Ltd., and Placer Dome Research Centre) by standard fire assay with an atomic absorption finish on a 30 g pulp sample. Copper was assayed by digesting 2g of sample in aqua regia and determining the assay value by atomic absorption spectrometry. In 2004, gold was assayed by Eco-Tech Laboratories Ltd. by standard fire assay with an atomic absorption finish on a 30 g pulp sample. Copper assays utilized aqua regia sample decomposition with analysis by inductively coupled plasma – atomic emission spectroscopy (ICP-AES). Terrane's 2006-2007 drill core samples were analyzed for gold content using ALS Chemex's method Au-AA25. Gold assays utilized a fire assay fusion sample decomposition of a 30 g pulp with an atomic absorption spectrometry finish. Samples from Thompson Creek's 2010-2016 program continued with the analytical protocol adopted during 2006-2007, with all samples receiving an ICP-AES copper assays following an aqua regia digestion and gold by fire assay with atomic absorption finish. Samples from 2017-2018 were analyzed by BV Labs for precious and base metals, as well as major and trace elements. Gold was assayed using a 30 g fire assay with atomic absorption spectrometry ("**AAS**") finish (BV Labs lab code FA430). Over limits of gold ≥ 10 ppm triggered 30 g fire assay with gravimetric finish (FA530). All samples were analyzed for a 45 element package (including copper and base metals) using a 4 acid digest and inductively coupled plasma – mass spectrometry/emission spectroscopy (ICP-MS/ES) on a 0.25 g aliquot. Over limits of copper ≥ 1% triggered analysis using ICP-MS with AAS finish (MA404) on a 0.50 g aliquot. Over limits of silver ≥ 100 ppm triggered 30 g fire assay with gravimetric finish (FA530). Over limits for sulfur (>10%) triggered Leco analysis (TC000). Mercury was analyzed using a 4 acid digest and cold vapor atomic absorption spectrometry (CV400).

Production blasthole samples are collected once or twice a day by the Ore Control Geologist/Technician and delivered to the on-site assay laboratory for analysis. Samples are delivered in individual heavy-duty plastic bags with unique barcode ID tags. Upon delivery at the assay laboratory, a Geology Sample Submission form is filled out at the laboratory stating the date submitted, the person submitted by, the number of samples along with the sample identifications and the analysis required (Cu, Au, Ag, S, Fe, ABA). Each sample transferred from the bag to individual drying pans and is scanned into a batch created in the assay laboratory's Laboratory Information Management System software. Samples are dried, crushed, and riffle split down to ~300 g. This split material is then pulverized to -200 mesh, barcoded and staged for wet chemistry and fire assay.

The Mount Milligan Assay Laboratory uses standards and blanks as well as internal duplicates for QA/QC. A first and last duplicate is digested and analyzed for each set of twenty blast hole samples. A quality control standard is also

digested and analyzed with each set of twenty blast hole samples. All controls and duplicates must fall within acceptable QA/QC limits for each data set prior to data release. In the opinion of the applicable author of the Mount Milligan Technical Report, sample preparation, security, and analytical procedures utilized during drilling programs were adequate and conducted according to industry standards.

For 2017-2018 diamond drilling, certified reference materials ("**CRM**"), blanks, and duplicates were used to monitor QA/QC of the core sampling, processing, and assaying processes. All samples were marked with a unique sample ID number and sample tag in the core box by a logging geologist and cut using an electric core saw. While sampling drill core, the logging geologists inserted CRMs and coarse blank samples alternately into the sample sequence every 10 samples. Additional coarse blanks were inserted after high grade ore intervals. In addition to the inserted reference materials, field and preparation duplicates were inserted alternately into the sample sequence every 20 samples. For field duplicates the marked sample was halved and both halves were sent for analysis with a unique sample ID. Preparation duplicates were prepared at BV Labs prior to sample pulverization. The QC insertion rates are acceptable according to current CIM best practice standards, with QC samples accounting for ~15% of the 2017-2018 assay database.

After drill hole samples were cut and bagged in poly-plastic sample bags, they were prepared for sample shipment by a geotechnician. Individual sample bags were collected in rice bags and sealed with both zip ties, and individually numbered security tags. A copy of the sample submission form and chain of custody forms for each batch was included in the last rice bag of samples, and emailed to the exploration office and BV Labs. After the assay results were received from the lab, gold and copper assays were checked by a Centerra database manager using control charts for the CRMs. Any quality control failures (samples bracketing CRMs with assay values ± three standard deviations of the expected value) were documented and relevant batches of samples were requested for re-assay by BV Labs using the primary pulp. After completion of the programs approximately 5% of the sample pulps from BV Labs were submitted to ALS in Vancouver, British Columbia as an independent check for analytical bias and accuracy.

In the building of the drill database, a series of assay quality control programs, including the use of blanks, standards, duplicate samples, and external check assay programs, have been carried out over the years, both during drill programs and afterwards during a series of assay checks. As well, a number of database compilation, verification, and review programs (including third party, independent review) have been undertaken, the last one being in 2014, subsequent to the release of Thompson Creek's 2015 Technical Report. In January 2018, the drill hole database was updated to correct inconsistencies and deficiencies for exploration and modelling. Historical (pre-2018) assays were not modified, and new assays added to the database for 2018 drill holes followed the analytical, QA/QC and security procedures as described. Centerra considers the final database used for the December 31, 2018 mineral resource and mineral reserve estimation to be robust and verified.

Mineral Resource and Mineral Reserve Estimates

The following tables set out the mineral resource and mineral reserve estimates of the Project as of December 31, 2018. Mineral resources are exclusive of mineral reserves.

MOUNT MILLIGAN MINERAL RESOURCE ESTIMATE SUMMARY – AS OF DECEMBER 31, 2018[(1)(2)(3)(4)(5)]

Classification	Tonnes (kt)	Cu (%)	Au (g/t)	Contained Cu (Mlb)	Contained Au (koz)
Measured	74,001	0.092	0.3	150	779
Indicated	268,232	0.148	0.2	878	1,943
Total Measured + Indicated	**342,233**	**0.136**	**0.2**	**1,028**	**2,722**
Inferred	40,984	0.127	0.3	115	411

Notes:

(1) CIM definitions were followed for classification of Mineral Resources.
(2) The mineral resources have been estimated based on a gold price of $1,450 per ounce, copper price of $3.50 per pound and an exchange rate of 1USD:1.25CAD.
(3) The open pit mineral resources are constrained by a pit shell and are estimated based on an NSR cut-off of C$8.12 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs, smelter treatment charges and royalty and streaming arrangements in determining economic viability.
(4) Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
(5) The Mount Milligan Streaming Arrangement entitles Royal Gold to 35% of gold sales and 18.75% of copper sales from the Mount Milligan Mine. Under the Royal Gold Stream Arrangement, Royal Gold will pay $435 per ounce of gold delivered and 15% of the spot price per metric tonne of copper delivered.
(6) Numbers may not add due to rounding.

MOUNT MILLIGAN MINERAL RESERVE ESTIMATE SUMMARY –
AS OF DECEMBER 31, 2018[1][2][3][4][5]

Classification	Tonnes (kt)	Cu (%)	Au (g/t)	Contained Cu (Mlb)	Contained Au (koz)
Proven	211,649	0.183	0.4	853	2,600
Probable	235,913	0.189	0.3	983	2,136
Total Proven + Probable	**447,562**	**0.186**	**0.3**	**1,836**	**4,736**

Notes:

(1) CIM definitions were followed for classification of Mineral Reserves.
(2) The mineral reserves have been estimated based on a gold price of $1,250 per ounce, copper price of $3.00 per pound and an exchange rate of 1USD:1.25CAD.
(3) The open pit mineral reserves are estimated based on an NSR cut-off of C$8.12 per tonne and takes into consideration metallurgical recoveries, concentrate grades, transportation costs, smelter treatment charges and royalty and streaming arrangements in determining economic viability.
(4) The Royal Gold Streaming Arrangements entitles Royal Gold to 35% of gold sales and 18.75% of copper sales from the Mount Milligan Mine. Under the Royal Gold Stream Arrangement, Royal Gold will pay $435 per ounce of gold delivered and 15% of the spot price per metric tonne of copper delivered.
(5) Numbers may not add due to rounding.

Mining Operations

Metallurgy

Metallurgical investigations conducted by various research laboratories prior to commencement of operations conclusively showed that froth flotation is the optimum process for the recovery of copper, gold, and silver. These investigations were the basis of the performance models used in previous resource modelling. With the commencement of operations, performance issues were identified. As a result, previous assumptions in the models were addressed together with identified issues in the plant to produce new performance equations. From these new performance models, the LOM average recoveries are estimated at 78.7% for copper and 67.6% for gold. Concentrate grade varied with head grade and ore type with a LOM average of 23.0% Cu. The impurity element contents in the concentrate were below the penalty levels normally imposed by most smelters; therefore, no penalties are expected.

Mining Method/Operations

The large scale open pit mining for the Mount Milligan Mine will provide mill feed at a nominal rate of 60,000 t/d. Annual mine production will peak at 49.3 Mt/a, with a LOM stripping ratio of 0.77 tonnes waste to 1 tonne ore. The mining operations equipment fleet comprises two 311 mm electric blast hole drills, one 203 mm diesel blast hole drill, two 41 m^3 electric cable shovels, two 19 m^3 front end loaders, thirteen 217 t trucks and two 190 t trucks. These major units are supplemented with a back-up equipment fleet of graders, track and rubber-tired dozers, backhoes and water trucks. A 15 m bench height has been selected for mining both ore and waste. The overall mining sequence was developed through a series of mining pushbacks specific to the MBX, 66 and WBX subzones (collectively, the "**Main Zone**"), and SS phases. The approach was designed to:

- maintain higher grade mineralization in the MBX and 66 subzones;
- maintain a smooth waste/ore ratio with required TSF construction materials;
- develop an ore blending strategy while selectively mining from the Main Zone and SS pits to smooth delivery of copper and gold head grades to achieve the required concentrate grades;
- provide potential waste rock storage in the mined out sections of the Main Zone pit for waste generated from the WBX and SS mining phases

The ultimate designed pit consists of 10 Phases, with Phases 1 and 2 now completely mined. The mine is currently in Phase 3 with initial stripping and road access started in Phase 4. Phases 1 through 7 are focused on the Main Zone while Phases 8 through 10 will focus on the Southern Star Zone. The phases may not be mined sequentially, with the LOM mining schedule focused on returning the highest value. The Mount Milligan Mine's experience to date, through its mining and milling experience and its on-going close reconciliation between the block model and actual mill production reconciliation data, considers dilution to be relatively insignificant and therefore it is not included for planning and scheduling. This is also based on the deposit's typically very gradational ore/waste boundaries and the attention to, and management of, blast movement.

Mineral Processing

The Mount Milligan Mine is a copper-gold porphyry deposit, consisting of two principal zones, the Main Zone and the SS Zone. The Main Zone includes four contiguous sub-zones: MBX, WBX, DWBX and 66 (low-copper and high-gold, southeast of the MBX sub-zone). These geologic zones are the basis for the metallurgical test work.

The Mount Milligan Mine deposit is being mined using conventional open-pit equipment, with the ore being processed through a gyratory crusher, secondary pre-crushing and a SAG-ball mill together with a rougher and cleaner flotation plant, producing a marketable gold-rich copper concentrate.

The Mount Milligan Mine concentrator was designed to process ore at a nominal rate of 60,000 t/d, producing a marketable concentrate of copper, gold and silver. Run of mine ore is crushed to 80% passing 150 mm. Prior to being introduced into the SAG and ball mill circuit, a variable percentage of the ore (depending on hardness) is pre-crushed to 65 mm or finer. The final feed to flotation from the ball mill circuit will be successively improved from the current 80% passing 195 µm to a life of mine average of 180 µm. The rougher/scavenger flotation circuit produces a high-grade rougher concentrate and a lower grade rougher/scavenger concentrate. These concentrates are separately reground and then upgraded in three cleaner flotation stages to produce a final flotation concentrate assaying approximately 21% Cu. A gravity circuit is used to scalp out coarse gold from the rougher concentrate prior to the cleaning circuit with this material added to the final concentrate produced from flotation at the storage stock tank. The final flotation concentrate is thickened and stored in a stock tank prior to filtering. The combined concentrate is then pressure-filtered to a moisture content of approximately 9%, stockpiled and then trucked to the rail loadout facility at Mackenzie. From here, the concentrate is railed to North Vancouver where it is loaded onto to ships and sent to purchasers located around the Pacific Rim. The final rougher/scavenger tailing containing mostly non-sulphide gangue minerals is stored in the TSF, while the cleaner/scavenger tailing containing most of the sulphide gangue minerals is stored in a separate area of the TSF. The latter is kept underwater to prevent acid generation from the oxidation of the sulphide minerals.

Mount Milligan Mill - Water Management

Since late December 2017 to date, the Mount Milligan Mine has experience a lack of sufficient water resources which have resulted in at various times of 2018 in a short temporary suspension of mill processing operations, operating using only one ball-mill, and with reduced throughput. For a further discussion of the water management issues, and our water management strategy, see the discussion under "*Mount Milligan Mine - Environmental Conditions*" elsewhere in this document.

Tailings Storage Facility

The TSF tailings dam at Mount Milligan is constructed using the centerline method. Mining and placement of overburden, non-acid generating ("**NAG**") sulphide rock, weathered, and oxide rock from the mine are integrated at the TSF. A portion of the low NAG, oxide and weathered materials are used in the construction of the upstream side of the dam. Delivery of potentially acid-generating ("**PAG**") rock for sub-aqueous storage at the TSF will be integrated in the cleaner/scavenger tailing PAG Separator Dyke and bulk storage area within the TSF. Residual overburden will be stockpiled in the WSB laydown area and material remaining after construction requirements are met in any time period will be placed in storage areas that meet long-term containment requirements. Waste from the open pit is separated into categories based on soil, extent of oxidation and acid generation/metal leaching potential and later combined based on destination: topsoil (stripped from the tailing area, open pits and plant site); overburden (primarily glacial tills, alluvial sands and gravels); weathered and oxide waste rock; NAG waste rock, and PAG waste rock.

The existing tailings management facility at Mount Milligan will reach capacity in 2035, and TCM will require additional permits to raise the tailings dam to accommodate the tailings and waste rock to be processed over the life of mine. The current elevation of the tailings is 1,095m. TCM has carried out necessary studies to expand the tailings dam to an elevation of 1,114m and will need to obtain the necessary permits to carry out such work. TCM will engage in further studies to determine the final height required for the entire life of mine. There are no assurances permits will be obtained at all, or on the time frame required by TCM for such tailings dam raises.

We undertake regular internal monitoring and inspections, annual third-party inspections and the Ministry of Mines visits the Mount Milligan tailings storage facility annually to perform its own inspections. We engage independent experts to perform reviews of all tailing dams, and to submit their reviews to the government and the surrounding Indigenous groups for review and questions. We have complied with these requirements. In accordance with applicable legislation, we have an independent tailings review board comprised of three members who review the operation and structure of the Mount Milligan tailings management facilities.

Environmental Conditions

During the financial year ending December 31, 2018, we spent approximately $2.4 million in connection with our environmental programs relating to our Mount Milligan Mine operations. We are subject to various federal, provincial and local laws, regulations and permits governing the protection of the environment in connection with our activities in Canada. Among other requirements, our Canadian operations must comply with authorizations issued under federal and provincial mining and environmental laws.

Environmental programs and initiatives are essential to mine success. Mount Milligan Mine's environmental permit requirements are implemented in accordance with conditions of the permits and other regulatory approvals. The Mount Milligan Mine was specifically designed as a non-discharging mine with a limited spatial footprint and environmental impacts generally occur within that footprint.

The Mount Milligan Mine was reviewed under the *British Columbia Environmental Assessment Act* and initially assessed by the *Canadian Environmental Assessment Act*. The *Canadian Environmental Assessment Act* determined that the project would not require formal federal review. An Environmental Assessment Application was filed in July 2008 (the "**Application**"). Provincial and federal agencies, Indigenous groups and stakeholders participated in a harmonized review of the Application. The provincial Environmental Assessment Certificate was issued in March 2009 and the federal Environmental Assessment Decision Statement was issued in December 2009. The provincial Environmental Assessment Report and the federal Comprehensive Study Report concluded that, taking into account the required mitigation measures, the Mount Milligan Mine is not likely to cause significant adverse environmental effects. The provincial Environmental Assessment Certificate has been amended from time to time, most recently in February 2019 to permit obtaining water for use in the Mount Milligan milling operations from Philip Lake 1, Rainbow Creek and Meadows Creek until November 30, 2021 at rates that are protective of the environment.

Pursuant to the EAC, we have prepared and implemented an EMS designed to ensure that we address Mount Milligan Mine's environmental related legal requirements. The Environmental, Health and Safety Management System is aligned with ISO 14001. The Mount Milligan Mine EMS covers topics relating to, among other things, document and operational controls, incident reporting and adaptive management. In compliance with the Mount Milligan Mine EMS, environmental and other management plans are updated annually or semi-annually as necessary and are submitted to applicable regulatory authorities for review and/or approval as part of the adaptive management process.

We have implemented Fish Habitat Compensation Plans which are authorized under the Fisheries Act and the Metal Mining Effluent Regulations.

All necessary permitting requirements to operate Mount Milligan Mine have been applied for and approved by the applicable regulatory agencies. Some are temporary in nature (for example the temporary amendment to the EAC to allow for limited withdrawal from Philip Lake), whereas others are for the duration of the mine life. For those permits which are temporary, we expect from time to time to reapply for extensions or permanent amendments as required. There are no assurances that such extensions and/or amendments will be obtained. See "*Risk Factors*".

The Mount Milligan Mine current permits include an operating permit issued under the British Columbia *Mines Act* by the Ministry of Energy and Mines; an Effluent Permit, Air Permit and Refuse Permit, all issued by the Ministry of Environment ("**MOE**") under the British Columbia *Environmental Management Act*; several water licences and various Special Use Permits and Road Use Permits issued by the British Columbia Ministry of Forest Lands and Natural Resource Operations.

The Mount Milligan Mine includes a comprehensive water management plan for construction activities and operational phases. The Mount Milligan Mine site is designed, operated and managed to prevent surface water discharge to the receiving environment during mining operations. Water management is a significant part of the Reclamation Plan for the Mount Milligan Mine. The Reclamation Plan employs proven practices and is not dependent on long-term active water treatment. Under the Reclamation Plan, all mine components will be decommissioned and reclaimed in accordance with best available technology, and industry practices, in compliance with federal and provincial regulations.

Environmental monitoring has not identified water quality issues outside of the footprint of the mine. There are significant landscape activities in the vicinity of the mine operated by other industries that may influence metals in the water column, benthic macroinvertebrates and perhaps fish that must be further monitored as part of cumulative impacts studies.

Emergency Response Plan and Handling of Hazardous Materials

The Mount Milligan Mine has an Emergency Response Plan (the "**Mount Milligan ERP**") and hazardous material transportation procedures. We conduct quarterly mock exercises to test different aspects of the Mount Milligan ERP, including response time, effective communications and the skills of the emergency response team and we have updated

the Mount Milligan ERP to ensure notification protocols remain valid and improvements from the mock exercises are incorporated in the plan.

Decommissioning and Reclamation

The Mount Milligan Mine submitted a five-year revision to its Reclamation Plan in 2014 and will submit another revision as per permit and regulatory requirements in 2019.

The five-year Reclamation Plan for the site outlines the closure goals and activities for the site and minimizes and mitigates long-term environmental impacts resulting from construction and operation of the facility via sound science and contingency planning. An adaptive management process is utilized whereby new knowledge and technology is incorporated into successive management and reclamation plans that take into account operational plan updates. This adaptive management approach will aid in negating or minimizing activities such as post-closure water treatment.

Community Sustainability

We endeavour to work in a responsible way to meet or exceed expectations of potentially impacted indigenous groups, and stakeholders. See *"Responsible Mining – Our Approach"* above.

Indigenous Groups

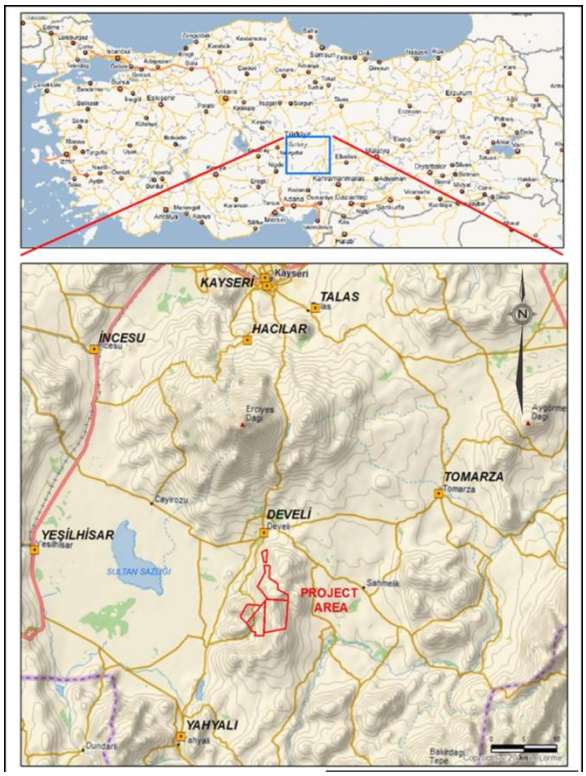
Maintaining productive relationships with Indigenous groups and ensuring project benefits are shared in accordance with our formal agreements is a priority for all of Centerra's projects and operations in British Columbia. See "*Responsible Mining – Our Approach*" above.

Technical Report

The Mount Milligan Technical Report, with an effective date of December 31, 2016 was filed on March 22, 2017 on www.sedar.com.

3.2 Development Properties

Öksüt Project



Quick Facts

The Öksüt Project is situated in Turkey approximately 300 km southeast of Ankara and 48 km south of Kayseri, the provincial capital.

We own 100% of the Öksüt Project property.

We issued the Öksüt Technical Report on September 3, 2015 (with an effective date of June 30, 2015).

In January 2018, we received a pastureland permit for the Öksüt Project, which was the last key permit needed to commence construction activities at the Öksüt Project. Construction activities commenced in April 2018.

Location	Turkey
Ownership	100%
Business structure	Our wholly-owned subsidiary (indirectly held), Öksüt Madencilik Sanayi ve Ticaret Anonim Sirketi, is the holder of the rights to mining and exploration for the Öksüt Project
Estimated Mineral Reserves (as at December 31, 2018)	1,278 koz of contained gold (probable) average grade – 1.4 g/t tonnage – 28,843 ktonnes
ESTIMATED MINERAL RESOURCES (as at December 31, 2018) Mineral resources are in addition to reserves. Mineral resources do not have demonstrated economic viability.	211 koz of contained gold (measured and indicated) average grade – 0.5 g/t tonnage – 12,738 ktonnes
Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred resources will ever be upgraded to a higher	50 koz of contained gold (inferred) average grade – 0.7 g/t tonnage – 2,229 ktonnes
Employees	75

Property Description and Location

Location

The Öksüt Project is located in south-central Turkey, 295 km to the southeast of the capital city of Ankara and 48 km directly south of the city of Kayseri which has a population of 1.1 million. The nearest administrative centre is at Develi (population 64,000) located approximately 10 km north of the Project. Ankara and Kayseri have international airports and are serviced by international and domestic airlines. The Project's co-ordinates are 715000-722100 Easting and 4236500-4249300 Northing (UTM ED 50 zone 36).

The Project is located in the Develi Mountains on a north-south trending topographic high. The topographic relief comprises steep-sided V-shaped valleys, and locally, cliffs tens of metres high, capped by flat-lying mesas and plateaus. The Project site is located at an elevation of approximately 1,800 m. The valleys are extensively farmed, with the local population living in a number of small villages including the villages of Öksüt and Zile.

Mining Licenses

Mining rights and minerals are exclusively owned by the state. The state delegates rights to explore and operate to Turkish individuals or legal entities through set period licences in return for royalty payments. Mining licensing is regulated by the General Directorate of Mining Affairs, a unit of the Ministry of Energy and Natural Resources. Other institutions of importance are central government ministries, the provincial administration, and local government institutions.

Due to changes in Turkish mineral laws, which now permit the issuance of mining licenses for areas greater than 2000 ha, we applied for and received in 2017 a new operation license number 85712 which unifies the previous two contiguous operation licences (numbers IR 82468 and 82469). The unified license has a total area of 3,995.81 ha. Mineral rights under this licence have been granted to OMAS. According to the Turkish Mining Law, OMAS has the right to explore and develop any mineral resources contained within the operation licence, provided fees and taxes are paid in order to keep the licence in good standing. The operations license was issued on May 1, 2017 and is currently set to expire on January 16, 2023. We will submit applications to renew the operation licenses in the normal course and in accordance with the time frames permitted under local laws.

While OMAS has the right to explore and develop within the area covered by the operation licences, it requires various permits for the deveopment of the project. In November 2015, we received approval of the environmental impact assessment report for the Öksüt Project. In 2016, we received various other permits necessary to begin development, including the forestry usage permit on July 14, 2016, and the operation permit for the forestry area on August 26, 2016. In January 2018, we received the pastureland permit, which was the last remaining permit needed to begin development.

Construction Update

As at December 31, 2018 the Öksüt Project construction is approximately 38% complete. The project is on time and on budget and the Company continues to expect that the first gold pour from the Öksüt Project will occur in the first quarter of 2020.

Mineralization

The Öksüt Project is a high-sulphidation epithermal gold deposit within the Central Anatolian Volcanic Province, part of the Tethyan Metallogenic Belt. The belt extends from southeastern Europe across Turkey, the Caucasus, and on into Pakistan and contains a number of important gold and porphyry copper deposits. Magmatic activity and related ore forming processes are the result of the closure of the Tethyan Ocean in response to the collision between the north-moving Arabian Plate with the Eurasian Plate that began in the late Cretaceous period and continues today.

The Öksüt Project gold mineralization is hosted within the Develidağ Volcanic Complex, one of the numerous stratovolcanoes situated along the Central Anatolian Fault Zone. The volcanic complex is composed of Miocene basaltic-andesitic volcanic domes, pyroclastic rocks, and lava flows. Flow-banded Pliocene andesite overlies these sequences and the Öksüt Project mineralization to the north and east.

There are several gold occurrences in the Öksüt Project area, the most important of which is the Keltepe Deposit. The distribution of the alteration assemblages and the gold grades at the Keltepe Deposit are strongly zoned, with a central massive silica breccia having the highest gold grade. This core is surrounded by quartz-alunite altered volcanic rocks, and as the alteration intensity diminishes outwardly, the gold grade decreases.

The Keltepe Deposit has been oxidized to depth, up to 400 m below the surface. The original copper content of the deposit has been completely leached out of the current resources, however, zones of oxide copper enrichment are found

deeper within the deposit, below the planned open pit. An irregular zone of supergene enrichment exists below the oxide zone, with some high-grade sulphide copper intersections. It is surmised that the oxidation of the deposit has liberated the gold allowing heap leaching at a relatively coarse crush size.

The nearby Güneytepe Deposit is significantly smaller and does not show the more straightforward zonation and continuity of alteration and gold grades as observed on the Keltepe Deposit. Silicification is intense, however, the host rocks are much less porous, and, as a result, oxidation is restricted to the upper 50 m to 75 m of this deposit.

Keltepe Deposit

The Keltepe Deposit is elongated NNW-SSE and is approximately 600 m long and 350 m wide with a minimum known vertical extent of 450 m. Two principal rock types are present: a texturally diverse variety of polymictic breccias and a texturally uniform porphyritic andesite.

The Keltepe Deposit is strongly oxidized to a maximum known depth of up to 400 m below surface. This unusually deep oxidation is attributed to the porous and permeable nature of the siliceous and quartz-alunite altered breccias and to the presence of a deep groundwater table controlled by the NNW-SSE and NE-SW trending fault zones that drain outwards from the topographic high beneath which the Keltepe Deposit is located.

Oxidation is not uniformly complete throughout the deposit, with patches of less oxidized or unoxidized rock enclosed by fully oxidized rocks.

Oxide gold mineralization occurs from the surface (~1,800 m RL) to 250 m to 300 m below surface (~1,500 m RL to 1,600 m RL). Mineralization lies in an NW-SE orientation along strike and extends for approximately 950 m. Its width varies along strike, but in the centre of mineralization the width is about 370 m. Gold mineralization is believed to occur as finely disseminated particles as it was not identified during scanning electron microscope analysis. This has been confirmed by a gold deportment study that shows that the major gold mineral identified at Keltepe is native gold with an average fineness of 6.9 µm. This study also indicates that the host minerals for the gold in the sample studied are mainly quartz and other silicates and iron oxide, with minor (2% to 10%) rutile-silicate complexes and trace associations with pyrite.

Güneytepe Deposit

The Güneytepe Deposit is located approximately 600 m to the south-southeast of the Keltepe Deposit. Gold mineralization primarily occurs along NW-SE and NE-SW trending ledges of two compositions: (1) massive to vuggy residual quartz with associated silicification, and (2) quartz-alunite plus quartz-kaolinite alteration. The location of the ledges is controlled by the intersection of NW-SE and NE-SW trending structures.

As observed at the Keltepe Deposit, gold mineralization at the Güneytepe Deposit is also considered to be controlled by NW-SE and NE-SW trending faults. The deposit is bounded to the north and south by two NE-SW trending fault zones, which confine the gold mineralization into a NE-SW trending corridor.

Oxidation in the ledges rarely exceeds 150 m in depth and averages approximately 50 m to 75 m. Oxidation appears to be deeper in the massive to vuggy quartz and quartz-alunite zones as compared to those composed mainly of quartz-kaolinite.

Gold mineralization at Güneytepe is more variable than at Keltepe in both grade and lateral/vertical distribution. Higher sulphur contents are also recorded in the oxide zone due to sulphides, mostly pyrite, being encapsulated within massive silica and also in patchy silica altered rocks.

Öksüt Project Mineral Reserves and Mineral Resource Estimates

Mineral Resources for the Öksüt Project were estimated using a block model constrained with three dimensional (3D) wireframes of the principal mineralized domains and incorporating all the drilling completed to the date of the resource estimate. The resource model update for the Öksüt Project was prepared by Centerra as of December 31, 2018, using all of the drill holes available as of that date. The proven and probable gold mineral reserves increased by 91,000 contained ounces, because of 16 new drill holes that were included in the resource model for 2018. The drill holes were primarily completed to further delineate in-pit mineralization within the Keltepe open pit.

ARANZ Leapfrog software was used to update the principal mineralized domains at Keltepe and Güneytepe and values for gold were interpolated into blocks using ordinary kriging in GEOVIA GEMS software.

Mineral Reserves Estimation

All mineral reserves within the Öksüt Project have been classified as probable.

Mineral Reserves[1][2][3][4]
(as at December 31, 2018)
(tonnes and ounces in thousands)

	Proven			Probable			Total Proven and Probable		
Deposit	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)
Keltepe	-	-	-	24,171	1.4	1,125	24,171	1.4	1,125
Güneytepe	-	-	-	4,672	1.0	153	4,672	1.0	153
Total	**-**	**-**	**-**	**28,843**	**1.4**	**1,278**	**28,843**	**1.4**	**1,278**

(1) CIM definitions were followed for classification of Mineral Reserves.
(2) The open pit reserves at the Öksüt Project were estimated based on a 0.3 grams of gold per tonne cut-off grade, a gold price of US$1,250 and an exchange rate of 1USD:3.5TL.
(3) Open pit optimization used a LOM recovery of 77%.
(4) Numbers may not add up due to rounding.

Mineral Resources Estimation

The Mineral Resource estimate, exclusive of Mineral Reserves, as at December 31, 2018 is summarized in following table:

Mineral Resources[1][2][3][4][5][6]
(as at December 31, 2018)
Measured and Indicated Mineral Resources
(tonnes and ounces in thousands)

	Measured			Indicated			Total Measured and Indicated		
Deposit	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)
Keltepe	3,567	0.5	55	7,022	0.5	123	10,589	0.5	178
Güneytepe	320	0.8	8	1,829	0.4	25	2,149	0.5	33
Total	**3,887**	**0.5**	**63**	**8,851**	**0.5**	**148**	**12,738**	**0.5**	**211**

(1) CIM definitions were followed for classification of Mineral Resources.
(2) Mineral Resources are in addition to Mineral Reserves. Mineral resources that are not mineral reserves have no demonstrated economic viability.
(3) Open pit optimization used a LOM recovery of 77%.
(4) The mineral resources have been estimated based on a gold price of $1,450 per ounce.
(5) Open pit mineral resources are constrained by a pit shell and are estimated based on a 0.2 grams of gold per tonne cut-off grade.
(6) Numbers may not add up due to rounding.

Inferred Mineral Resources[1][2][3][4][5]
(as at December 31, 2018)
(tonnes and ounces in thousands)

Deposit	Tonnes (kt)	Grade (g/t)	Contained Gold (oz)
Keltepe	1,229	0.7	27
Güneytepe	1,000	0.7	23
Total	**2,229**	**0.7**	**50**

(1) CIM definitions were followed for classification of Mineral Resources.
(2) Mineral Resources are in addition to Mineral Reserves. Mineral resources that are not mineral reserves have no demonstrated economic viability.
(3) Inferred mineral resources have a large degree of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the inferred resources can be upgraded to a higher resource category.
(4) Open pit mineral resources are constrained by a pit shell and are estimated based on a 0.2 grams of gold per tonne cut-off grade.
(5) Numbers may not add up due to rounding.

Metallurgical Test Work

Metallurgical testing has focused on supporting the development of the Öksüt Project as a heap leach operation. Testing to date has focused on gold recovery at coarse particle sizes. Metallurgical testing was initiated in 2012 using samples from existing exploration diamond drill holes. A second program, completed in 2012, utilized samples from a single large diameter hole to provide the bulk of the sample for this program. The second program included the first column leach tests. In 2013, four large diameter drill holes were drilled (three in the Keltepe Deposit and one in the Güneytepe Deposit) to provide samples for two large scale column leach test programs. A mineralogy program was also completed on the samples from this program. In 2014, a further five large diameter drill holes (one in the Güneytepe Deposit and four in the Keltepe Deposit) were completed to provide samples for additional large-scale column leach tests and further mineralogical analysis.

The results from all programs show that samples from the Öksüt Project are amenable to heap leach processing. Leach rates are relatively fast with comparatively high final recoveries. Size by size analysis of the column leach test feed and tails samples shows gold evenly distributed among the size classes, roughly following the mass splits.

Since the Keltepe Deposit contains approximately 90% of the contained gold for the Öksüt Project, the leach characteristics for the Keltepe Deposit will predominate. Güneytepe Deposit leach characteristics are expected to be as good as or better than Keltepe Deposit and are not anticipated to present any issues.

Mining Operations

Mining

The Öksüt Project is planned as a conventional truck and shovel open pit mine. Material will be drilled and blasted, before being loaded and hauled to the waste dump, crusher, or the various ore stockpiles depending on the most profitable way to process the material. At the Öksüt Project, two pits have been planned to be mined simultaneously, the main Keltepe pit and the small satellite Güneytepe pit. A total of approximately 28.9 Mt of ore at a grade of 1.4 g/t Au, containing a total of approximately 1.3 million ounces of gold, is planned to be mined and stacked over a mine life of eight years from the two open pits. It is planned to use a mining contractor to do all mining using small excavators and 36 tonne trucks. The use of this equipment among mining contractors is common in Turkey. The mining contractor will provide and maintain all equipment, and will perform drill, blast, load, haul, and road and dump maintenance on a unit cost basis. Centerra will provide oversight of the mining operations, grade control, survey control, mine planning, and other required technical services.

The Keltepe pit will be developed in three cutbacks to smooth stripping requirements and mine higher grade material earlier in the mine life. The smaller Güneytepe pit will be developed in two cutbacks. Lower grade material will be stockpiled throughout the Project for processing at the end of the mine life.

Processing

The flowsheet for the Öksüt Project is based on an 11,000 tpd heap leach operation. It includes primary crushing, screening and secondary crushing, heap stacking and cyanide leaching, carbon adsorption, carbon stripping and regeneration, electrowinning and refining.

Run-of-mine ore will be delivered by 36 tonne haul trucks to the primary crusher. The ore will be dumped on the stationary grizzly installed over the 80 tonne truck dump hopper. Oversize rocks will be handled by a rock breaker. The ore will be withdrawn from the dump hopper via a 2.0 m wide x 4.5 m long grizzly feeder. The grizzly oversize will feed the 1.5 m x 2.0 m jaw crusher that will reduce the rock size to minus 150 mm prior to being conveyed by a 1.4 m wide x 95.5 m long belt conveyor to the secondary crushing circuit, along with the grizzly feeder undersize. A self-cleaning belt magnet will be installed over the conveyor belt feeding the secondary crusher building. A metal detector installed after the belt magnet will identify any remaining piece of metal and the conveyor will be stopped to allow manual removal by an operator.

The product from the primary crushing circuit will feed a 2.4 m wide x 6.1 m long double-deck screen. The screen oversize will feed a 600 kW cone crusher while the screen undersize will report with the cone crusher product and will be transported by a 1.1 m wide x 50.7 m long belt conveyor to a radial stacker after quicklime has been added to the crushing circuit product. A 10,000 t capacity stockpile will be formed by the 1.1 m wide x 39 m long stacker installation.

The crushed ore will be trucked from the crushing facility to the heap leach pad (HLP). The leach pad will be developed in three phases and is designed to accommodate up to 40 Mt.

The heap will be irrigated with a diluted cyanide solution recirculated from the ADR plant, via a network of piping covering the surface area under leach. The barren leach solution will be pumped from the barren tank at the ADR plant to the

area under heap leach. The cyanide concentration will be adjusted and the pH will be controlled so that HCN gas formation is inhibited. The solution will be filtered to remove carbon fines prior to distribution over the area under heap leach to minimize emitter plugging. It will be pumped by means of two centrifugal pumps installed in series. The first pump will cover operation for the first three years of operation, which is the end of Phase 1, while the second pump will be required from year four and beyond.

The irrigation distribution piping will consist of a 300 mm diameter main header made of carbon steel from the barren pumps discharge to the heap perimeter followed by high-density polyethylene ("**HDPE**") ending at the ore panels to be irrigated. Drip emitters will be used to provide irrigation. A typical panel piping arrangement will include a 300 mm diameter HDPE header starting from the main header and running for 190 m along the 250 m side of the panel. It is proposed to use two lengths of 300 mm diameter HDPE header in rotation for irrigation, one in operation and the other one available for installation on the next section to be irrigated. Four lateral pipes spaced at every 62.5 m will be branched from the header. Each lateral pipe will include a 150 mm butterfly valve, a pressure gauge, and 75 m of a 150 mm diameter HDPE pipe followed by 75 m of a 100 mm diameter HDPE pipe. Emitter lines will be branched at every 500 mm on the pipes and emitters will be spaced at every 762 mm on the emitter lines.

The pregnant leach solution will flow by gravity through a network of collection pipes at the base of the heap to the pregnant leach solution pond prior to being pumped to the ADR plant for precious metals recovery.

Production Estimates

A total of approximately 28.9 Mt of ore at a grade of 1.4 g/t Au, containing a total of approximately 1.3 million ounces of gold, is planned to be mined and stacked over a mine life of eight years from the two open pits.

Taxes and Royalties

Taxes

The corporate income tax rate in Turkey is 22%. However, Investment Incentive Certificates are available to provide reduced corporate tax rates for profits derived from investments made in Turkey to promote economic development. In February 2018 (amended in October 2018), we obtained an Investment Incentive Certificates for the Öksüt Project, which makes the project eligible to various benefits, including a further reduction of corporate income tax rate (by way of income tax credits), VAT exemptions, and customs duty exemptions.

Royalties

The Öksüt Project mine operations is subject to a Turkish Government State royalty, which is a sliding scale royalty for gold and other metals. Turkish Mining Law provides a reduction of 40% of the royalties payable relating to gold processed at refining facilities within Turkey.

The Turkish Government State royalty is dependent on the price of gold, as follows:

Gold price ($/oz)	Royalty
<800	2%
801-1,250	4%
1,251-1,500	6%
1,501-1,750	8%
1,751-2,000	10%
2,001-2,250	14%
>2,251	16%

Environmental Matters

During 2016, OMAS completed an Environmental and Social Impact Assessment ("**ESIA**") study which is compliant with EBRD Performance Requirements and the Equator Principles. The ESIA also incorporates information developed by OMAS through the Turkish environmental impact assessment ("**EIA**"). Since 2016, OMAS also completed and/or updated a number of additional environmental and social studies including biodiversity, socio-economics, land use and livelihoods, ground water and geochemical modelling and cultural heritage/archeology.

The ESIA, management plans and non-technical summary were subsequently disclosed by OMAS in April 2016. OMAS held disclosure meetings open to all stakeholders in the Develi district and villages around the project site.

Upon completion of the ESIA, OMAS also commenced additional biodiversity studies, as part of a Biodiversity Action Plan, with international and local experts. Key biodiversity activities to date included an ornithological survey; flora and habitat surveys; construction of a plant nursery; critical species salvaging and seed collection; definition of conservation areas within the mine site; and delivery of the collected seeds to a designated seed bank. OMAS will continue to implement all the critical Biodiversity Action Plan requirements in parallel with planned construction activities. OMAS has also implemented an environmental and social management system ("**ESMP**") and prepared health, safety, environmental and social management plans and procedures based on Turkish legislation, the EIA, the ESIA and Centerra standards and commitments. The ESMP and the related plans and procedures align with EBRD and IFC (Equator Principles) environmental and sustainability performance standards. As part of the OMAS Facility discussed elsewhere in this document, lenders and their consultants conduct regular monitoring visits on compliance with the ESMP.

Decommissioning and Reclamation

Mine closure and rehabilitation in Turkey is regulated through the Turkish Regulation on Reclamation of Mine Sites. The regulation requires preparation of a mine closure report as part of the EIA permit. The first iteration of the Öksüt conceptual closure plan will be prepared in the first year of full operation using a systematic approach to accurately estimate the LOM and asset retirement obligation closure costs such as the Standardized Reclamation Cost Estimator.

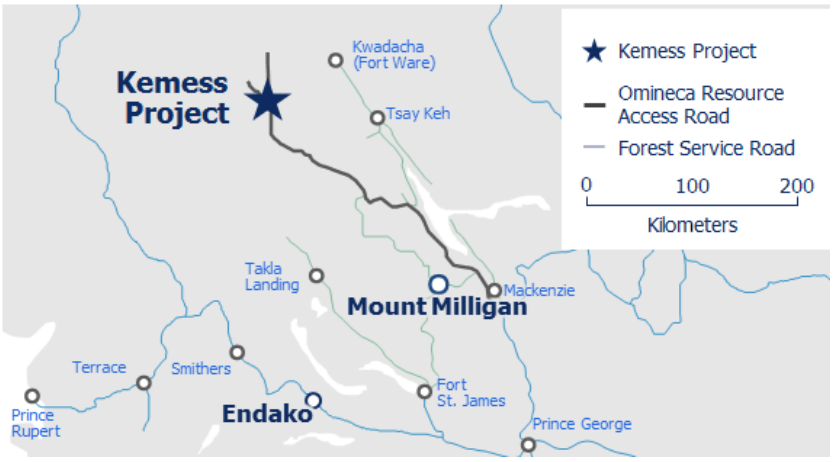
Exploration Activities

The Öksüt Project includes several other exploration targets in addition to the Keltepe and Güneytepe Deposits. All of these (Keltepe NW, Yelibelen, Büyüktepe, Boztepe, Boztepe W, Keltepe E, and Tombak) have received exploratory work since 2008. Except for Keltepe E (waste dump area) where condemnation drilling was done during feasibility study, exploring mineralization potentials in other prospects have been continuing. In the last couple of years, more drilling has been done in Keltepe NW, Boztepe, Yeliebelen and Buyuktepe.

Technical Report

The Öksüt Technical Report, with an effective date of June 30, 2015 was filed on September 3, 2015 on www.sedar.com.

Kemess Project



Quick Facts

Centerra acquired the Kemess Project effective January 8, 2018, with the acquisition of AuRico Metals Inc

The Kemess Project is at an advanced stage – it has an approved Environmental Assessment certificate, all permits required to commence construction and a completed NI 43-101 Feasibility Study.

AuRico entered into an impact benefits agreement on May 17, 2017 with the Takla Lake First Nation, Tsay Keh Dene First Nations and the Kwadacha First Nation. These are the nations with rights and title to the project area.

Location	British Columbia, Canada
Ownership	100%
Business Structure	Our wholly-owned subsidiary (directly held), AuRico is the holder of the rights to the Kemess Project.
Mine Type	Underground
Estimated Mineral Reserves (as at December 31, 2018) See "Kemess Silver Stream Arrangement" below.	<u>Kemess Underground</u> Tonnage - 107,381 k tonnes (probable) 1,868 k oz contained gold (probable) average gold grade – 0.5 g/t 630 M lbs contained copper (probable) average copper grade – 0.266% 6,878 k oz contained silver (probable) average silver grade –1.99 g/t
Estimated Mineral Resources (as at December 31, 2018) See "Kemess Silver Stream Arrangement" below. Mineral resources are in addition to reserves. Mineral resources do not have demonstrated economic viability. Mineral resource estimates for the Kemess East deposit are based on a preliminary economic assessment completed in May 2017 (the "**PEA**"). Readers are cautioned that the 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	<u>Kemess Underground</u> Tonnage – 173,719 ktonnes (indicated) 1,737 koz of contained gold (indicated) average gold grade – 0.3 g/t 697 Mlbs contained copper (indicated) average copper grade – 0.182% 8,632 koz of contained silver (indicated) average silver grade – 1.55g/t <u>Kemess East</u> Tonnage – 177,500 ktonnes 2,305 koz contained gold (indicated) average gold grade – 0.4 g/t 1,410 M lb contained copper (indicated)

to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred resources will ever be upgraded to a higher	average copper grade – 0.360% 11,240 koz contained silver (indicated) average silver grade –1.97 g/t <u>Kemess Underground</u> Tonnage – 47,700 ktonnes 529 koz. contained gold (inferred) average gold grade – 0.3 g/t 210 Mlbs contained copper (inferred) average copper grade – 0.200% 2,530 koz contained silver average silver grade – 1.65 g/t <u>Kemess East</u> Tonnage – 29,300 ktonnes 283 koz. of contained gold (inferred) average gold grade – 0.3 g/t 203 M lb of contained copper (inferred) average copper grade – 0.314% 1,880 koz contained silver (inferred) average silver grade – 2.0 g/t
Kemess Silver Streaming Arrangement	Pursuant to a silver stream agreement entered into with Triple Flag dated June 27, 2018, the Company has agreed to sell 100% of the silver production from the Kemess project in exchange for advance payments for silver payable in tranches of $10 million, $10 million, $12.5 million and $12.5 million. The payments would be due upon public announcement of a construction decision for the Kemess underground development project and the three succeeding anniversaries of such date. In addition, Triple Flag will make ongoing payments of 10% of the then current market price for each ounce of silver delivered.

Property Description and Location

<u>Location</u>

The Kemess Project is located in a mountainous area of north-central British Columbia, Canada, approximately 250 km north of Smithers and 430 km northwest of Prince George.

The property is host to the former Kemess South ("**KS**") Mine (operated from 1998 to 2011), the Kemess Underground ("**KUG**") deposit, and the Kemess East ("**KE**") deposit. Work on the KS is now focussed on reclamation and site rehabilitation. The KUG project will use existing infrastructure originally used during the KS Mine which remain at site. The remainder of this section will primarily relate to the KUG deposit and the KUG Project unless otherwise noted. References to activities done before January 8, 2018 relate to matters pre-dating our ownership of the Kemess Project.

<u>Mining Licenses</u>

The Kemess Project is comprised of 58 mining claims totaling 29,302 ha. AuRico also has leasehold on an additional four mining claims totaling 3,483 ha.

Mineralization

The KUG deposit is a copper-gold-silver porphyry deposit and is typical of calc-alkaline porphyry copper-gold deposits in the western cordillera. The deposit has a low-grade ore zone at a depth of 150 m below the surface on its western flank

and a higher-grade zone 300 m to 550 m below surface on the eastern side, which forms the KUG project. KUG is hosted by potassic altered Takla Group volcanic rocks and Black Lake plutonic rocks. The deposit is centered on a mineralized porphyritic monzodiorite/diorite pluton and associated WSW trending dykes, which extend to the southwest. Higher grade copper-gold mineralization is characterized by secondary biotite alteration in the volcanic and the eastern plutonic host rocks.

The KE deposit is a copper-gold-silver-molybdenum porphyry deposit and is typical of calc-alkaline porphyry copper-gold deposits in the western cordillera. The deposit is deeply buried and mineralization starts at an average depth of 900 m below surface and extends to 1,500 m below surface. Unlike KUG, there is no significant low-grade mineralization associated with KE. At KE, there is reasonable continuity of mineralization within the deposit. KE is mostly hosted by potassic altered Black Lake plutonic rocks. In the eastern portion of the deposit, weak mineralization is hosted within potassic altered Takla Volcanics, but still largely within the Black Lake plutonic rocks.

Kemess' Mineral Reserves and Mineral Resource Estimates

The Kemess mineral reserves and mineral resources are as described starting on page 79. The estimates of mineral resources at the Kemess Underground and Kemess East projects have been adjusted in 2018 to standardize the metal prices and exchange rates used in the Kemess Technical Report listed above to our current corporate assumptions. At Kemess East an additional nine holes were included in the 2018 statement of resources that resulted in the conversion of inferred mineral resources to the indicated category.

Mining Operations

Mining

It is expected that the KUG deposit will be mined with an underground panel caving approach. The KUG mine will be located approximately 6.5 km north of the existing KS site.

It is expected that triple declines will be developed comprising access, intake air and conveyor declines. The access decline will provide access for personnel, equipment, and materials/consumables. The final design establishes a single extraction level that includes 582 drawpoints (291 drawbells). The cave will be initiated in the highest-grade ore in the northeast of the orebody and progress to the southwest over the life of the mine.

Processing

The KUG project intends to process 9 Mt/y (24,600 t/d equivalent) through the "B side" grinding circuit, one of the two original KS grinding circuits that processed KS ore. The "A side" grinding circuit was previously removed. The existing Kemess "B side" grinding circuit is expected be used to process the KUG ore following primary crushing underground and stockpiling ahead of the process plant. The original flotation, thickening, and concentrate handling facilities remain, while the tailings will be pumped to the KS open pit, which is permitted for use as a tailings facility. The KS open pit has a capacity for approximately 107 Mt tailings and 3.0 Mt waste rock from KUG development. To achieve this storage capacity, a 25m high dam (the "**East Dam**") is required to be constructed at the east end of the open pit. A spillway will be constructed in the south-west area of the pit to allow discharge of excess water once KUG operations have ceased while ensuring adequate water cover of PAG tailings.

For KUG ore, the process plant will produce a single concentrate at an estimated grade of 22% Cu, and is expected to achieve recoveries of 91% Cu, 72% Au and 65% Ag. Concentrate would be trucked to the Company-owned load-out facility in Mackenzie for subsequent rail transport to market. Test work indicates that KUG ore would produce a concentrate that is free of deleterious elements and readily marketable to both smelters and traders.

Production Estimates

It is expected that first ore will be mined at the KUG project 3 years after commencement of construction activities, with processing commencing in the subsequent year. Total ore mined over the 12-year LOM is expected to be 107.3 Mt at 0.27% Cu and 0.54 g/t Au and 1.99 g/t Ag for 285.7 kt Cu, 1,868 koz Au and 6,878 koz Ag, at an all-in at sustaining costs (a non-GAAP measure) of $244/oz Au on a by-product basis.

Environmental Matters

AuRico received an EA certificate for the Kemess Underground project in March 2017. As part of the EA process, AuRico considered potential effects on several valued components of the natural and human environment including, among other components, aquatic and terrestrial ecosystems, current use of lands and resources for traditional purpose. The most substantive potential impacts of the project are associated with the long-term management of waste rock, tailings, mine water and process water and their downstream effects on high quality fish habitat. This assessment is based upon a number of factors, including: high quality fish habitat in potential receiving environments such that stringent limits on

effluent water quality will be applied; flow rates in potential receiving environment streams vary substantially through the year with relatively low winter flows; and TKN ascribe great value to water bodies in the receiving environment such as Thutade Lake and the Finlay River. With the application of appropriate engineering design, project planning, and implementation of mine and environmental management plans, it is anticipated that the project will avoid any significant environmental effects.

In addition to the EA certificate, the KUG project is required to obtain a number of new provincial and federal licenses/permits. A number of existing permits for the KS Mine have been in place since 1996 that remain in good standing, but may require amendment or renewal before construction begins. On August 31, 2017, the Company submitted permit applications to the British Columbia Major Mines Permitting Office for the commencement of construction at KUG, including construction of a water treatment and water discharge system. KUG received in July 2018 all of the permits required to commence construction. On September 21, 2018, the Company also received its effluent discharge permit which allows discharging treated water from the site.

Water Management

Tailings and mine development waste rock are expected to be stored in the KS open pit (the proposed KUG TSF). The PAG waste materials will be stored under a water cover to prevent metal leaching/acid rock drainage. At closure, a NAG tailings beach extending from the East Dam to the supernatant pond will be present on the eastern end of the KUG TSF. As the KUG mine approaches the end of its operational life, a large above-water beach will exist on the east end of the KUG TSF.

During operations, process water from the KUG TSF supernatant pond are expected to be reclaimed for use as mill process water and excess water treated and discharged to Attichika Creek. The sludge produced from the water treatment plants during operations will be sub-aqueously stored in the KUG TSF.

The closure phase will extend for the period of time (currently predicted to be six years) required for ongoing treatment of water within the KUG TSF and controlled discharge to Attichika Creek. Excess water in the KUG TSF supernatant pond will continue to be treated in the closure phase and thereafter until the water quality meets discharge criteria. The discharge rate from the KUG TSF will decline to approximately 1.5 Mm3/yr (96 L/s) in the closure phase and be treated and discharged over a six-month period, while waterways are open and flowing. Continued operation of two water treatment streams will be required for metals removal (rated to treat 187 L/s) and selenium removal (rated to 75 L/s) throughout the active closure phase, these two streams will be housed within the same building on site.

Once water quality within the KUG TSF reaches concentrations that would allow for untreated discharge to the receiving environment, active water treatment would cease and the KUG project would transition to post-closure. No water treatment is expected post-closure as water quality modelling results indicate that there are no contaminants of potential concern downstream of the proposed discharge location

When water quality in the KUG TSF meets discharge criteria without treatment, the upslope diversion ditch will be re-graded to original elevation and this will allow catchment runoff and melt-water to flow into the KUG TSF and out through the closure spillway to Waste Rock Creek and ultimately to Attichika Creek.

Indigenous and Public Consultants

AuRico (prior to our acquisition) engaged substantively with the surrounding communities to consult with them regarding their plans and to gain their support for the KUG project. Since 2010, AuRico has continued to meet regularly and consult with the TKN prior to and during the EA process. These meetings helped to identify the KUG project's potential effects on TKN communities, provided updated information about the KUG project, and built relationships.

An Impact Benefit Agreement with the TKN, signed on May 17, 2017 allows for KUG to be constructed within a framework of respect and consultation with TKN. Kemess is active in TKN communities, participating in annual career fairs and community visits.

Kemess East

In May 2017, AuRico (prior to our acquisition) completed the PEA on the KE project. The PEA for the KE project presents a stand-alone scenario that does not factor in or modify in any way the economics of the feasibility stage KUG project. The PEA does, however, assume that the KUG project is advanced ahead of KE, and hence a number of project components, most notably the access corridor connecting KUG to the KS process plant, the triple decline access to the KUG footprint and the water treatment plants associated with KUG, are not duplicated in the capital expenditures for KE, these assets would be shared by both projects.

Readers are cautioned that the 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, and there is no certainty that the PEA will be realized.

The PEA for the KE project is based on a mine plan for an underground panel cave with initial production beginning 4 years following the start of development of the KE declines and ramping up to a steady-state production rate of 30,000 tonnes per day. The PEA estimates average annual gold equivalent production of 222,000 ounces, based on annual production of 80,000 ounces of gold, 57 million pounds of copper and 318,000 ounces of silver, at all-in sustaining costs on a co-product basis of $611 per ounce gold and $1.47 per pound copper over a 12-year life. The KE mineral resources are located approximately 800 m to 1,140 m below surface. The KE cave footprint is 400 m by 275 m and will be accessed and supported by a twin decline system for access and ore conveying. This twin decline system starts from the KUG decline, utilizing 2.5 km of planned KUG development. A raise from surface supplies fresh air to the KE mine levels and is exhausted via the KE twin declines to the KUG exhaust ventilation system.

Following extraction from the KE cave and primary crushing underground, ore would be conveyed to the existing KS process plant where it will be processed at an average rate of 30,000 tonnes per day using existing grinding, flotation, thickening, and concentrate handling facilities; and a grinding circuit of increased capacity included in the PEA design. Concentrate will be trucked to the Company-owned loadout facility in Mackenzie for subsequent rail transport to market.

The PEA identified many opportunities for the Company to further evaluate with the primary opportunity being integration with the KUG project to achieve optimal sequencing, tailings management, and economies of scale in areas including ore processing, G&A and site services. In addition, potential exists to improve the quality and quantity of the KE mineral resource by additional in-fill and expansion drilling.

Kemess Property Exploration

The field based component of the 2018 Kemess exploration program ran from July 14th to November 29th. The program comprised a historic core relogging and pulp sampling program focused on the Nugget brownfield target and the KUG deposit. For Nugget, located 1.8 km west of KUG, 4,419 m of historic drill core in eight holes was re-logged and 3,887 historic pulp samples were sent for re-assay with a multi-element analytical package. A geological cross section was developed to provide an improved understanding in advance of drill hole planning for 2019. Re-logging identified the presence of three porphyry phases and associated breccias. For KUG, 3760 m of historic drill core in six holes was re-logged. The six KUG holes comprised a first draft geological cross section through the western portion of the KUG deposit including projection of the system beyond its previously interpreted southern limit. The southern end of this cross section is 300 m west of a newly identified geophysical target that has been untested by drilling. In addition, 230 kg of historic drill core intervals selected for metallurgical testing were identified, sampled and shipped for analysis.

Sampling and Analysis, Data Verification and Security of Samples

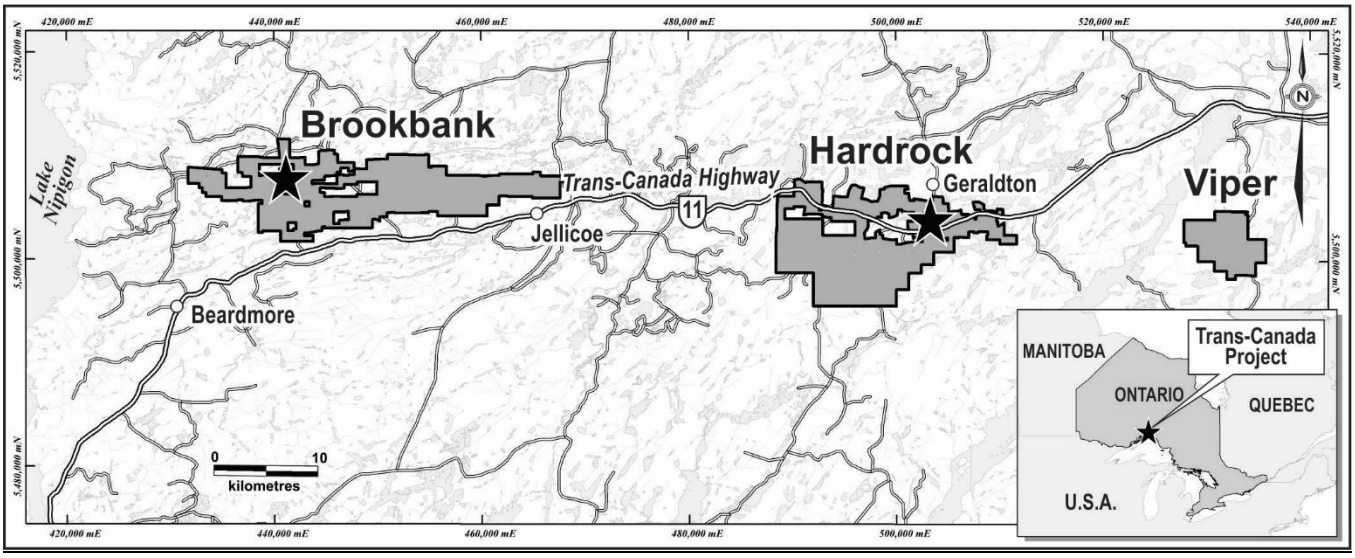
Samples from the 2002 drilling campaign at the Nugget prospect were submitted to BV Labs for major and trace element analyses. These samples were only assayed for Au and Cu during the 2002 program. All samples were analyzed for a 45 element package (including copper and base metals) using a 4 acid digest and inductively coupled plasma – mass spectrometry/emission spectroscopy (ICP-MS/ES) on a 0.25 g aliquot. Over limits of copper ≥ 1% triggered analysis using ICP-MS with AAS finish (MA404) on a 0.50 g aliquot. Over limits of silver ≥ 100 ppm triggered 30 g fire assay with gravimetric finish (FA530). Over limits for sulfur (>10%) triggered Leco analysis (TC000). Mercury was analyzed using a 4 acid digest and cold vapor atomic absorption spectrometry (CV400).

CRM, blanks, and duplicates were used to monitor QA/QC of the core sampling, processing, and assaying processes. During the 2002 drill program, all samples were marked with a unique sample ID number and sample tag in the core box by a logging geologist and cut using an electric core saw. Samples were crushed and pulverized on site. While sampling drill core, the logging geologists inserted CRMs, coarse blank samples, and coarse crush duplicates randomly into the sample sequence with an insertion rate of one in 26. The CRM used during the 2002 program was only certified for Au. In order to assess analytical processes for the major and trace element analyses, all of the CRMs within the sample sequence were replaced with OREAs 501c prior to sample submission in 2018. As this program is intended to be used for alteration modelling and targeting, and not to replace the existing Cu and Au analyses, the 2002 insertion rate was deemed acceptable. Once all of the CRM samples were replaced, all of the pulps were repacked into cardboard boxes and five gallon buckets. All samples were delivered to BV Labs as one shipment. A copy of the sample submission form was attached to the outside of the shipment, and emailed to the exploration database manager as well as to BV Labs.

Technical Report

The Kemess Technical Report with an effective date of July 14, 2017 can be found under the AuRico Metals Inc. profile on www.sedar.com. To the best of our knowledge, information and belief, there is no new material scientific or technical information that would make the disclosure of the mineral resources or mineral reserve, and other technical information on the Kemess Project as set out in the Kemess Technical Report to be inaccurate or misleading.

Greenstone Gold Property



Quick Facts

Pursuant to an amended and restated partnership agreement entered into with Premier Gold Mines Limited ("**Premier**") dated March 9, 2015 (the "**Partnership Agreement**"), Centerra and Premier formed a 50/50 partnership (the "**Greenstone Partnership**") for the joint ownership and development of Premier's Greenstone Gold Property (formerly known as the Trans-Canada Property). Pursuant to the Partnership Agreement, Centerra has agreed to make capital contributions to the Greenstone Partnership in the aggregate amount of C$185 million, half of which is on behalf of Premier. As of December 31, 2018, Centerra has contributed C$92.8 million to the Greenstone Partnership.

The managing partner of the Greenstone Partnership is Greenstone Gold Mines GP Inc. ("**GGM**"), which is owned 50/50 by Centerra and Premier. GGM is the current owner of all claims and leases comprising the Greenstone Gold Property.

The major deposits within the Greenstone Gold Property are the Hardrock, Brookbank, Kailey and Key Lake deposits, and the Bankfield West and Viper exploration targets.

Location	Ontario, Canada
Ownership	50%
Business Structure	Centerra holds its 50% limited partnership interest in the Greenstone Partnership, and its 50% interest in the managing partner, GGM, through a wholly-owned subsidiary, AuRico Canadian Royalties Holdings Inc..
End Product	Gold doré
Proposed Mine Type	Open pit

Estimated Mineral Reserves (Centerra's share)
As at December 31, 2018

	Tonnes (kt)	Grade (g/t)	Contained gold (koz)
	Total proven and probable mineral reserves		
Hardrock - open pit	70,858	1.0	2,324

Estimated Mineral Resources (Centerra's share)
As at December 31, 2018

Mineral resources are in addition to reserves. Mineral resources do not have demonstrated economic viability.

Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or part of the inferred resources will ever be upgraded to a higher

	Total Measured and Indicated Mineral Resources		
	Tonnes (kt)	Grade (g/t)	Contained gold (koz)
Hardrock - open pit	5,722	0.4	66
Hardrock – underground	6,846	3.9	860
Brookbank – open pit	1,319	2.0	86
Brookbank – underground	926	7.2	215
Key Lake – open pit	1,286	1.2	49
Key Lake – underground	16	6.5	3
Kailey	4,315	1.0	133
	Inferred Mineral Resources		
Hardrock – open pit	85	0.9	2
Hardrock – underground	10,754	3.6	1,235
Brookbank – open pit	86	2.4	7
Brookbank – underground	202	4.1	27
Key Lake – open pit	673	1.3	28
Key Lake – underground	29	3.6	3
Kailey	1,844	1.0	58

Employees (Greenstone Gold Mines GP Inc.) 24

Property Description and Location

The Greenstone Gold Property is located in northern Ontario, Canada approximately 275 km northeast of Thunder Bay, Ontario. The property consists of four claim groups including Hardrock, Brookbank, Key Lake and Viper with a cumulative strike length of more than 100 km located along, or in close proximity to the Trans-Canada Highway between the towns of Geraldton and Beardmore in the Province of Ontario.

The Greenstone Gold Property consists of 361 patented and leased mining claims plus 1,753 unpatented mining claim cells covering an aggregate area of 34,390 ha. All of the claims, leases and licences of occupation are beneficially held by GGM on behalf of the Greenstone Partnership and are subject to terms under a number of agreements. The major claim groups within the Greenstone Gold Property are as follows:

Project	Claim groups	Description of Claim
Hardrock Project	Hardrock and Kailey	A contiguous block of patented claims, mining leases, licences of occupation and staked claims covering a total area of 14,208 ha. The Hardrock Project is located approximately at Latitude 49°40'N and Longitude 86°56'W in the townships of Lindsley, Errington, Salsberg, McKelvie and Ashmore, and four km south of the town of Geraldton.
Brookbank project	Brookbank, Cherbourg and Fox Ear deposits and the Irwin prospect	939 unpatented cells and mining leases and totalling 15,848 ha. It is located 14 km northeast of the town of Beardmore, Ontario. The Greenstone Partnership owns 100% of the 18 leases that comprise the Brookbank project with the remaining portion of the Brookbank project subject to two joint venture agreements with Metalore Resources Limited ("**Metalore**"). The first joint venture is between the Greenstone Partnership (74%) and Metalore (26%) while the second is between the Greenstone Partnership (79%) and Metalore (21%). The Brookbank project hosts the

Project	Claim groups	Description of Claim
		Brookbank, Cherbourg and Foxear deposits and the Irwin prospect.
Key Lake	Includes the past producing Jellicoe mine	The Key Lake deposit consists of 47 unpatented, leased and patented mining claims totalling 791 ha and is 100-percent owned by the Greenstone Partnership. The Key Lake deposit is 12 km west of the town of Geraldton, Ontario. It is a few hundred metres north of the Trans-Canada Highway.
Viper project	Various exploration prospects	The Viper project was staked by Premier in October 2013 with three additional claims staked in May 2014, and an additional isolated claim was added in October 2015. The Viper project is 100% owned by Greenstone Partnership and is made up of 216 unpatented claim cells totalling 3,543 ha.

Royalties and Other Agreements

Indigenous Communities

Mining claims that comprise the Hardrock Project cover asserted traditional territories of Ginoogaming, Aroland and Long Lake 58 First Nations. Indigenous interests and rights as well as related consultation issues may impact the Limited Partnership's ability to pursue exploration, development and mining at its Hardrock Project. Prior to Centerra's acquisition of its interest in the Greenstone Partnership, Premier signed a memorandum of understanding in 2009 with the Ginoogaming First Nation ("**Ginoogaming**"). The agreement was subsequently amended in December 2011. The agreement established a commitment by both parties to develop a mutually beneficial, co-operative, productive and positive working relationship with respect to exploration activities within Ginoogaming's asserted traditional lands and the potential development of the Hardrock Project.

In June 2018, the Greenstone Partnership entered into a definitive agreement with Long Lake #58 First Nations ("**LLFN**"). In December 2018, the Greenstone Partnership also entered into a long-term relationship agreement with The Métis Nation of Ontario Secretariat Inc.

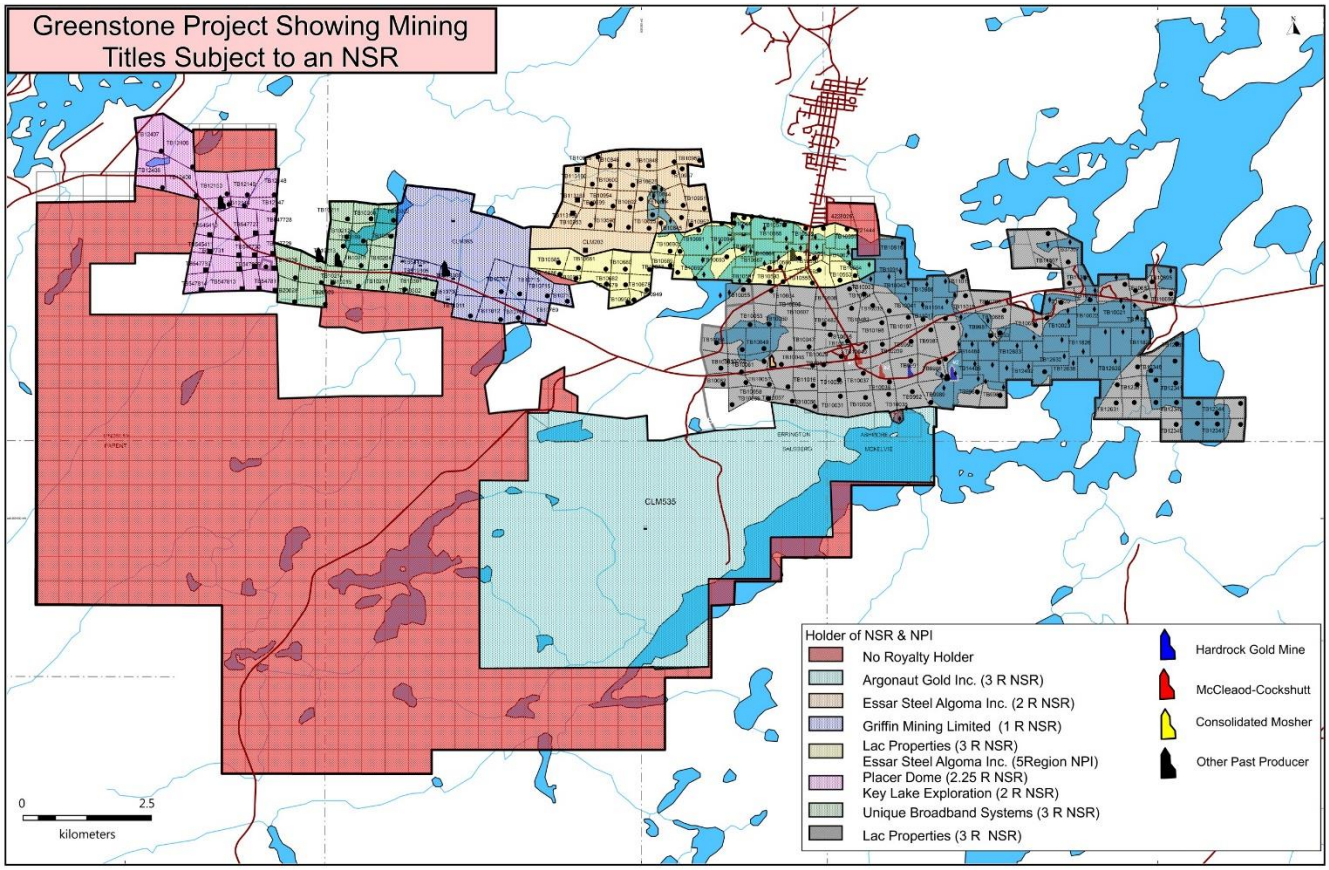
In December 2018, the Greenstone Partnership entered into a new exploration agreement with LLFN, replacing the one previously signed by Premier and LLFN dated March 18, 2010. This agreement established a commitment by both parties for a mutually beneficial, co-operative and productive working relationship with respect to exploration activities within LL58's asserted home lands.

Royalties

Conventional royalties or taxes on possible future mineral production will be due to the Ontario or Federal governments.

There are a number of underlying agreements and royalties that apply to some of the mining claims constituting the Greenstone Gold Property, including a 3% NSR royalty in favour of Franco-Nevada over the Hardrock Project deposit.

Map of Greenstone Project showing mining titles subject to an NSR



Permits and Other Agreements

Permits are required to undertake surface stripping and trenching and drilling. The Greenstone Partnership completed a 20,000 m drilling program in 2018 and will perform further infill drilling in the winter of 2019 with a view to confirming or improving the accuracy of the resource model. As discussed elsewhere in this AIF, the Partnership is evaluating programs to minimize the risk profile of the project including the advancement of permitting, entering into final Long-term Relationship Agreements with local Indigenous groups, and carrying out detailed engineering. In December 2018, the Environmental Impact Study and Environmental Assessment on the Hardrock Project was approved by the Minister of Environment and Climate Change Canada. The Ontario provincial EA Review Report was issued for public comment on October 22, 2018 and approval is anticipated during the first quarter of 2019. Work on pre-construction permit applications are well advanced and will be submitted for review once the Provincial Ministry EA Report is approved.

Mineral Resource and Mineral Reserve Estimates

Hardrock Project

The Mineral Resource estimate covers a corridor of the Hardrock deposit with a strike length of 5.7 km and a width of approximately 1.7 km, down to a vertical depth of 1.8 km below surface. Mineralized zones were interpreted in 3D using GEOVIA GEMS and Paradigm GOCAD software based on a litho-structural model and the drill hole database. The drill hole database used in the estimate contained 304,940 sampled intervals from 684,116 m of diamond drilling in 1,629 holes and 1,219 assays from 26 channel samples.

Mineral Resources were estimated by applying a minimum true thickness of 3.0 m and using the grade of the adjacent material when assayed or a value of zero when not assayed. High-grade capping on raw assay data was established on a per zone basis and ranged from 15 to 45 g Au/t. Drill holes falling within the mineralized zones were composited to 1.5 m intervals. Mineral Resources were estimated using 3D block modelling and 3-pass ID3 interpolation.

Mineral Resources were classified as Indicated only in areas where the maximum distance to drill hole composites was less than 35 m for blocks interpolated in passes 1 and 2 (using a minimum of two drill holes). Mineral Resources were

classified as Inferred in areas where blocks were interpolated during passes 1 to 3 and isolated blocks were reclassified as "exploration potential" on a visual basis. No Measured Mineral Resources were estimated for the Project.

The Mineral Reserve estimate for the Hardrock Project is consistent with the CIM definitions and is suitable for public reporting. As such, the Mineral Reserves are based on Measured and Indicated Mineral Resources, and do not include any Inferred Mineral Resources. There are only Indicated Mineral Resources and no Measured Mineral Resources. Therefore, all of the Mineral Reserve estimate is classified as Probable. The Inferred Mineral Resources contained within the mine design are classified as waste.

Open pit optimization was conducted using GEOVIA Whittle software to determine the optimal economic shape of the open pit to guide the pit design process. The Mineral Reserve estimate includes a 17.3% mining dilution at an average grade of 0.15 g Au/t and a 1.4% ore loss factor.

A feasibility level pit slope design study was carried out by Golder. The conclusions of this study have been used as an input to the pit optimization and design process.

Mineral reserve and mineral resource estimates are set out above on pages 85-86.

Other Greenstone Gold Property Deposits

In addition to the Hardrock deposit, mineral resources were estimated for Brookbank, Key Lake and Kailey deposits. Open pit optimization using GEOVIA Whittle software, based on the Lerchs-Grossmann algorithm, was completed to estimate in-pit Mineral Resources for all three deposits. For Brookbank and Key Lake, underground Mineral Resources were also estimated see pages 85-86.

Mining Operations

Mining

Mining will be carried out using conventional open pit techniques with 10 m benches. An owner mining open pit operation is planned with hydraulic shovels and mining trucks and includes outsourcing of certain support activities such as explosives manufacturing and blasting.

Production drilling of the 10 m benches will be by blast hole drill rigs with both rotary and down-the-hole drilling capability. Blast holes are loaded with bulk emulsion. The majority of the loading in the pit will be carried out by three hydraulic face shovels, two 26 m^3 and one 19 m^3 and two front-end wheel loaders (21 m^3). The shovels and loaders will be matched with a fleet of 181 t payload mine trucks. The presence of underground stopes was considered when designing the pits mainly for the void in the F-Zone, which is 150 m high and 30 m wide. Most of the other underground openings are backfilled with sand fill or rock fill.

Mining of the Hardrock main pit will occur in phases (including the borrow pit) with a single phase for the smaller pit extension to the east. Waste rock will be disposed of in four distinct waste dumps with three located around the pit and one further to the south. The open pit generates 548.9 Mt of overburden and waste rock (inclusive of historic tailings and underground backfill) over the LOM for an average LOM strip ratio of 3.87:1.

The LOM plan details 14.5 years of production at a plant nameplate capacity of 27,000 t/d.

Mineral Processing and Metallurgical Testing

Between 2011 and 2013, mineralogy, grindability and gold recovery test work was performed by SGS Lakefield Research Limited ("**SGS Lakefield**") and McClelland Laboratories, Inc. The SGS Lakefield test work showed that the ore is composed mainly of quartz and plagioclase with minor amounts of pyrite and arsenopyrite, the gold occurs mainly as native gold, the ore is in the category of medium hardness to moderately hard, a portion of the gold can be recovered by gravity concentration and gold can be recovered to a bulk concentrate. The subsequent McClelland Laboratories, Inc. test work showed that gold recovery increased with finer grind size but was not affected by cyanide concentration.

In 2015/2016 additional test work was carried out by SGS Lakefield, JKTech Pty Ltd and FLSmidth. Primarily, high pressure grinding roll ("**HPGR**") tests were required to confirm the ore amenability for high pressure grinding, to select the equipment and estimate the operating costs. Grindability, head grade determination, mineralogy, magnetic separation, gravity recovery, flotation, cyanidation, cyanide destruction, solid-liquid separation and other tests were completed. Additional thickening and rheology test work was carried out to determine the sizing and operating parameters of a pre-leach thickener.

The HPGR testing program included laboratory scale tests (batch and locked-cycle tests) to determine the amenability of the ore to HPGR milling and yield data to perform a preliminary sizing; abrasion tests to provide the data necessary to predict the service life of the rolls and a large-scale pilot plant test to adequately size the equipment. Bond grindability

testing was performed to evaluate the BWI reduction of the HPGR product compared to the feed. A detailed comminution trade-off study recommended two stage crushing followed by HPGR and ball milling over other typical comminution flowsheets such as crushing followed by SAG milling and ball milling, to reduce the risk in not meeting the design throughput and increase energy efficiency.

A multivariate linear regression analysis was used to determine the correlation between the residual gold grade and the ore body mineralogical composition. The results of the cyanidation tests conducted on composites were used as the basis for the analysis. The residual gold grade from the cyanidation test work was found to be highly correlated to the gold, arsenic and sulphur head sample grades, and somewhat less predominantly to grind size.

A metallurgical gravity concentrate and leach recovery test work program were carried out on composites from the 20,000-m 2018 drilling campaign with recoveries similar to estimates noted in the 2016 Feasibility Study.

The gold recovery process for the Project consists of a crushing circuit (gyratory and cone), a grinding circuit (HPGR and ball mill), pre-leach thickening, a leach and CIP circuit, cyanide destruction and tailings disposal, carbon elution and electrowinning, carbon regeneration and a gold refinery. The process operation schedule is 24 hours per day, 365 days per year, with an overall availability of 92%.

Gold production averages 356 koz for the first four full years of production (Year 2 to 5) with an average head grade of 1.27 g Au/t and an average metallurgical recovery of 90.6%.

Environmental Matters

Environmental baseline studies were initiated for the Project in 2013 and were used to identify environmental constraints during the development of preliminary layouts and designs for the Project. This includes consideration of siting and layout of Project infrastructure as well as consideration of design alternatives from an environmental management and approvals perspective. This environmental baseline was the basis for determining incremental changes and predicting environmental effects associated with the Project.

An environmental impact statement / environmental assessment, which also includes a conceptual closure plan, was approved by the federal government in December 2018 allowing GGM to start applying for the federal permits required for the Project. Through 2018, the government of Ontario also advanced the provincial EA process and a decision is expected in the first quarter of 2019, which will allow GGM to apply for the provincial permits required to advance the Project.

Active consultation with stakeholders (community members, agencies and interested parties) and Indigenous communities has been undertaken throughout Project planning including the preparation of the environmental impact statement / environmental assessment and will continue as the Project progresses.

Historical Environmental Issues and Liabilities

The Hardrock Project is situated within a historical mine site for which Premier Gold Mines Ltd. acquired the mining claim in December 2008. The property is a brownfield site that was actively mined during the 1930-1970s by two mines known as the MacLeod-Mosher and Hardrock Mines.

Since mining ceased in the 1970s, decommissioning and remediation activities have been completed at the historical Hardrock Mine and MacLeod-Mosher Mine with a focus on arsenic impacted soils and materials. Despite these efforts, residual soil with primarily arsenic concentrations above applicable environmental criteria exist and will need to be managed as part of the Project development.

Surface infrastructure associated with these underground mines has been removed, with the exception of the former headframe, referred to as the McIntyre headframe, various mine openings (e.g., shafts, a glory hole, raises), and tailings areas remain. Two tailings areas associated with the historical mines are located within the Hardrock Project development area ("**PDA**") and are referred to as the MacLeod High/Low tailings and Hardrock tailings. Characterization and rehabilitation works have been completed at the historical mine sites between 1988 and 2000. With the exception of the western portion of the historical Hardrock tailings, acid rock drainage conditions are unlikely. Groundwater and seepage water quality associated with the tailings is poor (especially with respect to arsenic) and has influenced water quality in Kenogamisis Lake. A number of shafts and underground stopes exist from historical underground mining activities at the former MacLeod-Mosher and Hardrock mines. The presence of the underground stopes was considered when designing the open pit, mainly for the unfilled voids which are located at depth. Most of the other underground openings are backfilled with rock. The remediation and rehabilitation of the mines was prior to current closure planning regulations.

The Hardrock Project has included plans to relocate approximately 77% of the historical Hardrock tailings and 22% of the historical MacLeod tailings to a secure long-term management facility which has been demonstrated to result in improvements to water quality in Kenogamisis Lake.

Mine openings associated with the former MacLeod-Mosher and Hardrock mines fall within the footprint of the open pit with the exception of the Mosher No. 1 Shaft and Hardrock No. 1 Shaft. As the ground surface at the remaining openings will be mined and be within the boundaries of the open pit, these structures will be secured from access by removal due to the open pit. No further closure work related to these openings is expected. The Mosher No. 1 Shaft will be stabilized and secured (capped) in accordance with O. Reg. 240/00 once no longer required. Hardrock No. 1 Shaft is currently cap in accordance with O. Reg. 240/00. At closure, the cap will be inspected by a Qualified Professional Engineer and, if required, stabilized and secured (capped) with a new cap in accordance with O. Reg. 240/00. The sealing of Hardrock No.1 Shaft will evaluate the potential connection with the open pit and be designed to prevent outflow from the shaft to Kenogamisis Lake. A failed stope, referred to as the "Glory Hole" has been fenced and secured at surface.

Technical Report

The Hardrock Technical Report, with an effective date of October 1, 2016 was filed on December 21, 2016 on www.sedar.com.

3.3 Exploration Properties

We own interests in a number of exploration properties, including:

- 100% of the Berg property in Canada; and
- 100% of the Yamaç property in Turkey.

In 2018, we surrendered our interest in the Kapuyt property in Armenia.

We also are party to various joint venture agreements regarding the following exploration properties where our ownership interest in the underlying properties have not yet vested. In 2018 and to the date of this document, we relinquished our rights to earn-in interests in the La Luz and Montes de Oro properties in Nicaragua, the Glor and La Navidad properties in Mexico, the Klippen, Karlinberget and Brännberg properties in Sweden, and the Mutsk property in Armenia.

Canada – Berg

Berg is a copper, molybdenum and silver exploration project located in British Columbia, Canada. We acquired our interest in the Berg property in connection with the acquisition of Thompson Creek in October 2016. The Berg property comprises 115 mineral claims and one mining lease centered at 53° 48' North Latitude and 127° 26' West Longitude for a total of approximately 45,949 acres. The Berg property is 100% owned by us with a 1% net smelter return royalty held by Royal Gold on eight of the mineral claims and one mining lease, including those which host the deposit on the Berg property. All mineral claims and the mining lease are in good standing. Mineral claims are subject to exploration expenditure obligations, or we may choose to pay annual fees to the province in lieu of exploration expenditures. We expect to renew such mineral claims and mining lease in the ordinary course.

Turkey – Yamaç

We have a 100% interest in the Yamaç property. We commenced an exploration program in the fourth quarter of 2017, including geochemical sampling, geophysical surveying and diamond drilling on the property. No exploration activities occurred on the Yamaç property in 2018 as we waited for the relevant permits to be issued.

Mexico – Tenoriba Property

We entered into an option agreement with Mammoth Resources Corp. ("**Mammoth**") on December 17, 2018 for the Tenoriba property in the Province of Chihuahua, Mexico. Mammoth itself had optioned the Tenoriba property from Mr. Rodolfo Chavez Rocha and Minera Ches Mex S. de R.L. de C.V. (collectively, the "**Original Owners**"). We have the right to earn a 51% interest in the property by spending a total of $5 million by the third anniversary of the date of the agreement, and making rental payments to Mammoth in the amount of $350,000 on or before the fourth anniversary of the agreement date. Thereafter, we would have a further right to earn an additional 19% by spending an additional $4 million within a further three-year period, and making annual rental payments to Mammoth totalling $550,000 or issuing common shares of Centerra for such amount (at Centerra's option). After earn-in, the interests of the parties would be subject to a 2% NSR royalty in favour of the Original Owners. Thereafter in both cases (whether the second option right is exercised or not), the parties would fund the exploration and development of the applicable property proportionally to their respective interests.

Canada – Max Property

We entered into an option agreement with JAMA Holdings Inc. ("**JAMA**") dated August 14, 2018 for the Max property in the Province of British Columbia and adjacent to the Mount Milligan Mine. Pursuant to the option agreement, we have the right to acquire a 51% interest in the property by (i) making cash payments to JAMA over a four-year period from the date of the agreement totalling C$200,000; and (ii) spending or allocating work credits/portable assessment credits totalling C$4 million over the same four-year period. Thereafter, we have a further right to earn an additional 19% interest in the property by (i) making cash payments or issuing shares of Centerra, in each case, worth C$400,000 to JAMA, and; (ii) spending or allocating work credits/portable assessment credits totalling C$3 million over a three-year period from exercising this second option. Thereafter in both cases (whether the second option right is exercised or not), the parties would fund the exploration and development of the applicable property proportionally to their respective interests.

Finland – Pontio and Karhu Properties

We entered into an option agreement with Gemdale Ltd. dated October 9, 2018 for the Pontio and Karhu properties in the municipalities of Oulainen, Haapavesi, Ylivieska and Nivala in Finland. Pursuant to the option agreement, we have the right to acquire a 70% interest in the property by making a one-time cash payments to Gemdale Ltd. of $50,000

and spending a total of $5 million by the fourth anniversary of the date that an exploration permit in respect of such properties becomes effective. Thereafter in both cases (whether the second option right is exercised or not), the parties would fund the exploration and development of the applicable property proportionally to their respective interests.

Sweden & Finland Strategic Agreement

We entered into a strategic alliance agreement with Erris Resources Limited ("**Erris**") dated as of January 12, 2015 (as amended January 2019) in relation to all lands within the Kingdom of Sweden, and the lands in the Central Lapland Greenstone Belt and Laivakangas regions of the Republic of Finland. Pursuant to the strategic alliance agreement, we agree to fund Erris' generative investigation and exploration activities within this area, in exchange for the right to earn an ownership interest in any of Erris' properties in the area which we designate. Throughout 2018, we carried out work on three designated properties: the Klippen, Karlinberget and Brännberg properties. Unfortunately, as noted above, we elected to relinquish our earn-in rights in 2018 on each of the three properties. If we designate any further properties, we would have the right to earn a 51% interest in such designated property by spending $1 million on each such property. Thereafter, we have the further right to increase our ownership interest by 19% (for a total of 70% interest) by funding an additional $2 million on further exploration expenditures.

Burkina Faso and Cote d'Ivoire Strategic Agreement

We entered into a strategic agreement with Gengold Resource Capital Pty Ltd. ("**Gengold**") dated as of September 14, 2017 in relation to the areas of Burkina Faso and Core d'Ivoire. Pursuant to the strategic agreement, we agreed to fund Gengold's generative investigation and exploration activities within this area for a period of 2 years, in exchange for the right to earn an ownership interest in any of Gengold's properties in the area which we designate. No such areas have been designated to date.

3.4 Molybdenum Properties

Endako Mine

The Endako Mine is an open-pit molybdenum mine, concentrator and roaster located approximately 161 km west of Prince George, British Columbia, Canada. The property currently comprises a contiguous group of 60 mineral tenures containing 34 claims and 26 leases, covering approximately 12,835.11 ha.

The Endako Mine is operated as a joint venture between Thompson Creek which holds a 75% interest, and Sojitz, which holds the remaining 25% interest. The joint venture was formed on June 12, 1997 pursuant to the terms of the Exploration, Development and Mine Operating Agreement between Thompson Creek and Sojitz. We are the manager of the Endako Mine Joint Venture with overall management responsibility for operations.

Endako Mine deposit is divided into four named areas: Northwest, Denak West, Denak East and Endako. Mining has occurred in the Endako and both Denak areas. The Northwest zone is yet to be put in operation. There are no royalties, back-in rights, encumbrances on title or other agreements, other than the agreement governing the Endako Mine Joint Venture. The infrastructure at Endako Mine includes a 55,000 ton per day concentrator, a 35,000 to 40,000 pound per day roaster (and an additional non-operating roaster), tailings and reclaim water ponds, a crushing plant, waste rock dumps, an administrative building, a truck shop/warehouse, a change house, a first aid station, a laboratory, a garage and other shops. The power supply of the site is provided by a 9 km, 69 kV power line owned by B.C. Hydro from a nearby substation. Water for the milling process is re-circulated from the tailings facility while make-up water is pumped from François Lake, located nearby.

Endako's current permits include an operating permit issued under the British Columbia *Mines Act* by the Ministry of Energy and Mines; an Effluent Permit, Air Permit and Refuse Permit, all issued by the MOE under the *British Columbia Environmental Management Act*; and several water licences issued by the British Columbia Ministry of Forest Lands and Natural Resource Operations.

Endako conducts and is subject to numerous ministry inspections annually. In 2018, the tailings dam Engineer of Record (Golder) inspected the tailings dams at Endako and issued its annual Dam Safety Inspection review report. MOE conducted an inspection of all of the facilities subject to *Environmental Management Act* permits in 2018, as well as an inspection of dust control measures at Endako; and the Ministry of Energy and Mines conducted a geotechnical inspection. Pursuant to an Order issued by the Chief Inspector of Mines to all mining operations in British Columbia, Endako has established an Independent Tailings Review Board consisting of three independent experts in tailings dam design, construction and maintenance.

The Endako Mine has been on care and maintenance effective July 1, 2015 due to the continued weakness in the molybdenum market. As of December 31, 2018, there are approximately 10 employees at Endako Mine for care and maintenance activities.

Thompson Creek Mine

TC Mine is an open-pit molybdenum mine and concentrator located approximately 48 km southwest of the town of Challis, Idaho, USA. The TC Mine land holdings comprise of 1,589 patented and unpatented lode, mill site and placer claims along with fee owned property totaling approximately 9,955 ha.

All current resources are located on patented mineral claims and are not expected to be subject to any US federal government royalties that could be enacted in the future. Approximately 50% of the mineral claims are located within the boundaries of the Salmon-Challis National Forest, with the remaining 50% located within the perimeter of land managed by the United States Bureau of Land Management.

TC Mine has permits issued under the federal *Clean Water Act* and *Clean Air Act*. TC Mine conducts and is subject to numerous agency inspections annually. The TSF at TC Mine is governed by an Idaho statute and dam safety permit administered by the Idaho Department of Water Resources. The tailings dam Engineer of Record (Golder) and the Idaho Department of Water Recourses Dam Safety Engineer conducted inspections in 2018. The Environmental Protection Agency conducted a compliance inspection of the NPDES discharge points in August of 2018 and has reported no instances of non-compliance with permit conditions for the year.

TC Mine operates a commercial molybdenum beneficiation circuit to treat molybdenum concentrates to supplement the concentrate feed sourced directly for the Langeloth Facility. This beneficiation process at TC Mine allows the Company to process high copper molybdenum concentrate purchased from third parties, which is then transported to Langeloth for processing.

TC Mine has been on care and maintenance since December 2014 due to declines in the molybdenum prices.

As at December 31, 2018, TC Mine had 54 employees for care and maintenance, and beneficiation process activities.

Langeloth Metallurgical Facility

Our wholly-owned Langeloth Facility is located in Langeloth, Pennsylvania, approximately 40 km west of Pittsburgh, on land we own in fee simple. The facility receives molybdenum concentrate from third party producers that is either purchased for processing and re-sale or that is toll converted to finished products for third parties. The facility produces and sells ammonium perrhenate and rhenium metal pellets as well as sulfuric acid all recovered as by-products of processing the molybdenum disulfide. In addition, the Langeloth Facility calcines other metal containing materials from various third-party operations.

Four multiple-hearth furnaces are used for the conversion (roasting) of molybdenum concentrate into technical grade molybdenum oxide. These four roasters have the annual capacity to process 36 million pounds of molybdenum contained in concentrates. The molybdenum oxide can be sold as a finished product to customers or can be upgraded at the facility to molybdenum oxide briquettes, pure molybdenum trioxide powder or various sizes of ferromolybdenum products. Two additional furnaces are used to calcine non-hazardous metal containing materials that contain metals other than molybdenum.

The Langeloth Facility has permits which are issued under the federal Clean Water Act and Clean Air Act, both of which are implemented in Pennsylvania by the state Department of Environmental Protection.

As at December 31, 2018, the Langeloth Facility had 131 employees.

4. GOVERNANCE

4.1 Directors and Officers

The following tables set out the directors and executive officers of Centerra Gold Inc. as at December 31, 2018. The term of office for each of the directors will expire at the time of our next annual shareholders meeting, scheduled for May 1, 2019. Each of the directors on the board as of December 31, 2018 was elected to his or her present term as a director by our shareholders at the annual meeting of our shareholders held on May 1, 2018.

Directors

DIRECTOR	BOARD COMMITTEES	PRINCIPAL OCCUPATION OR EMPLOYMENT
RICHARD W. CONNOR Columbine Valley, Colorado, USA Director since June 5, 2012	Audit (Chair) Risk Human Resources and Compensation Special	Corporate Director Partner with KPMG LLP from 1980 to 2009 Other Public Company Directorships (current) Antero Resources Corporation (resigned January 24, 2019), Antero Resources Midstream Management LLC (resigned January 24, 2019), and Zayo Group Holdings Inc.
EDUARD D. KUBATOV Bishkek, Kyrgyz Republic Director since March 10, 2016	Nominating and Corporate Governance Risk Sustainable Operations	Director of the Kyrgyz branch of Robust Resources, an Australian based mining company. General director of Talas Gold Mining Company from 2007 to 2014. General director of Polyus Gold Kyrgyzstan from 2011 to 2013. Other Public Company Directorship (current) None
STEPHEN A. LANG Columbia, Missouri, USA Director since June 17, 2008	Human Resources and Compensation Risk Sustainable Operations	Chairman of the Board of Directors of Centerra President and Chief Executive Officer of Centerra from June 2008 to May 2012 Vice President and Chief Operating Officer of Centerra from December 2007 to June 2008 Other Public Company Directorships (current) Alio Gold Corp. Bear Creek Mining Corporation International Tower Hill Mines Ltd.

DIRECTOR	BOARD COMMITTEES	PRINCIPAL OCCUPATION OR EMPLOYMENT
ASKAR OSKOMBAEV Bishkek, Kyrgyz Republic Director since May 1, 2018	Risk Sustainable Operations	Chairman of the Board of Directors of Kyrgyzaltyn JSC since July 2016. Advisor to the Kyrgyz Republic Prime Minister, Head of Analytical Support Group from November 2015 to June 2016. Expert on monitoring and evaluation, Secretariat of the National Council on Sustainable Development under the President of the Kyrgyz Republic, UNDP project from November 2014-February 2015. Expert on anti-corruption policy, working group of the President of the Kyrgyz Republic, OSCE project from May to September 2014. Adviser to the Prime Minister of the Kyrgyz Republic from November 2012 to April 2014. Other Public Company Directorships (current) None
MICHAEL S. PARRETT Richmond Hill, Ontario, Canada Director since May 8, 2014	Human Resources and Compensation (Chair) Audit Nominating and Corporate Governance Special (Chair)	Independent Consultant and Corporate Director. Stillwater Mining Company from 2009 to 2017. Director, Pengrowth Energy Corporation from 2004 to 2016 Director of Gabriel Resources Limited from 2003 to 2010 (including Chairman from 2005-2010). Other Public Company Directorships (current) None
JACQUES PERRON Denver, Colorado, USA Director since October 20, 2016	Risk (Chair) Sustainable Operations	Corporate Director. Chief executive officer of Thompson Creek from October 2013 to October 2016 (when we acquired Thompson Creek) President and Chief executive officer of St. Andrew Goldfields Ltd. from 2007 to 2013. Other Public Company Directorships (current) Victoria Gold Corp. Aquila Resources Inc.
SCOTT G. PERRY Toronto, Ontario Canada Director since December 31, 2015	None	CEO of Centerra Gold Inc. since November 1, 2015. CEO and Director of AuRico Gold from September 2012 to October 2015. Executive Vice President and CFO of AuRico Gold Inc. from February 2008 to September 2012. Other Public Company Directorships (current) None

DIRECTOR	BOARD COMMITTEES	PRINCIPAL OCCUPATION OR EMPLOYMENT
SHERYL K. PRESSLER Atlanta, Georgia, USA Director since May 7, 2008	Nominating and Corporate Governance (Chair) Audit Special Sustainable Operations	Investment and Strategy Consultant Director of Stillwater Mining Company from May 2002 to May 2013 CEO of Lending Lease Real Estate Investment – US from 2000 to 2001 Other Public Company Directorship (current) None
BEKTUR SAGYNOV Bishkek, Kyrgyz Republic Director since March 10, 2016	Risk Sustainable Operations	Until December 2018, Deputy Chairman on Economics, Finance and Investment of Kyrgyzaltyn JSC Expert of the consulting group for negotiations with Centerra Expert in the energy and mineral resources division of the office of the Prime Minister of the Kyrgyz Republic Other Public Company Directorship (current) None
BRUCE V. WALTER Toronto, Ontario, Canada Director since May 7, 2008	Sustainable Operations (Chair)	Chairman of Nunavut Iron Ore, Inc. Director and officer of Dynatec Corporation from 2002 to 2007 (Vice Chairman from 2002 to 2005 and President and Chief Executive Officer from 2005 to 2007) Other Public Company Directorships (current) Westaim Corporation
SUSAN L. YURKOVICH Vancouver, British Columbia, Canada Director since May 1, 2018	Human Resources and Compensation Sustainable Operations	President and CEO of the British Columbia Council of Forest Industries (COFI) and President of British Columbia Lumber Trade Council. Executive Vice-President, British Columbia Hydro from 2006 to 2015. Other Public Company Directorships (current) None

Executive Officers

OFFICER	PRINCIPAL OCCUPATION IN PAST 5 YEARS
SCOTT G. PERRY *President & Chief Executive Officer* Toronto, Ontario, Canada	CEO of Centerra Gold Inc. since November 1, 2015 and President and CEO as of January 1, 2018. CEO and Director of AuRico Gold Inc. from September 2012 to October 2015. Before that, he served as Executive Vice President and CFO of AuRico Gold Inc. from February 2008 to September 2012.
DARREN J. MILLMAN *Vice President and Chief Financial Officer* Toronto, Ontario, Canada	Vice President and Chief Financial Officer of Centerra since April 1, 2016. Vice President Finance and Treasurer of Centerra from January 2015 to March 2016. Treasurer of Centerra from January 2013 to January 2015. General Manager Finance and Company Secretary of Ivanhoe Australia from July 2007 to December 2012.

OFFICER	PRINCIPAL OCCUPATION IN PAST 5 YEARS
GORDON D. REID *Vice President and Chief Operating Officer* Oakville, Ontario, Canada	Vice President and Chief Operating Officer of Centerra since January 2013. Vice President, Operations of Centerra from March 2009 to January 2013. President, Kumtor Operating Company from 2007 to March 2009.
DENNIS C. KWONG *Vice President, Business Development and Exploration* Toronto, Ontario, Canada	Vice President, Business Development and Exploration of Centerra since January 2016. Vice President, Business Development of Centerra since October 2008 to 2015.
YOUSEF REHMAN *Vice President, General Counsel & Corporate Secretary* Burlington, Ontario, Canada	Vice President, General Counsel & Corporate Secretary of Centerra since January 1, 2018. Senior Legal Counsel of Centerra from 2014 to 2017.

Other Information About Our Directors and Officers

Share Ownership

As of the date of this AIF, our directors and executive officers (as a group) beneficially own, control or direct, or exercise control or direction over, directly or indirectly, 448,448 Common Shares representing approximately 0.15% of our total outstanding Common Shares (on a non-diluted basis).

Cease Trade Orders

To our knowledge as of the date of this AIF, no director or executive officer of Centerra is or has been in the last ten (10) years a director, chief executive officer or chief financial officer of any company that:

- was subject to an order that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or
- was subject to an order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

For the purposes of the foregoing, order means (i) a cease trade order, (ii) an order similar to a cease trade order, or (iii) an order that denied the relevant company access to any exemption under securities legislation, in effect for a period of more than 30 consecutive days.

Bankruptcy and Insolvency

Other than as set out below, to our knowledge as of the date of this AIF, no director or executive officer of Centerra, or a shareholder holding a sufficient number of securities of Centerra to affect materially the control of Centerra:

- is or has been within the last ten (10) years a director or executive officer of any company that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, or
- has within the last ten (10) years become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder.

Mr. Parrett was a director of Mongolia Minerals Corporation (a Canadian private company involved in mining investments in Mongolia) which filed for protection under the *Companies' Creditors Arrangement Act* on June, 2014. The *Companies' Creditors Arrangement Act* proceedings were terminated in February 2015 and Mr. Parrett resigned.

Mr. Lang was a director Allied Nevada Gold Corp. which together with certain of its domestic direct and indirect subsidiaries, filed voluntary petitions for relief under chapter 11 of the U.S. Bankruptcy Code in the United States

Bankruptcy Court for the District of Delaware on March 10, 2015. The Company changed its name to Hycroft Mining Corporation and emerged from Chapter 11 in October 2015.

Mr. Perry was a director of Lachlan Star Limited, a mining company based in Australia. He ceased being a director in October 2014. In February 2015, Lachlan Star Limited entered into voluntary administration.

Penalties and Other Sanctions

To our knowledge as of the date of this AIF, no director or executive officer of Centerra, or a shareholder holding a sufficient number of securities of Centerra to affect materially the control of Centerra, has been the subject of:

- any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
- any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Conflicts of Interest

Some of our directors also serve as directors and/or officers of other companies involved in natural resource exploration, development and production and consequently there exists the possibility for such directors to be in a position of conflict.

In addition, two of our board members are nominees of Kyrgyzaltyn JSC, a significant shareholder. A third member of our board is also a Kyrgyz Republic citizen. As discussed elsewhere in this AIF, we are in in the process of completing the Kumtor Strategic Agreement entered into with, among others, the Kyrgyz Government regarding outstanding legal and regulatory matters affecting KGC and the Kumtor Mine. As a result, there may exist conflicts of interest as it relates to these discussions. We have established a special committee of the Board of Directors to review matters relating to these discussions. The special committee is comprised of a sub-set of directors who are independent of Kyrgyzaltyn and the Kyrgyz Republic.

4.2 Committees

The Board and management believe that sound and effective corporate governance is essential to our performance. We have adopted certain practices and procedures to ensure that effective corporate governance practices are followed and that the Board functions independently of management. The Board carries out its responsibilities directly and through the following standing committees:

- Audit Committee
- Human Resources and Compensation Committee
- Nominating and Corporate Governance Committee
- Sustainable Operations Committee
- Risk Committee

A discussion of our approach to corporate governance and other committees can be found in our management information circular prepared in connection with our most recent annual meeting of shareholders.

Audit Committee

The Audit Committee is responsible for assisting the Board in fulfilling its oversight responsibilities in relation to the following:

- the integrity of our financial statements
- our compliance with legal and regulatory requirements (other than with respect to health, safety and the environment)
- compliance with our Code of Ethics for employees
- the qualifications and independence of our external auditor
- the design and implementation of internal controls over financial reporting and disclosure controls
- management of financial risk delegated by the Board

- related party transactions
- the performance of our internal audit function and independent auditor
- any additional matters delegated to the Audit Committee by the Board

Audit Committee Charter

A copy of the Audit Committee's charter is attached as Schedule A to this AIF and is also available on our website at www.centerragold.com.

Composition of the Audit Committee

The Audit Committee is comprised of Richard W. Connor (Chair), Michael S. Parrett, and Sheryl K. Pressler. Each member of the Audit Committee is independent and financially literate within the meaning of National Instrument 52-110 – *Audit Committees* of the Canadian Securities Administrators.

Relevant educational experience

Richard W. Connor, a director and Chair of our Audit Committee, has over 25 years of experience as an audit partner with KPMG LLP in the United States, principally for publicly traded clients in a variety of industries, including Energy and Mining, and Media and Telecommunications. Mr. Connor retired from KPMG LLP in 2009, where he served as the Office Managing Partner of the KPMG Denver Office from 1996 to 2008. Mr. Connor was elected to the partnership in 1980 and was appointed to the firm's SEC Reviewing Partners Committee in 1987. Mr. Connor earned his BS degree in Accounting from the University of Colorado. He is a member of the American Institute of Certified Public Accountants and the Colorado Society of Certified Public Accountants. Mr. Connor currently serves on the board of directors and as chairman of the audit committee of Antero Resources Corporation, an independent oil and natural gas company headquartered in Denver Colorado. Mr. Connor also serves on the board of directors of Antero Midstream Partners LP, a publicly listed master limited partnership listed on the New York Stock Exchange, and on the board of Zayo Group LLC, a provider of bandwidth infrastructure and colocation services headquartered in Boulder, Colorado.

Michael S. Parrett, a director, is currently an independent consultant and corporate director. He served on the boards of Stillwater Mining Company from 2009 to 2017, and Gabriel Resources Limited from 2003 to 2010 (including as Chairman from 2005 to 2010), Pengrowth Energy Corporation from 2004 to 2016, and of Fording Canadian Coal Trust from 2003 to 2008. Previously, Mr. Parrett was the Chief Financial Officer and the President of Rio Algom Limited and, prior to that, Chief Financial Officer of Falconbridge Limited. Mr. Parrett is a Chartered Professional Accountant and received his Bachelor of Arts degree in Economics from York University.

Sheryl K. Pressler, a director, is currently an investment and strategy consultant in Atlanta, Georgia. From 2000 to 2001, she served as Chief Executive Officer of Lend Lease Real Estate Investments-United States. From 1994 to 2000, she served as Chief Investment Officer of California Public Employees' Retirement System. Prior thereto, she was responsible for the investment management of the retirement funds for the McDonnell Douglas Corporation. Ms. Pressler received a Bachelor of Arts degree from Webster University and a Master of Business Administration degree from Washington University. Ms. Pressler served on the board of directors of Stillwater Mining Company from 2002 until 2013.

External Audit Pre-Approval Procedures

As part of our corporate governance practices, under our Audit Committee charter, the Audit Committee is required to pre-approve the audit and non-audit services performed by external auditors in accordance with applicable law.

Fees Paid to External Auditors

Audit, tax and other fees billed by our external auditor, KPMG LLP, in respect of the years ended December 31, 2018 and December 31, 2017 are set out below.

	2017 ($)	% total fees[4] (%)	2018 ($)	% of total fees[4] (%)
Audit fees	1,016,775	70.1	900,960	67.9
Audit-related fees[1]	241,350	16.6	220,500	16.6
Tax fees[2]	65,200	4.5	136,300	10.3
All other fees[3]	126,860	8.7	69,700	5.2
Total fees	**1,450,185**		**1,327,460**	

Notes:

(1) Audit related fees in 2017 and 2018 included interim reviews of the consolidated financial statements and accounting assistance work.
(2) Tax fees comprise amounts billed for transfer pricing advisory services, tax compliance and tax advisory services.
(3) In 2018, the "all other fees" included advisory services in connection with the integration of AuRico. In 2017, it included advisory services on the Company's reporting obligations under the *Extractive Sector Transparency Measures Act*. All non-audit services to be provided by KPMG LLP must be pre-approved by the Audit Committee.
(4) Numbers do not add to 100% due to rounding.

4.3 Interest of Management and Others in Material Transactions

A description of the material transactions entered into during the three years prior to the date of this AIF or during the current financial year with any director, executive officer or shareholder of Centerra or any associate or affiliate of such person that has materially affected or is reasonably expected to materially affect Centerra can be found under the heading Management's Discussion and Analysis – Related Party Transactions in our MD&A for the year ended December 31, 2018.

5. RISK FACTORS

Below are the risk factors that we believe can have a material effect on the profitability, future cash flow, earnings, results of operations, stated reserves and financial condition of the Company. If any event arising from these risks occurs, the Company's business, prospects, financial condition, results of operations or cash flows could be adversely affected, the trading price of Centerra's common shares could decline and all or part of any investment may be lost.

You should note that the following is not, however, a complete list of the potential risks we face. Additional risks and uncertainties not currently known to us, or that are currently deemed immaterial, may also materially and adversely affect the Company's business operations, prospects, financial condition, results of operations, or cash flows.

5.1 Strategic Risks

Country, Political & Regulatory

Centerra's operations and mineral resources are subject to country political and regulatory risks

Centerra's mining operations and exploration activities are affected in varying degrees by the political stability and government regulations relating to investment, corporate activity, and the mining business in the countries in which it operates, explores and develops properties. Operations may also be affected in varying degrees by terrorism; military conflict or repression; crime; populism; activism; labour unrest; attempts to renegotiate or nullify existing concessions, licenses, permits and contracts; unstable or unreliable legal systems; changes in fiscal regimes including taxation, and other risks arising out of sovereignty issues.

Governments have entered into contracts with Centerra and/or granted mining claims, permits, licenses or concessions that enable us to conduct operations or exploration and development activities. Notwithstanding these arrangements, Centerra's ability to conduct operations, exploration and/or development activities at any of its properties is subject to obtaining and/or renewing permits or concessions, changes in laws or government regulations or shifts in political attitudes beyond its control.

A significant portion of the Company's gold production and its mineral reserves and mineral resources are derived from assets located in the Kyrgyz Republic and Turkey, countries that have experienced political difficulties in recent years. There continues to be a risk of future political instability in these jurisdictions.

The Company does not currently carry political risk insurance covering its investments in any of the countries where it operates. From time to time, it assesses the costs and benefits of obtaining and maintaining such insurance. There can be no assurance that, if the Company chose to obtain it, political risk insurance would be available to it, or that particular losses the Company may suffer with respect to its foreign investments will be covered by any insurance that we may obtain in the future.

Resource nationalism could adversely impact Centerra's business

Companies in the mining and metals sector continue to be targeted to raise government revenue, particularly as governments struggle with deficits and concerns over the effects of depressed economies. Many governments are continually assessing the fiscal terms of the economic rent for mining companies to exploit resources in their countries. Numerous countries, including the Kyrgyz Republic and Turkey have in the past introduced changes to their respective mining regimes that reflect increased government control or participation in the mining sector, including, but not limited to, changes of laws or governmental regulations affecting foreign ownership, taxation and royalties, labour mine safety, exchange rates, exchange controls, permitting and licensing of exploration, development and production, land use

restrictions, annual fees to maintain mineral properties in good standing, price controls, export controls, export and import duties, restrictions on repatriation of income or return of capital, requirements for local processing of mineral products, environmental protection, as well as requirements for employment of local staff or contractors, and contributions to infrastructure and social support systems. The Company's operations may be affected in varying degrees by such laws and government regulations.

There can be no assurance that industries deemed of national or strategic importance like mineral production will not be nationalized. Government policy may change to discourage foreign investment; nationalization of mining industries may occur; or other government limitations, restrictions or requirements not currently foreseen may be implemented. There can be no assurance that the Company's assets will not be subject to nationalization, expropriation or confiscation, whether legitimate or not, by any authority or body. While there are often provisions for compensation and reimbursement of losses to investors under such circumstances, there is no assurance that such provisions would effectively restore the value of the Company's original investment or that such restoration would occur within a reasonable timeframe. There also can be no assurance that the laws in these countries protecting foreign investments will not be amended or abolished or that existing laws will be enforced or interpreted to provide adequate protection against any or all of the risks described above. Furthermore, there can be no assurance that the agreements the Company has with the governments of these countries will prove to be enforceable or provide adequate protection against any or all of the risks described above.

Centerra's ability to make payments depends on the cash flows of its subsidiaries

Centerra conducts substantially all of its operations through subsidiaries, some of which are incorporated outside North America. The Company has no direct operations and no significant assets other than the shares of its subsidiaries. Therefore, the Company is dependent on the cash flows of its subsidiaries to meet its obligations, including payment of principal and interest on any debt it incurs or dividends. The ability of Centerra's subsidiaries to provide the parent company with payments may be constrained by, among others, the following factors: (i) the cash flows generated by operations, investment activities and financing activities; (ii) the level of taxation and royalties, particularly corporate profits and withholding taxes, in the jurisdiction in which they operate and in Canada; and (iii) the introduction of exchange controls, repatriation restrictions (including those that may be ordered by courts) or the availability of hard currency to be repatriated.

Changes in, or more aggressive enforcement of, laws, regulations and government practices could adversely impact Centerra's business

Mining operations, development activities, and exploration activities are subject to extensive laws and regulations, both in the countries where mining operations and exploration and development activities are conducted and in the mining company's home jurisdiction. Centerra's lenders may also impose similar requirements to Centerra's operations. These regulations relate to production, development, exploration, exports, imports, taxes and royalties, labour standards, suppliers and contractors, occupational health, waste disposal, protection and remediation of the environment, mine decommissioning and reclamation, mine safety, toxic substances, transportation safety and emergency response, social responsibilities and sustainability, and other matters.

Compliance with these laws, regulations and lender requirements increases the costs of exploring, drilling, developing, constructing, operating and closing mines and other facilities. It is possible that the costs, delays, access to land, water, and power, and other effects associated with these laws and regulations may impact the Company's decision as to whether to continue with operating its existing mines, ore processing and other facilities, or whether to proceed with exploration or development of properties. Since legal requirements change frequently, are subject to interpretation and may be enforced to varying degrees in practice, the Company is unable to predict the ultimate cost of compliance with these requirements or their effect on operations.

In particular, there has been a global increase in the level of local community concerns in respect of the environmental footprint of mining operations as well as concerns over the management of water resources, and mine closure plans. This may lead to governments and other stakeholders becoming increasing rigorous in their laws, regulations or requirements.

If the laws, regulations or lender requirements relating to the Company's operations were to change, or the enforcement of such requirements were to become more rigorous, the Company could be required to incur significant capital and operating expenditures to comply, which could have a material adverse effect on its financial position and its ability to achieve operating and development targets. Changes to laws and regulations may also impact the Company's reserves.

Community activism may influence laws and regulations, result in increased contributory demands, or in business interruption

Slow economic development in some of the countries in which the Company operates has resulted in an increase in community activism and expectations by local governments for resource companies to increase their contributions to local communities. For example, the Kumtor Mine has experienced a number of roadblocks in the past resulting from the discontent of various community groups. Heightened global concern for the environment and water in particular, as a result of both climate change impacts as well as following certain significant industrial accidents, has led to increased scrutiny of mining operations, review of laws aimed at environmental protection, and delays in the issuance of required permits and licenses for development and operation activities.

There is a risk that the Kumtor Strategic Agreement with the Kyrgyz Government will not be successfully completed

The Company entered into the Kumtor Strategic Agreement with the Kyrgyz Government on September 11, 2017 which sets out the pathway for the resolution of substantially all the outstanding claims, disputes, court proceedings and court orders affecting the Kumtor Mine. A fulsome discussion of the Kumtor Strategic Agreement is found elsewhere in this document. Completion of the Kumtor Strategic Agreement is subject to various conditions precedents which are expected to be completed by the deadline of May 31, 2019. While the Company has been working closely with the Kyrgyz Government to expeditiously satisfy the remaining conditions precedent, there are no assurances that the deadline will not be further extended, or that all of the conditions precedent to the completion of the settlement contained in the Kumtor Strategic Agreement will be satisfied. If the settlement contained in the Kumtor Strategic Agreement is not completed, there are no assurances that (i) the Company will be able to successfully resolve any or all of the outstanding matters affecting the Kumtor Mine or that any future discussions between us and the Kyrgyz Government will result in a mutually acceptable resolution; or (ii) the Kyrgyz Government and/or Parliament will not take actions that are inconsistent with the Kyrgyz Government's obligations under the Kumtor Strategic Agreement or Kumtor Project Agreements, including adopting a law "denouncing" or purporting to cancel or invalidate the Kumtor Project Agreements or laws enacted in relation thereto which have the effect of nationalization of the Kumtor Mine. Furthermore, if all such claims are not resolved as provided for in the Kumtor Strategic Agreement and despite the Company's view that all disputes related to the 2009 Restated Investment Agreement should be determined in arbitration, there are risks that an arbitrator may (i) reject the Company's claims; (ii) determine it does not have jurisdiction; and/or (iii) stay the arbitration pending determination of certain issues by the Kyrgyz Republic courts. Even if the Company receives an arbitral award in its favour against the Kyrgyz Republic and/or Kyrgyzaltyn, there are no assurances that it will be recognized or enforced in the Kyrgyz Republic. Accordingly, the Company may be obligated to pay part of or the full amounts of such claims regardless of the action taken by the arbitrator. The Company does not have insurance or litigation reserves to cover these costs.

The Company's planned activities are dependent upon receipt and/or renewal of numerous permits and licenses

A number of approvals, licenses and permits are required for various aspects of exploration, mine development, and operations. This includes licenses and permits, which include or cover without limitation air quality, water quality, water rights, dam safety, emergency preparedness, hazardous materials (including the transportation thereof), waste rock management, solid waste disposal and tailings operations. Changes in a mine's design, production rates, quality of material mined, milling processes or circuits, and many other matters often require submission of the proposed changes for agency approval prior to implementation (including consultations with potentially impacted Indigenous Groups), and these may not be obtained. In addition, changes in operating conditions beyond our control, changes in agency policy and federal, provincial and state laws, litigation or community opposition could further affect the successful permitting of operations.

Obtaining and maintaining the various permits for the Company's exploration, mine development, and operations is complex, time-consuming and expensive. The Company has in place processes and personnel designed to obtain all necessary permits and licenses. However, its efforts are contingent upon many variables outside of its control. The Company cannot be certain that all necessary permits and licenses will be maintained or obtained on acceptable terms or in a timely manner. Any failure to obtain or maintain permits or licenses, even if inadvertent, could result in the interruption of production, exploration or development, or material fines, penalties or other liabilities.

The Company's relationships with local communities may affect our existing operations and development projects

Having positive and constructive relationship with the communities in which the Company operates is critical to ensure the future success of its existing operations and the construction and development of our development projects. There is an increasing level of public concern relating to the real and perceived effect of mining activities on the environment and on communities impacted by such activities. Adverse publicity relating to the mining industry or the Company could have an adverse effect on the Company's reputation or financial condition and may impact its relationship with the

communities in which it operates. Reputation loss may also result in decreased investor confidence, increased challenges in developing and maintaining community relations and serve as an impediment to the Company's overall ability to advance its projects, which could have a material adverse impact on the Company. While the Company is committed to operating in a socially responsible manner, there is no guarantee that its efforts in this regard will mitigate this potential risk.

The inability of the Company to maintain positive relationships with local communities may also result in additional obstacles to permitting, increased legal challenges, or other disruptive operational issues at any of its operating mines, and could have a significant adverse impact on the Company's ability to generate cash flow, with a corresponding adverse impact to the Company's share price and financial condition.

Indigenous Claims and Consultation Issues

Certain of Centerra's properties are subject to rights or the asserted rights of various Indigenous groups. These interests of such groups and rights as well as related consultation issues may impact the Company's ability to pursue exploration, development and mining at certain of its properties. Governments in many jurisdictions must consult with, or require the Company to consult with, potentially impacted Indigenous groups with respect to grants of mineral rights, the issuance or amendment of project authorizations, and the grant of necessary licenses and permits. Consultation and other rights of Indigenous groups may require accommodation including undertakings regarding employment, procurement opportunities, royalty payments and other matters. This may affect the Company's ability to acquire within a reasonable time frame effective mineral titles, permits or licenses in these jurisdictions in which title or other rights are claimed by Indigenous peoples, and may affect the timetable and costs of development and operation of mineral properties in these jurisdictions, particularly if the Company is required to, or chooses to, enter into community development, impact benefits agreements, or other similar agreements with potentially impacted communities. These legal requirements may also affect the Company's ability to expand or transfer existing operations or to develop new projects.

Legal and Other

Current and future litigation may impact the revenue and profits of the Company

The Company is from time to time involved in or subject to legal proceedings related to its business. These claims can be based on allegations of breach of contract, negligence, breach of statutory duty, public nuisance or private nuisance or otherwise in connection with our operations or investigations relating thereto. Such legal proceedings can be complex, costly, and highly disruptive to business operations by diverting the attention and energies of management and other key personnel. The assessment of the outcome of legal proceedings, including its potential liability, if any, is a highly subjective process that requires judgments about future events that are not within our control. The outcome of litigation, arbitration or other legal proceedings, including amounts ultimately received or paid upon judgment or settlement, may differ materially from management's outlook or estimates, including any amounts accrued in the financial statements.

Centerra's properties may be subject to defects in title

Centerra has investigated its rights to explore and exploit all of its material properties, and to the best of its knowledge, those rights are in good standing. However, no assurance can be given that such rights will not be revoked or significantly altered to its detriment. There can also be no assurance that the Company's rights will not be challenged or impugned by third parties, including local governments and Indigenous groups. As a result, the Company may be constrained in its ability to operate its properties or unable to enforce its rights with respect to its properties.

Although the Company is not currently aware of any existing title uncertainties with respect to any of its properties except as discussed in the preceding paragraphs, there is no assurance that such uncertainties will not result in future losses or additional expenditures.

Centerra may be unable to enforce its legal rights in certain circumstances

In the event of a dispute arising at its foreign operations, the Company may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in Canada or in arbitration. The Company may also be hindered or prevented from enforcing its rights with respect to a governmental entity or instrumentality because of the doctrine of sovereign immunity.

The dispute resolution provisions of the Restated Investment Agreement for the Kumtor Mine stipulate that any dispute between the parties thereto is to be submitted to international arbitration. However, there can be no assurance that a particular governmental entity or instrumentality will either comply with the provisions of these or any other agreements or voluntarily submit to arbitration.

Centerra's largest shareholder is a state-owned entity of the Kyrgyz Government

Centerra's largest shareholder is Kyrgyzaltyn, which is a state-owned entity. Kyrgyzaltyn owns approximately 27% of the common shares of Centerra. Pursuant to the terms of the Restated Shareholders Agreement, to which Centerra and Kyrgyzaltyn are parties, Kyrgyzaltyn has two nominees on its board of directors. In addition, and in light of various considerations including the importance of the Kumtor Mine to Centerra, Centerra included in its proposed nominees for election at the most recent annual general shareholders' meeting a third nominee of Kyrgyzaltyn who was elected to the Board.

There can be no assurance that the Kyrgyz Government, through its ownership and control of Kyrgyzaltyn, will not use its influence to materially change the direction of the Company. This concentration of ownership may have the effect of delaying or preventing a change in control of Centerra, which may deprive its shareholders of a control premium that might otherwise be offered in connection with such a change of control. The Company is aware that Kyrgyzaltyn has in the past received inquiries regarding the potential acquisition of some or all of its common shares in the Company and the sale by Kyrgyzaltyn of its shareholdings to a third party could result in a new purchasing shareholder obtaining a considerable interest in the Company. Should Kyrgyzaltyn sell some or all of its interest in Centerra, there can be no assurance that an offer would be made to the other shareholders of Centerra or that the interests of such a shareholder would be consistent with the plans of the Company or that such a sale would not decrease the value of the Common Shares.

Centerra's directors may have conflicts of interest

Certain of our directors also serve as directors and/or officers of other companies involved in natural resource exploration, development and production and consequently there exists the possibility for such directors to be in a position of conflict.

Centerra is subject to Anti-Corruption Legislation

Centerra is subject to anti-corruption and anti-bribery laws, including Canada's *Corruption of Foreign Public Officials Act* (the "**Anti-Corruption Legislation**"), which prohibits Centerra or any officer, director, employee or agent of Centerra or any shareholder of Centerra acting on its behalf from paying, offering to pay, or authorizing the payment of anything of value to any foreign government official, government staff member, political party, or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. The Anti-Corruption Legislation also requires public companies to make and keep books and records that accurately and fairly reflect their transactions and to devise and maintain an adequate system of internal accounting controls. Centerra's international activities create the risk of unauthorized payments or offers of payments by Centerra's employees, consultants or agents, even though they may not always be subject to Centerra's control. Centerra prohibits these practices and provides training and education to its employees and seeks confirmation of compliance from its consultants and agents. However, Centerra's existing safeguards may prove to be less than effective, and Centerra's employees, consultants and agents may engage in conduct for which Centerra might be held responsible. Any failure by us to adopt appropriate compliance procedures and ensure that Centerra's employees and agents comply with the Anti-Corruption Legislation and applicable laws and regulations in foreign jurisdictions could result in substantial penalties or restrictions on Centerra's ability to conduct business in certain foreign jurisdictions.

Strategy and Planning

Centerra's future exploration and development activities may not be successful

Exploration for and development of mineral properties involve significant financial risks and may be subject to political risks that even a combination of careful evaluation, experience and knowledge may not eliminate. While the discovery of a mineral resource or mineral deposit may result in substantial rewards, few properties that are explored are ultimately developed into producing mines. The economic feasibility of development projects is based upon many factors, including the accuracy of mineral resource and reserve estimates; metallurgical recoveries; capital and operating costs; government regulations relating to prices, taxes, royalties, land tenure, land use, water consumption, importing and exporting, environmental protection; and gold prices, which are highly volatile. Development projects are also subject to the successful completion of socio-environmental impact assessments, feasibility studies, issuance of necessary governmental permits and availability of adequate financing.

The Company's ability to sustain or increase present levels of production is dependent on the successful acquisition or discovery and development of new orebodies and/or expansion of existing mining operations. The Company cannot ensure that its current exploration and development programs will result in profitable commercial mining operations or replacement of current production at existing mining operations with new mineral reserves. Also, substantial expenses

may be incurred on exploration projects that are subsequently abandoned due to poor exploration results or the inability to define mineral reserves that can be mined economically.

It is also not unusual for new mining operations to experience unexpected problems during the start-up phase and to require more capital and time than anticipated.

Centerra's mineral reserves may not be replaced

Centerra has two mines that provide revenue – the Kumtor Mine located in the Kyrgyz Republic and the Mount Milligan Mine located in British Columbia, Canada. Current LOM plans for the Kumtor Mine contemplate mining until 2023 and milling operations until 2026. Based on the current LOM plan for the Mount Milligan Mine, there is approximately 19 years remaining (to 2038).

If the Company's existing mineral reserves are not replaced either by the development or discovery of additional reserves and extension of the LOM at its operations, or through the acquisition or development of an additional producing mine, there could have an adverse impact on its future cash flows, earnings, results of operations and financial condition, including as a result of requirements to expend funds for reclamation and decommissioning. Although the Company is actively engaged in programs to increase mineral reserves, there can be no assurance that these programs will be successful.

Centerra may experience difficulties with its partners

As a result of having partners in the exploration, development and operation of the Company's projects (Endako, Greenstone, and exploration option arrangements), the Company is subject to the risks normally associated with any partnership/joint venture arrangements. These risks include disagreement with a partner on how to explore, develop, operate and finance a project, possible litigation between us and a partner regarding matters in the agreement, and failure by the Company's partners to abide by Centerra's policies and procedures. This may be particularly the case when the Company is not the operator on the property.

Centerra's mineral reserve and resource estimates may be imprecise

Mineral reserve and resource figures are estimates and no assurances can be given that the indicated levels of minerals will be produced or economically extracted, or that we will receive the price assumed in determining its mineral reserves. These estimates are expressions of judgment based on knowledge, mining experience, analysis of drilling results and industry practices, and historical and forecasted costs. Valid estimates and the assumptions such estimates rely on may significantly change when new information becomes available or conditions change. While the Company believes that the mineral reserve and resource estimates included are well established and reflect management's best estimates, by their nature mineral reserve and resource estimates are imprecise and depend, to a certain extent, upon analysis of drilling results and statistical inferences that may ultimately prove unreliable.

Furthermore, fluctuations in the market price of gold, copper and other commodities as well as increased capital or production costs or reduced recovery rates may render mineral reserves uneconomic and may ultimately result in a reduction of reserves. The extent to which mineral resources may ultimately be reclassified as proven or probable mineral reserves is dependent upon the demonstration of their profitable recovery. The evaluation of mineral reserves or resources is always influenced by economic and technical factors, which may change over time.

No assurances can be given that any mineral resource estimate will ultimately be reclassified as proven or probable mineral reserves.

Centerra's production and cost estimates may be inaccurate

Centerra prepares estimates of future production and costs for its operations. These production and cost estimates are based on historical costs and productivity experience, or technical studies in the case of new operations; however, actual production and costs may vary from estimates for a variety of reasons, including actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors relating to the ore reserves, such as the need for sequential development of orebodies and the processing of new or different ore grades; encountering unusual or unexpected geological conditions; risks and hazards associated with mining; shortages of principal supplies needed for operations, including explosives, fuel, chemical reagents, water, equipment parts and lubricants; natural phenomena, such as inclement weather conditions, floods, earthquakes, ice or ground movements, pit wall failures and cave-ins; equipment failures; labour issues including unexpected labour shortages or strikes, and the inability to retain or attract the suitable personnel and civil action by employees; and insufficient modelling robustness. Costs of production may also be affected by a variety of factors, including: changing waste-to-ore ratios, ore grade metallurgy, labour costs, costs of supplies and services (such as, for example, fuel and power), general inflationary pressures and currency exchange rates.

As a result of social media and other web-based applications, reputational risks have increased.

Damage to the Company's reputation can be the result of the actual or perceived occurrence of any number of events, including, without limitation, allegations of fraud or improper conduct, environmental non-compliance or damage, or the failure to meet the Company's objectives or guidance. Any of these events could result in negative publicity to the Company, regardless of whether the underlying event is true or not.

Although Centerra places a great emphasis on protecting its image and reputation, the Company does not ultimately have direct control over how it is perceived by others. Reputation loss may lead to increased challenges in developing and maintaining government and community relations, decreased investor confidence and act as an impediment to the Company's overall ability to advance its projects, or to access equity or debt financing.

Centerra may be unable to identify opportunities to grow its business or replace depleted reserves, and it may be unsuccessful in integrating new businesses and assets that we acquire.

As part of Centerra's business strategy, the Company has sought and will continue to seek new operating, development and exploration opportunities in the mining industry. In pursuit of such opportunities, the Company may fail to select appropriate acquisition candidates or negotiate acceptable arrangements, including arrangements to finance acquisitions or integrate the acquired businesses into its business. The Company cannot provide assurances that it can complete any acquisition or business arrangement that it pursues, or is pursuing, on favorable terms, if at all, or that any acquisitions or business arrangements completed will ultimately benefit its business. Further, any acquisition the Company makes will require a significant amount of time and attention of the Company's management, as well as resources that otherwise could be spent on the operation and development of its existing business.

Any future acquisitions would be accompanied by risks, such as a significant decline assumed commodity prices; the quality of the mineral deposit acquired proving to be lower than expected; the difficulty of assimilating the operations and personnel of any acquired companies; the potential disruption of its ongoing business; the inability of management to realize anticipated synergies and maximize its financial and strategic position; the failure to maintain uniform standards, controls, procedures and policies; and the potential for unknown or unanticipated liabilities associated with acquired assets and businesses, including tax, environmental or other liabilities. There can be no assurance that any business or assets acquired in the future will prove to be profitable, that the Company will be able to integrate the acquired businesses or assets successfully or that the Company will identify all potential liabilities during the course of due diligence.

The trading price of the Company's common shares may be subject to large fluctuations and may increase or decrease in response to a number of events and factors.

These factors may include, but are not limited to the price of gold, copper and other metals; the impact of exchange rates on our operation costs; the Company's operating performance and the performance of competitors and other similar companies; the public's reaction to the Company's press releases, other public announcements and its filings with the various securities regulatory authorities; changes in earnings estimates or recommendations by research analysts who track the Company's common shares or the shares of other companies in the resource sector; changes in general economic conditions; the presences or actions of a large shareholder; the arrival or departure of key personnel; and acquisitions, strategic alliances or joint ventures involving the Company or its competitors.

In addition, the market price of the Company's shares are affected by many variables not directly related to the Company's success and are therefore not within its control, including other developments that affect the market price and volume volatility for all resource sector shares, the breadth of the public market for the Company's shares, and the attractiveness of alternative investments. The effect of these and other factors on the market price of the Common Shares on the exchanges in which the Company trades has historically made Centerra's share price volatile and suggests that the Company's share price will continue to be volatile in the future.

Natural Phenomena

Centerra may experience further ground movements at the Kumtor Mine

From time to time, the Kumtor Mine has experienced ground movement in various parts of the Central pit, which has led to an employee casualty, considerable short falls in the annual gold production, changes in mining sequences, increased expenditure on depressurization and dewatering programs, the movement of existing infrastructure and/or the redesign and construction of new infrastructure, reduced slope angles of the Central pit, and changes in waste rock dump designs. Most recently, pit wall movement has been experienced in the northwest wall of the Central Pit where KGC is currently undertaking cut-back 19.

Although extensive efforts are employed by Centerra to prevent and anticipate further ground movement, there is no guarantee that sudden unexpected ground movements will not recur. A future ground movement could result in a significant interruption of operations. The Company may also experience a loss of mineral reserves or a material increase in costs, if it is necessary to redesign the open pit or waste rock dumps as a result of a ground movement. The consequences of a ground movement will depend upon the magnitude, location and timing of any such movement.

Centerra may experience unanticipated waste dump movements at the Kumtor Mine

The Company often has to mine a significant amount of waste rock material in order to gain access to ore. At the Kumtor Mine, we place this waste rock material in three areas which have been permitted by Kyrgyz authorities for such purpose: the Davidov Valley waste dump, Lysii waste dump and Sarytor waste dump. These waste dumps are continuously monitored to, among other things, ensure their stability. In 2013, a large section of the Kumtor Mine's principal waste-rock dump, the Davidov Valley waste dump, experiencing a greater than anticipated rate of movement which required the relocation of certain mine infrastructure including workshops, administrative facilities and electrical substations. The Company expedited the relocation of the affected infrastructure to ensure continued safe operations.

Extensive efforts are employed by the Kumtor Mine to confirm the stability of the waste dumps and to anticipate waste dump movement (some minimal movement is naturally expected to occur) including automated system monitoring, third party geotechnical reviews, and revision to the strategies for placing waste rock on the waste dumps. However, despite these effects, there are no assurances that sudden unexpected waste dump movements will not recur as they are many factors that are outside of our control that may impact the stability and movement of the waste dump, including weather conditions. Any unanticipated waste dump movement could result in interruption of operations. There is also a possibility that waste dump movement may reach the tailings dam facility, which could have significant effects on the environment (see risk entitled "*Water management and the oversight of our tailings management facilities are subject to regulation and risks and could result in significant damages to persons and property.*") The consequences of a waste dump movement will depend upon the magnitude, location and timing of any such movement.

Centerra will experience further ice movement at the Kumtor Mine

Continued movement of ice from the South-East Ice Wall into the Kumtor Central pit above the high-grade SB Zone section requires the mining of ice and waste to maintain its planned production of ore.

During 2012, a substantial acceleration of ice movement, which was exacerbated by a 10-day illegal strike which occurred in early February 2012, required us to revise the Kumtor Mine plan to maintain safe access to the Kumtor Central pit. Under the new mine plan, mining of cut-back 12B, where ore for the second quarter of 2012 was to be released, was stopped to permit pre-stripping of ice and waste in the southwest portion of the pit (cut-back 14B) and unloading of ice and waste material from the high movement area to provide access to the southeast section of the Kumtor Central pit. The changes to the mine plan and the delayed release of ore from cut-back 12B resulted in a seven-week shutdown of the Kumtor mill and required us to revise its 2012 production and cost guidance.

In February 2014, increased movement of the South arm of the Davidov glacier required the construction of a buttress to ensure continued safe mining in the open pit.

Although the Company is employing extensive efforts to manage further waste and ice movements, there is no guarantee that such efforts will be successful or that further waste and ice movements will not adversely affect operations at the Kumtor Mine. Future movements could result in a significant interruption of operations, impede access to ore deposits, or require redeployment of mobile equipment away from mining of ore. The Company may also experience a loss of mineral reserves or a material increase in costs if it is necessary to redesign the open pit and surrounding infrastructure as a result of waste and ice movements. The consequences of further ice movement into the Kumtor Central pit will depend upon the extent, location and timing of any such movement.

Natural or Man-Made Disasters

The Company's operations are subject to adverse events brought on by both natural and man-made disasters including but not limited to severe weather conditions, forest fires, earthquakes and avalanche. These events could damage or destroy or adversely affect the operations at our physical facilities and similar events could also affect the facilities of our suppliers. Any such damage or destruction could adversely affect our financial results, future cash flows and earnings as a result of the reduced availability of supplies, decreased production output or increased operating costs.

While the risks were taken into account when determining the design criteria for our operations, there can be no assurance that the Company's operations will not be adversely affected by this kind of activity. Although we believe we have reasonable insurance arrangements in place to cover certain of such incidents related to damage or destruction, there can be no assurance that these arrangements will be sufficient to fully protect us against such losses.

Competition

Centerra's future prospects may suffer due to increased competition for mineral acquisition opportunities

Significant and increasing competition exists for mineral acquisition opportunities throughout the world, particularly for opportunities in jurisdictions considered politically safer. As a result of this competition, some of which is with large, better established mining companies with substantial capabilities and greater financial and technical resources, the Company may be unable to acquire rights to exploit additional attractive mining properties on terms we consider acceptable. Accordingly, there can be no assurance that the Company will acquire any interest in additional operations that would yield mineral reserves or result in commercial mining operations. The Company's inability to acquire such interests could have an adverse impact on its future cash flows, earnings, results of operations and financial condition. Even if the Company does acquire such interests, the resulting business arrangements may not ultimately prove beneficial to its business.

5.2 Financial Risks

Commodity Market

Centerra's business is sensitive to the volatility of gold and copper prices

The value of the Company's mineral resources and future operating profit and loss is largely dependent on the world market price of gold and copper, which are volatile and are affected by numerous factors beyond its control. A reduction in the price of gold or copper may prevent the Company's properties from being economically mined or result in the write down of assets whose value is impaired as a result of low metal or commodity prices. The price of gold or copper may also have a significant influence on the market price of Centerra's common shares. The price of gold and copper are subject to many factors which are beyond the control of the Company, including global supply and demand; central bank lending, sales and purchases; expectations for the future rate of inflation; the level of interest rates; the strength of, and confidence in, the U.S. dollar; market speculation; the availability and cost of substitute materials; and global or regional political and economic events, including the performance of Asia's economies.

If the market prices fall and remain below production costs of any of the Company's mining operations for an extended period, losses would be sustained, and, under certain circumstances, there may be a curtailment or suspension of some or all of the Company's mining, development and exploration activities. The Company would also have to assess the economic impact of any sustained lower metal prices on recoverability and, therefore, the cut-off grade and level of our mineral reserves and resources.

We enter into provisionally-priced sales contracts, which could have a negative impact on our revenues if prices decline.

At the Company's Mount Milligan Mine operations, it enters into provisionally-priced sales contracts, whereby the contracts settle at prices to be determined at a future date. The future pricing mechanism of these agreements constitutes an embedded derivative, which is bifurcated and separately marked to estimated fair value at the end of each period. Changes to the fair value of embedded derivatives related to sales agreements are included in sales revenue in the determination of net income. To the extent final prices are higher or lower than what was recorded on a provisional basis, an increase or decrease to sales, respectively, is recorded each reporting period until the date of final pricing. Accordingly, in times of falling commodities prices, the Company's revenues and cash flow are negatively impacted by lower prices received for contracts priced at current market rates and also from a decrease related to the final pricing of provisionally-priced sales pursuant to contracts entered into in prior years; in times of rising commodities prices, the opposite occurs.

We rely on a few key customers for our gold doré from the Kumtor Mine and copper-gold concentrate from Mount Milligan Mine, and the loss of any one key customer could reduce our revenues.

Centerra sells all of its production from the Kumtor Mine to Kyrgyzaltyn. The Company has also entered into three multi-year concentrate sales agreements for the sale of copper-gold concentrate produced at Mount Milligan Mine. Pursuant to these agreements, the Company has agreed to sell an aggregate of approximately 150,000 tonnes in 2019, 40,000 tonnes in 2020; and 40,000 tonnes in 2021. A breach of the applicable sales agreement by us or the applicable customer, a significant dispute with one of these customers, a force majeure event affecting the parties' respective performances under the agreement, a bankruptcy event experienced by the customer, early termination of the agreement, or any other event significantly and negatively impacting the contractual relationship with one of these customers could harm the Company's financial condition. If, in such an event, the Company is unable to sell the affected concentrate volume to another customer, or the Company sells the affected concentrate to another customer on terms less advantageous terms to it, the Company's revenues could be negatively impacted.

Our commodity hedging activities may reduce the realized prices we receive for our copper and gold (as it relates to Mount Milligan Mine), and involve market risk for the fair value of the derivatives, credit risk that our counterparties may be unable to satisfy their obligations to us, and financial risk due to fluctuations in the fair value of the derivatives.

In order to manage our cash flow exposure to copper and gold price volatility in selling production from Mount Milligan Mine, the Company enters into commodity derivatives from time to time for a portion of its expected production from the Mount Milligan Mine. Additionally, the Company receives cash provisional payments in selling production for the Mount Milligan Mine, thus requiring that it purchases gold or copper in order to satisfy its obligation to pay Royal Gold in gold and copper (as the case may be). The Company enters into commodity derivatives from time to time in order to manage its gold and copper price risk that arises when physical purchase and concentrate sales pricing periods do not match. The Company currently has in place unsecured hedging lines with various banks and trading companies in order to manage these exposures.

Commodity derivatives may limit the prices the Company actually realizes and therefore could reduce the Company's copper and gold revenues in the future. The Company's commodity hedging activities could impact its earnings in various ways, including recognition of certain mark- to-market gains and losses on derivative instruments. The fair value of the Company's derivative instruments could fluctuate significantly between periods.

The Company's commodity derivatives may expose it to significant market risk, which is the risk that the fair value of a commodity derivative might be adversely affected by a change in underlying commodity prices or a change in its expected production, which may result in a significant financial loss on the derivative. The Company mitigates the potential market risk by establishing trading agreements with counterparties under which the Company is not required to post any collateral or make any margin calls on our derivatives. The Company's commodity derivatives also expose it to credit risks that counterparties may be unable to satisfy their obligations to the Company.

The Company mitigates the potential credit risk by entering into derivatives with a number of counterparties, limiting the amount of exposure to any one counterparty, and monitoring the financial condition of the counterparties. If any of the Company's counterparties were to default on its obligations to the Company under the derivative transaction or seek bankruptcy protection, it could result in a larger percentage of the Company's future production being subject to commodity price changes which may have a significant adverse effect on the Company's cash flow, earnings and financial condition. The risk of counterparty default is heightened in a poor economic environment.

Centerra's operations are sensitive to fuel price volatility

The Company is also exposed to price volatility in respect of key inputs, the most significant of which is fuel. Increases in global fuel prices can materially increase operating costs, erode operating margins and project investment returns, and potentially reduce viable reserves. Conversely, a significant and sustained decline in world oil prices may offset other costs and improve returns. While the Company has entered into hedge arrangements to minimize its risk to fluctuating fuel prices, there are no assurances that such arrangements will be successful.

The Company's operations are subject to currency fluctuations that may adversely affect the financial position of the Company

The Company's earnings and cash flow may also be affected by fluctuations in the exchange rate between the U.S. dollar and other currencies, such as the Kyrgyz som, Canadian dollar, Turkish Lira, and the Euro. The Company's consolidated financial statements are expressed in U.S. dollars. The Company's sales of gold and copper are denominated in U.S. dollars, while production costs and corporate administration costs are, in part, denominated in Kyrgyz soms, Canadian dollars, Turkish Lira, Euros and other currencies. Fluctuations in exchange rates between the U.S. dollar and other currencies may give rise to foreign exchange currency exposures, both favourable and unfavourable.

Centerra does not currently use a hedging program to limit the adverse effects of foreign exchange rate fluctuations largely because we cannot hedge the Kyrgyz Som due to it not being freely traded. As the Company's exposure to other currencies increases, including the Turkish Lira with the development of the Öksüt Project, the Company may decide to engage in foreign exchange hedging transactions to reduce the risks associated with fluctuations in foreign exchange rates (to the extent available), but there are no assurances that any such hedging program will be successful.

Economy, Credit and Liquidity

Global Financial Conditions

Global financial conditions are beyond the Company's control. A significant disruption in the credit and capital markets could adversely affect our ability to obtain equity or debt financing in the future on favourable terms and could cause permanent decreases in our asset values, which may result in impairment losses. These factors could also increase the

Company's exposure to financial counterparty risk, adversely impact commodity prices, exchange rates, interest rates and impact the trading price of Centerra's common shares.

Centerra may experience reduced liquidity and difficulty in obtaining future financing

Centerra may not continue to generate cash flow from operations in the future sufficient to service its debt and make necessary or planned capital expenditures, including the further development and exploration of its mineral properties, including the Kemess and Greenstone Gold Properties. If the Company is unable to generate such cash flow, it may be required to adopt one or more alternatives, such as selling assets, borrowing additional funds, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive, cancelling or deferring capital expenditures and/or suspending or curtailing operations. Such actions may impact production at mining operations and/or the timelines and cost associated with development projects.

The Company's ability to borrow additional funds or refinance its indebtedness will depend on the capital markets and its financial condition at such time. The Company may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on its debt obligations.

Many of the Company's principal operations and development projects are located in under-developed areas that may have experienced past economic and political difficulties and may be perceived as unstable. This perceived increased country or political risk may make it more difficult for Centerra to obtain debt or equity financing. Failure to obtain additional financing on a timely basis may cause us to postpone development plans, forfeit rights in our properties or reduce or terminate our operations.

In order to finance future operations, Centerra may raise funds through the issuance of shares or the issuance of debt instruments or other securities convertible into shares.

Centerra cannot predict the potential need or size of future issuances of Common Shares or the issuance of debt instruments or other securities convertible into shares or the effect, if any, that this would have on the market price of our Common Shares. Any transaction involving the issuance of shares, or securities convertible into shares, could result in dilution, possibly substantial, to present and prospective security holders.

Restrictive covenants in Centerra's credit facilities may impact business activities

Pursuant to Centerra's credit facilities, the Company must maintain certain financial ratios and satisfy other non-financial maintenance covenants. Centerra and its material subsidiaries are also subject to other restrictive and affirmative covenants in respect of the Company's respective operations. These covenants include, without limitation, restrictions on our ability to incur additional indebtedness; pay dividends or make other distributions; make loans or investments; sell, transfer or otherwise dispose of assets; and incur or permit to exist certain liens.

Compliance with these covenants and financial ratios may impair the Company's ability to finance its future operations or capital needs or to take advantage of other favourable business opportunities. The Company's ability to comply with these covenants and financial ratios will depend on its future performance, which may be affected by events beyond its control. The Company's failure to comply with any of these covenants or financial ratios, if left uncured, will result in a default under applicable credit agreements and may result in the acceleration of the applicable indebtedness and other indebtedness to the extent there are cross-default provisions. In the event of a default and the Company is unable to repay any amounts then outstanding, the applicable lender(s), may be entitled to take possession of any collateral securing the credit facility to the extent required to repay those borrowings.

Insurance

Centerra may not be adequately insured for certain risks

Although the Company maintains insurance to cover some of the operational risks and hazards in amounts it believes to be reasonable, insurance may not provide adequate coverage or may not be available in all circumstances. No assurance can be given that insurance will continue to be available at economically feasible premiums or that it will provide sufficient coverage for losses related to these or other risks and hazards.

The Company may also be subject to liability or sustain losses in relation to certain risks and hazards against which the Company cannot insure or for which it may elect not to insure. The occurrence of operational risks and/or a shortfall or lack of insurance coverage could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Tax

The Company is subject to taxation in multiple jurisdictions and adverse changes to the taxation laws of such jurisdictions could have a material impact on our profitability

Centerra has operations and conducts business in a number of different jurisdictions and is accordingly subject to the taxation laws of each such jurisdiction, as well as tax reviews and assessments in the ordinary course. In some jurisdictions, such as Turkey, the Company is eligible for certain investment incentive programs which provide tax benefits for companies making investments in the relevant country. Participation in such programs requires continued oversight and compliance with the applicable program, which can be time consuming and require the input of third parties including contractors engaged in the investment.

The Company's international operations are also subject to the Organization of Economic and Co-operative Development's Base Erosion and Profit Shifting Action Plan, which mandates global businesses to conduct themselves in a manner that ensures taxes are paid in jurisdictions in which income arises.

Taxation laws are complex, subject to interpretation and subject to change. Any such changes in taxation law or reviews and assessments could result in higher taxes being payable by the Company, which could adversely affect its profitability. Taxes may also adversely affect the Company's ability to repatriate earnings and otherwise deploy its assets.

Counterparty

Short-term investment risks

The Company may, from time to time, invest some excess cash balances in short-term instruments issued by highly rated global financial institutions. The failure of any such financial institutions could have a negative effect on the liquidity of the Company's investments.

5.3 Operational Risks

Centerra's business is subject to production and operational risks that could adversely affect its business and insurance may not cover these risks and hazards adequately or at all.

Mining and metals processing involve significant production and operational risks, some of which are outside of our control, including but not limited to the following: unanticipated ground and water conditions; shortages of water for processing activities; adjacent or adverse land or mineral ownership that results in constraints on current or future mine operations; geological problems, including earthquakes and other natural disasters; metallurgical and other processing problems; unusual or unexpected mineralogy or rock formations; ground or slope failures; pit flooding; tailings design or operational issues, including dam breaches or failures; structural cave-ins, wall failures or rock-slides; flooding or fires; equipment failures or performance problems; periodic interruptions due to inclement or hazardous weather conditions or operating conditions and other force majeure events; lower than expected ore grades or recovery rates; accidents; delays in the receipt of, or failure to receive, necessary government permits; the results of litigation, including appeals of decisions; delays in transportation; interruption of energy supply; labour disputes; inability to obtain satisfactory insurance coverage; the availability of drilling and related equipment in the area where mining operations will be conducted; and the failure of equipment or processes to operate in accordance with specifications or expectations.

These risks could result in damage to, or destruction of, the Company's mines, mills and roasting facilities, resulting in partial or complete permanent shutdowns, sterilization of mineral reserves, personal injury or death, environmental or other damage to our properties or the properties of others, delays in mining, reduced production, monetary losses and potential legal liability. Milling operations are subject to hazards, such as equipment failure or failure of retaining dams around tailings disposal areas that may result in personal injury or death, environmental pollution and consequential liabilities.

The Company's insurance will not cover all the potential risks associated with our operations. In addition, although certain risks are insurable, the Company may be unable to maintain insurance to cover these risks at economically feasible premiums. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration and production is not generally available to the Company or to other companies in the mining industry on acceptable terms. The Company might also become subject to liability for pollution or other hazards that may not be insured against or that it may elect not to insure against because of premium costs or other reasons. Losses from these events may cause the Company to incur significant costs that could have a material adverse effect upon its business. Furthermore, should the Company be unable to fund fully the cost of remedying an environmental problem, it might be required to suspend operations or enter into interim compliance measures pending completion of the required remedy.

Health, Safety and Environment

Centerra is subject to environmental, health and safety risks

Centerra expends significant financial and managerial resources to comply with a complex set of environmental, health and safety laws, regulations, guidelines and permitting requirements (for the purpose of this paragraph, "laws") drawn from a number of different jurisdictions. The Company believes it is in material compliance with these laws. The historical trend that the Company observes is toward stricter laws, and the Company expects this trend to continue. The possibility of more stringent laws or more rigorous enforcement of existing laws exists in the areas of worker health and safety, the disposition of wastes, the decommissioning and reclamation of mining sites, restriction of areas where exploration, development and mining activities may take place, consumption and treatment of water, and other environmental matters, each of which could have a material adverse effect on the Company's exploration activities, operations and the cost or the viability of a particular project.

Water management and the oversight of our tailings management facilities are subject to regulation and risks and could result in significant damages to persons and property.

The water collection, treatment and disposal operations at the Company's mines are subject to substantial regulation and involve significant environmental risks. The extraction process for gold and metals can produce tailings, which are the sand like materials which remain from the extraction process. Tailings are stored in engineered facilities which are designed, constructed, operated and closed in conformance with local requirements and best practices.

If collection or our management systems (including our physical tailings management facilities) were to fail, overflow or not operate properly (including through matters beyond our control such as extreme weather, seismic event, or other incident), untreated water or other contaminants could spill onto nearby properties or into nearby streams and rivers, causing damage to persons or property, injury to aquatic life and economic damages. Environmental and regulatory authorities in the applicable jurisdictions of operation conduct periodic or annual inspections of the relevant mine. As a result of these inspections, the Company is from time to time required to modify its water management program, complete additional monitoring work or take remedial actions with respect to the operations as it pertains to water management.

Liabilities resulting from non-compliance, damage, regulatory orders or demands, or similar, could adversely and materially affect the Company's business, results of operations and financial condition. Moreover, in the event that the Company is deemed liable for any damage caused by overflow, the Company's losses or consequences of regulatory action might not be covered by insurance policies.

Centerra's workforce may be exposed to widespread pandemic

Centerra's operations are located in areas relatively remote from local towns and villages and represent a concentration of personnel working and residing in close proximity to one another. Further, the sites receive frequent visitors from all over the world, and a number of employees travel frequently abroad. Should an employee or visitor become infected with a serious illness that has the potential to spread rapidly, this could place Centerra's workforce at risk. The Company takes every precaution to strictly follow industrial hygiene and occupational health guidelines, and medical services are in place along with pandemic management protocols. There can be no assurance that this virus or another infectious illness will not impact Centerra personnel and ultimately its operations.

Centerra's operations use cyanide

The Kumtor Mine operations employ sodium cyanide, which is a hazardous material, to extract gold from ore. The Öksüt Project will also use gold processing technology in which cyanide is used. There is inherent risk of unintended discharge of hazardous materials in the operation of leach pads.

If any spills or discharges of sodium cyanide were to occur (at site or during transport), the Company could become subject to liability for remediation costs, which could be significant and may not be insured against. In addition, production could be delayed or halted to allow for remediation, resulting in a reduction or loss of cash flow. Finally, increased sensitivity in respect to the use of cyanide and the potential and perceived environmental impacts of cyanide use in mining operations could exacerbate potential reputational damage to the Company in the event of a cyanide release. While the Company takes appropriate steps to prevent discharges and accidental releases of sodium cyanide and other hazardous materials into the ground water, surface water and the downstream environment, there is inherent risk in the operation of gold processing facilities and there can be no assurance that a release of hazardous materials will not occur.

We must remove and reduce impurities and toxic substances naturally occurring in copper, gold and molybdenum and comply with applicable law relating thereto, which could result in remedial action and other costs.

Mineral ores and mineral products, including copper, gold and molybdenum ore and products, contain naturally occurring impurities and toxic substances. Although the Company has implemented procedures that are designed to identify, isolate and safely remove or reduce such impurities and substances, such procedures require strict adherence and no assurance can be given that employees, contractors or others will not be exposed to or be affected by such impurities and toxic substances, which may subject us to liability. Standard operating procedures may not identify, isolate and safely remove or reduce such substances.

Even with careful monitoring and effective control, there is still a risk that the presence of impurities or toxic substances in the Company's products may result in such products being rejected by the Company's customers, penalties being imposed due to such impurities or the products being barred from certain markets. Such incidents could require remedial action and could result in curtailment of operations. Legislation requiring manufacturers, importers and downstream users of chemical substances, including metals and minerals, to establish that the substances can be handled and used without negatively affecting health or the environment may impact the Company's operations and markets.

There is currently a capacity shortfall of the TMF at Kumtor Mine and Mount Milligan Mine.

The tailings dam design for both the Kumtor Mine and the Mount Milligan Mine require additional approvals and permits to reach the height required for their respective life of mine plans. While the Company has received in the past approvals to raise the tailings dam when required, there are no assurances that such approvals will continue to apply in the future, or that the Company will receive further approvals required to raise the tailings dam to its final height. If all necessary approvals are not maintained or obtained, delays in, or interruptions or cessation of the Company's production from the applicable mine may occur.

The Company's mining production depends on the availability of sufficient water supplies.

The Company's operations require significant quantities of water for mining, ore processing and related support facilities. Continuous production at the Company's mines depends on its ability to maintain its water rights and claims. The failure to obtain needed water permits, the loss of some or all water rights for any of its mines, in whole or in part, or shortages of water to which the Company has rights due to weather, equipment issues or other factors could require the Company to curtail or close mining production and could prevent it from pursuing expansion opportunities.

In December 2017, the Mount Milligan Mine mill operations were temporarily suspended due to a lack of available water for processing. The Mount Milligan Mine experienced a drier than normal spring and summer during 2017 with a limited amount of spring snow melt. This resulted in lower than expected reclaim water volumes in the TSF at the Mount Milligan Mine which is used for mill processing operations. The water shortage was exacerbated by unanticipated extremely cold temperatures at the Mount Milligan Mine, which has resulted in a greater than expected loss of water volumes in the TSF due to ice formation. The Company restarted mill operations at the Mount Milligan Mine in early February 2018 after completing a number of steps to increase the flow of water into the TSF, including adding pumps to existing water wells, increasing pump sizes to increase the flow rate, maximizing tailing placement and drilling additional wells. The Company received an amendment to the Mount Milligan Environmental Assessment Certificate that allowed for limited withdrawal of water from Philip Lake until October 2018 and in November 2018 permission was granted to pump until April 30, 2019. In August 2018 approval was received that allowed for pumping from ground water wells within the TSF (and one outside the TSF) for the entire LOM.

On February 27, 2019, the Company announced that it received an amendment to the Mount Milligan Environmental Assessment Certificate to permit access to additional sources of surface water and groundwater. Subject to the receipt of the relevant water licences, the Company will be permitted to obtain water for use in Mount Milligan's milling operation from Philip Lake 1, Rainbow Creek and Meadows Creek until November 30, 2021 at rates that are protective of the environment. The Company will also be permitted to access water from groundwater sources within a radius of six kilometres of the Mount Milligan Mine for the life of the mine.

The Company has started the necessary studies, and commenced consultation with potentially impacted Indigenous groups to work toward a further, longer-term amendment to the Environmental Assessment Certificate.

There are no assurances that this long-term solution will be successful. The failure to find a long-term solution to the lack of available water resources at the Mount Milligan Mine, or the re-occurrence of any water availability issues at the Mount Milligan Mine, including due to drier than expected weather conditions, extreme temperatures, or for any other reason, could adversely impact on the Company's future cash flows, earnings, results of operations and financial condition.

Regulation of greenhouse gas emissions effects and climate change issues may adversely affect our operations and markets.

Global climate change continues to attract considerable public, scientific and regulatory attention, and greenhouse gas emission regulation is becoming more commonplace and stringent. As energy, including energy produced from the combustion of carbon-based fuels, is a significant input to the Company's mining and processing operations, it must also comply with emerging climate change regulatory requirements, including programs to reduce greenhouse gas emissions. The Company's principal energy sources are electricity, purchased petroleum products and natural gas. In addition, the Company's processing facilities and mobile mining equipment emit carbon dioxide.

A number of governments or governmental bodies have introduced or are contemplating regulatory changes in response to the potential impacts of climate change. Where legislation already exists, regulation relating to emission levels and energy efficiency is becoming more stringent. The changes in legislation and regulation will likely increase the Company's compliance costs. The Company also may be subject to additional and extensive monitoring and reporting requirements.

In addition, the potential physical impacts of climate change on the Company's operations are highly uncertain and may be particular to the unique geographic circumstances associated with each of its facilities. These may include extreme weather events, changes in rainfall patterns, water shortages, and changing temperatures. These physical impacts could require the Company to curtail or close mining production and could prevent the Company from pursuing expansion opportunities. The Company has taken measures to mitigate the impact of weather on its operations, including ensuring that extreme weather conditions are included in its emergency response plans. However, there are no assurances that extreme weather events such as severe cold temperature or drought conditions will not adversely impact the cost, production and financial performance of the Company's operations.

Centerra faces substantial decommissioning and reclamation costs

The Company is required to establish at each of its mine sites and development projects a decommissioning and reclamation plan. Provision must be made for the cost of decommissioning and reclamation for operating sites. These costs can be significant and are subject to change. Kumtor Mine has established a reclamation trust fund to pay for these costs (net of forecast salvage value of assets) from the revenues generated over the LOM. As required by Canadian provincial and US federal and state laws, the Company has provided reclamation bonds for mine closure obligations for the Mount Milligan Mine, Endako Mine and the Thompson Creek Mine.

The Company cannot predict what level of decommissioning and reclamation may be required in the future by regulators. If the Company is required to comply with significant additional regulations or if the actual cost of future decommissioning and reclamation is significantly higher than current estimates, this could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Development and construction risks

Centerra is currently constructing the Öksüt Project and has a 100% interest in the Kemess project and a 50% in the Greenstone Gold Property, both of which are in development phase. The capital expenditures and time required to develop and construct mines are considerable and changes in cost or construction schedules can significantly increase both the time and capital required to build the project. Construction costs and timelines can be impacted by a wide variety of factors, many of which are beyond our control. These include, but are not limited to, weather conditions, ground conditions, performance of the mining fleet and availability of appropriate rock and other material required for construction, availability and performance of contractors and suppliers, delivery and installation of equipment, design changes, accuracy of estimates, global capital cost inflation, local in-country inflation and availability of accommodations for the workforce. Project development schedules are also dependent on obtaining the governmental approvals necessary for the operation of a project. The timeline to obtain these government approvals is often beyond the control of the Company. A delay in start-up or commercial production would increase capital costs and delay receipt of revenues.

While the Company believes that it has the expertise to develop the project within budget and on schedule, there can be no assurances. Any increase in the capital costs or delay in the project development timeline may adversely impact the Company's future cash flow, earnings, results of operations and financial conditions.

Asset Management

Centerra may experience mechanical breakdowns

The Company's mines (whether operating or currently on care and maintenance) use expensive, large mining and processing equipment that requires a long time to procure, build and install. Although the Company conducts extensive

preventive maintenance programs, there can be no assurance that the Company will not experience mechanical breakdowns of mining and processing equipment. In the past, the Company has experienced such mechanical breakdowns, which have resulted in unplanned mill shutdowns and reduced mill capacity. In addition, obtaining replacement components for the equipment can take considerable time which may also impact production. Any extended breakdown in mining or processing equipment could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial conditions.

Human Resources

Certain of our projects are unionized and may be subject to labour disturbances

Production at the Company's operations depends on the efforts of its employees. The Company has unionized environments at our Kumtor Mine, Kemess project and Langeloth Facility, and therefore employees are subject to collective agreements which require frequent renegotiations.

Non-management employees at Kumtor Mine (including those in head office) are unionized and subject to collective agreements. At the Kumtor Mine, a 2-year collective bargaining agreement was approved and ratified in January 2019.

The Kemess project has certain unionized employees. The labour agreement currently in place is effective until December 31, 2019.

The Langeloth Facility has certain unionized employees. The labour agreement currently in place with respect to the unionized employees at the Company's Langeloth Facility is effective through April 11, 2019.

There can be no assurance that, when such agreements expire, there will not be any delays in the renewal process, that negotiations will not prove difficult or that Centerra will be able to renegotiate the collective agreement on satisfactory terms, or at all. The renewal of the collective agreement could result in higher on-going labour costs, which could have a material adverse impact on Centerra's future cash flows, earnings, results of operations and financial condition. Centerra could be subject to labour unrest or other labour disturbances including strikes as a result of any failure of negotiations which could, while ongoing, have a material adverse impact on Centerra, including the achievement of any annual production guidelines and costs estimates. Existing collective agreements may not prevent a strike or work stoppage, and any such work stoppage could have a material adverse impact on the Company.

There is also a possibility that the Company's employees at its other projects, including the Mount Milligan Mine, could organize and certify a union in the future.

Centerra's success depends on its ability to attract and retain qualified personnel

Recruiting and retaining qualified personnel is critical to the Company's success. The number of persons skilled in the acquisition, exploration and development of mining properties is limited and competition for such persons is intense. As the Company's business activity grows, it will require additional key financial, administrative and mining personnel as well as additional operations staff. Certain jurisdictions in which the Company operates may limit the number of foreign nationals that can be employed at the mining site. For example, the Restated Concession Agreement relating to the Kumtor Mine operations requires two thirds of all administrative or technical personnel to be citizens of the Kyrgyz Republic. However, it has been necessary to engage expatriate workers for the Company's operations in the Kyrgyz Republic because of the shortage locally of trained personnel. Furthermore, large-scale projects in northern and central British Columbia competes for talent with the Company's operations. Although the Company believes that it will be successful in attracting, training and retaining qualified personnel, there can be no assurance of such success.

Supply Chain

Centerra's properties are located in remote locations and require a long lead time for equipment and supplies

Some of the Company's properties are in remote locations and depend on an uninterrupted flow of materials, supplies and services to those locations. Any interruptions to the procurement of equipment, or the flow of materials, supplies and services to the Company's properties could have an adverse impact on its future cash flows, earnings, results of operations and financial condition.

Centerra's operations may be impacted by supply chain disruptions

The Company's operations depend on uninterrupted supply of key consumables, equipment and components. The Company's Kyrgyz operations are limited with respect to alternative suppliers of fuel, and any disruption at supplier facilities could result in curtailment or suspension of operations. In addition, major equipment and components and certain key consumables are imported. Recent and potential future economic sanctions imposed on Russia by the U.S. and European Union in 2014 and 2016, may impact delivery of goods and services to the Kumtor Mine operation. The

accession of the Kyrgyz Republic to the Eurasian Economic Union may also impact the Kumtor Mine supply chains. Any disruption in the transportation of or restriction in the flow of these goods or the imposition of customs clearance requirements may result in production delays.

Information Technology Systems

Centerra's critical operating systems may be compromised

Cyber threats have evolved in severity, frequency and sophistication in recent years, and target entities are no longer primarily from the financial or retail sectors. Individuals engaging in cybercrime may target corruption of systems or data, or theft of sensitive data. Centerra is dependent on information technology systems in the conduct of its operations. The Company's mines and mills are automated and networked such that Centerra could be adversely affected by network disruptions from a variety of sources, including, without limitation, computer viruses, security breaches, cyber-attacks, natural disasters and defects in design. Centerra's operations also depend on the timely maintenance, upgrade and replacement of networks, equipment information technology systems and software, as well as pre-emptive expenses to mitigate the risk of failure.

Given the unpredictability of the timing, nature and scope of information technology disruptions, a corruption of the Company's financial or operational data or an operational disruption of its production infrastructure as a result of any of these or other events could result, among other things, in: (i) production downtimes; (ii) operational delays; (iii) destruction or corruption of data; (iv) increases in capital expenditures; (v) loss of production or accidental discharge; (vi) expensive remediation efforts; (vii) distraction of management; (viii) damage to our reputation or our relationship with customers; or (ix) in events of noncompliance, which events could lead to regulatory fines or penalties. Any of the foregoing could have a material adverse effect on the Company's business, results of operations and financial condition.

6. INVESTOR INFORMATION

6.1 Description of Share Capital

Our authorized share capital consists of an unlimited number of Common Shares, an unlimited number of Class A non-voting shares and an unlimited number of preference shares, issuable in series. There are no constraints on the ownership of our shares, except as set out in the restated shareholders agreement dated as of June 6, 2009 entered into between Centerra and Kyrgyzaltyn (the "**Restated Shareholders Agreement**"). See *"Restated Shareholders Agreement"* below. The following summary does not purport to be complete and reference is made to our articles of incorporation, as amended, which can be found on www.sedar.com.

Common Shares

Each common share of Centerra ("**Common Shares**") is entitled to:

- one vote at meetings of shareholders, except for meetings at which only holders of another specified class or series of shares are entitled to vote separately as a class or series;
- receive dividends if, as, and when declared by the Board; and
- participate in any distribution of our net assets upon liquidation, dissolution or winding-up on an equal basis per share but subject to the rights of the holders of preference shares.

There are no pre-emptive, redemption, purchase or conversion rights attached to our Common Shares.

The Board, at a meeting held on May 9, 2006, approved a three-for-one stock split of our outstanding Common Shares, which was affected by way of a stock dividend. Payable on June 1, 2006, shareholders of record at the close of business on May 29, 2006 received two additional Common Shares for each Common Share held. Our Common Shares began trading on a split basis on May 25, 2006 on the TSX.

As at December 31, 2018, there were 291,999,949 Common Shares issued and outstanding (on a non-diluted basis). As at March 20, 2019, there were 292,394,525 Common Shares issued and outstanding (on a non-diluted basis) and 5,641,515 options to acquire shares outstanding.

Class A Non-Voting Shares

The Class A non-voting shares have the same terms and conditions as our Common Shares, except:

- they will be non-voting; and

- they will not be entitled to any dividends or distributions that can be attributed reasonably to KGC or its assets or operations

There are currently no Class A non-voting shares outstanding as they have been created solely for the purposes of the insurance risk rights plan described below.

Preference Shares

Preference shares may be issued at any time or from time to time in one or more series as may be determined by the Board. The Board is authorized to fix before issue: the number, the consideration per share and the designation of and, subject to the special rights and restrictions attached to all preference shares, the rights and restrictions attached to the preference shares of each series. The preference shares of each series rank on a parity with the preference shares of each other series with respect to the payment of dividends and the return of capital on liquidation, dissolution or winding-up. The preference shares are entitled to a preference over the Common Shares and any other shares ranking junior to the preference shares with respect to the payment of dividends and the return of capital.

The special rights and restrictions attaching to the preference shares as a class may not be amended without any approval as may then be required by law, subject to a minimum approval requirement of at least two thirds of the votes cast at a meeting of the holders of preference shares to be called and held for that purpose.

There are currently no preference shares outstanding.

Political Risk Insurance Rights Plan

As a prerequisite to acquiring political risk insurance for our Kumtor mining operations, we adopted an insurance risk rights plan as of June 21, 2004. Our political risk insurance policy expired in November 2012, but our insurance risk rights plan still remains in effect. The insurance risk rights plan applies if an event occurs relating to KGC or its assets or operations at a time when Kyrgyzaltyn is controlled by the Kyrgyz Government and the event is caused by that Kyrgyz Government and results in a payment to us under the political risk insurance coverage. In this event, the following will occur:

- Each holder of our Common Shares will be entitled to exchange its shares for Class A non-voting shares. Kyrgyzaltyn has irrevocably elected to exchange all of its Common Shares for Class A non-voting shares and it is expected that no other shareholders would elect to do this.
- The holders of our Common Shares (but not Class A non-voting shares) will be entitled to acquire additional Common Shares for C$0.01 per share, with the aggregate number of Common Shares available determined by a formula designed to provide for the holders of Class A non-voting shares to be diluted by an amount that approximates the proceeds received under the political risk insurance.
- Following the exercise of the rights to acquire additional shares by our Common Shareholders, the Class A non-voting shares will convert back into Common Shares.

Kyrgyzaltyn has also agreed that, following the determination by the Board that an event has occurred that could reasonably result in this plan being triggered and for so long as such event continues or until the process described above has been completed, it will not transfer its shares or exercise any voting rights in respect of its shares or be entitled to receive any dividends or distributions on its shares that can be attributed reasonably to KGC or its assets or operations or distributions from KGC during such period. The plan will continue in effect until terminated by the Board based on a determination that it is no longer necessary or desirable having regard to, among other things, the extent of our operations based in the Kyrgyz Republic. A copy of the plan can be found on SEDAR at www.sedar.com.

6.2 Market for Our Securities

We completed our initial public offering on June 30, 2004. Our Common Shares are listed on the TSX under the symbol CG.

Trading Price and Volume

The table below shows the high and low prices and trading volume for our Common Shares on the TSX in 2018. All prices listed below are in Canadian dollars.

2018	High ($)	Low ($)	Volume
January	6.38	6.19	751,465
February	6.60	6.31	616,701
March	7.13	6.93	716,830
April	7.74	7.55	629,522
May	7.56	7.36	643,945
June	7.14	6.95	647,201
July	6.35	6.17	695,271
August	5.83	5.63	701,537
September	5.44	5.21	908,093
October	5.32	5.10	562,421
November	5.43	5.20	451,258
December	5.75	5.49	817,178

On December 31, 2018, the closing price of our Common Shares on the TSX was C$5.86.

Registrar and Transfer Agent

The transfer agent and registrar for our Common Shares is the AST Trust Company (Canada) at its principal office in Toronto, Ontario.

6.3 Dividend Policy

The table below shows the dividends paid per Common Share (in C$) over the last three financial years.

	2018	2017	2016
Cash dividends	Nil	Nil	$0.12[(1)]

Notes:
(1) In each of February, May, and July 2016, we declared quarterly dividends of C$0.04 per share. These quarterly dividends were payable on (i) March 24, 2016 to shareholders of record on March 10, 2016; (ii) on June 2, 2016 to shareholders of record on May 19, 2016; (iii) on August 25, 2016 to shareholders of record on August 11, 2016;

In July 2010, we adopted a dividend policy whereby the decision to pay dividends, the timing and the quantum thereof is to be determined by the Board from time to time based on, among other things, our cash balance, operating cash flows, anticipated capital requirements for future growth and the yields of comparable companies' dividend rates.

On December 9, 2016, we announced the suspension of future quarterly dividends. This decision was made by our board of directors in light of the restrictions relating to funds held at our wholly-owned Kyrgyz subsidiary, KGC. As discussed elsewhere in this AIF, these restrictions were removed in September 2017 as part of the Kumtor Strategic Agreement.

Pursuant to the terms of our Corporate Facility with a syndicate of lenders entered into in February 1, 2018, we are only permitted to declare and pay cash distributions to our shareholders in any fiscal quarter in an aggregate amount not to exceed $30 million and only if there is no event of default occurring.

6.4 Material Contracts

The following are the only material contracts, other than contracts entered into in the ordinary course of business not otherwise required to be disclosed, that we have entered into within the most recently completed fiscal year or before the most recently completed fiscal year but still in effect.

Corporate Credit Facility

The Company has entered a $500 million four-year secured revolving credit facility with a lending syndicate led by The Bank of Nova Scotia and National Bank of Canada. The corporate credit facility is described under the heading "About Centerra - *Recent Developments - Corporate*".

OMAS Credit Facility

On April 5, 2016, our wholly-owned subsidiary in Turkey, OMAS, entered into the $150 million credit facility fully underwritten by UniCredit Bank AG and the EBRD in support of the development of the Company's Öksüt Project in Turkey. The interest rate on the OMAS Facility is LIBOR plus 2.65% to 2.95% (dependent on project completion status). It is secured by the Öksüt Project assets. Centerra has provided a limited guarantee of OMAS' obligations under the OMAS Facility which can only be called upon if certain conditions relating to the tenure of the Öksüt Project mining license are not satisfied by August 22, 2022. Under Turkish mining laws, mining licenses are only issued for a maximum term of 10 years. As of December 31, 2018, $49.7 million have been drawn down on the OMAS Facility.

Mount Milligan Streaming Arrangement

As part of the Acquisition of Thompson Creek, we negotiated amendments to Thompson Creek's existing gold streaming arrangements Royal Gold. See "*Marketing and Distribution – Royal Gold Streaming Arrangement*" for a description of the agreement and the amendments.

Restated Investment Agreement

Centerra, KOC, KGC, the Kyrgyz Government and Kyrgyzaltyn entered into a Restated Investment Agreement dated as of June 6, 2009. The Restated Investment Agreement and related agreements set out the terms and conditions applicable to our ongoing operation and development of the Kumtor Mine, including providing for a comprehensive tax regime applicable to the Kumtor Mine. The Restated Investment Agreement has a term lasting until the earlier of 2042 or when the deposits comprising the Kumtor Mine are exhausted and mining is completed. For further information, see the section of this AIF entitled "*Centerra's Properties – Producing Properties – Kumtor Mine*".

Restated Shareholders Agreement

The Restated Shareholders Agreement was entered into among Centerra and Kyrgyzaltyn as of June 6, 2009 and sets out the rights and obligations of Centerra and Kyrgyzaltyn with respect to their respective ownership of our shares.

The Restated Shareholders Agreement provides that, in the event that Kyrgyzaltyn wishes to initiate a distribution of our Common Shares (whether by private placement or public offering) we shall furnish all reasonable assistance in preparing the required disclosure documents. We are obliged to provide such assistance to Kyrgyzaltyn only once in any 12-month period and the costs of this assistance is for the account of Kyrgyzaltyn. Also, if we propose to issue any of our Common Shares by private placement or public offering, we will provide Kyrgyzaltyn with an opportunity to sell its shares as part of the offering provided that our reasonable capital needs take priority.

So long as Kyrgyzaltyn and its affiliates continue to hold 10% or more of our outstanding Common Shares, we will include in our proposed slate of directors nominated for election at each annual or special meeting two Board nominees designated by Kyrgyzaltyn, one of whom must be independent of the Kyrgyz Government. Should Kyrgyzaltyn's interest constitute less than 10% but more than 5% of our outstanding Common Shares, Kyrgyzaltyn's right to Board nominee is limited to one.

We also entered into a separate agreement with Kyrgyzaltyn confirming that we will use commercially reasonable efforts to have at least one representative of Kyrgyzaltyn elected as Chairman of the KGC Board of Directors, a member of the KGC Management Committee and a member of the KGC Auditing Committee.

Restated Concession Agreement

The Restated Concession Agreement is described under the heading "*Centerra's Properties – Producing Properties – Kumtor Mine – Property Description, Location and Concession*".

Insurance Risk Rights Plan Agreement

The insurance risk rights plan agreement is described above under the heading "*Description of Share Capital – Political Risk Insurance Rights Plan"*.

6.5 Legal Proceedings and Regulatory Actions

Other than the proceedings discussed elsewhere in this document we are not a party to, or the subject of, any legal proceedings or regulatory actions that are outside of the ordinary course of business or that we would anticipate would result in a material adverse impact on our financial position or our results of operations, and no such proceedings or actions are known to be contemplated.

6.6 Interests of Experts

Our auditor, KPMG LLP, is independent in accordance with applicable rules of professional conduct of the Institute of Chartered Accountants of Ontario.

The individuals who are qualified persons for the purposes of NI 43-101 are listed under the section of this AIF entitled "*Technical Information"*. As a group, they beneficially own, directly or indirectly, less than 1% of any class of the outstanding securities of Centerra and our associates and affiliates.

7. GLOSSARY OF GEOLOGICAL AND MINING TERMS

The following is a glossary of technical terms and abbreviations that appear in this AIF:

alluvial	Relating to deposits made by flowing water, washed away from one place and deposited in another.
assay	An analysis to determine the presence, absence or concentration of one or more chemical components.
ball mill	A large steel cylinder containing steel balls into which crushed ore is fed. The ball mill is then rotated, causing the balls to cascade and grind the ore.
belt	An area characterized by a particular assemblage of mineral deposits, or by one or more characteristic types of mineralization.
bench	A ledge that, in open pit mines and quarries, forms a single level of operation above which minerals or waste materials are excavated from a contiguous bank or bench face. The mineral or waste is removed in successive layers, each of which is a bench.
blast hole	A hole drilled for the purpose of inserting an explosive charge in a material to be blasted.
block model	A model that utilizes a three-dimensional block grid of a fixed or variable size to estimate in-situ resources and reserves.
breccia	Rock consisting of fragments, more or less angular, in a matrix of finer-grained or cementing material.
capping	Individual assays above this assay grade value are limited to prior grade interpolation. Also referred to as high-grade top cutting.
carbon-in-leach (CIL)	A recovery process in which a slurry of gold ore, carbon granules and cyanide are mixed together in a leach tank. The cyanide dissolves the gold, which is then absorbed by the carbon. The carbon is subsequently separated from the slurry and the gold removed from the carbon.
carbon-in-pulp (CIP)	Similar process as CIL (above) except that the leaching takes place in tanks dedicated for leaching followed by adsorption into carbon in tanks dedicated for adsorption.
circuits	Facilities for removing valuable minerals from ore so that it can be processed and sold.
concentrate	A product containing valuable metal from which most of the waste material in the ore has been eliminated.
concession	Grants made under a system whereby the state or the private owner has the right to grant concessions or leases to mine operators subject to certain general restrictions. Concession systems are used in almost every mining country in the world except the United States.
cut-off grade	The minimum metal grade at which a tonne of rock can be economically mined and processed.
cuttings	The particles of rock produced in a borehole by the abrasive or percussive action of a drill bit.
cyanidation	A method of extracting gold or silver by dissolving it in a weak solution of sodium cyanide.

deposit	A mineralized body that has been physically delineated by sufficient drilling, trenching and/or underground work and found to contain a sufficient average grade of metal or metals to warrant further exploration and/or development expenditures; such a deposit does not qualify as a commercially mineable orebody or as containing mineral reserves until final legal, technical and economic factors have been resolved.
depressurization	The mechanical process of lowering or removing hydraulic water pressure from a geological structure or unit without the complete removal of the contained water.
dewatering	The mechanical process of removing or controlling water contained within a geological structure, unit or excavated opening such as an open pit or underground working.
diamond drill	A type of rotary drill that cuts by abrasion rather than percussion. The cutting bit is set with diamonds and is attached to the end of long hollow rods through which water is pumped to the cutting face. The drill cuts a core of rock which is recovered in long cylindrical sections, approximately two centimetres or more in diameter.
dip	The angle at which a bed, stratum or vein is inclined from the horizontal, measured perpendicular to the strike and in the vertical plane.
dilution	The effect of waste or low-grade ore being included in mined ore, increasing tonnage mined and lowering the overall ore grade.
doré	Unrefined gold and silver bullion bars usually consisting of approximately 90% precious metals that will be further refined to almost pure metal.
drill core	A long cylindrical sample of rock, approximately two centimetres in diameter, brought to the surface by diamond drilling.
electrowinning	Recovery of a metal from ore by means of electro-chemical processes.
facies	A term of wide application, referring to such aspects of rock units as rock type, mode of origin, composition, fossil content or environment of deposition.
fault	A fracture in the earth's crust, along which there has been displacement of the two sides relative to one another and parallel to the fracture. The displacement may be a few inches or many miles long.
feasibility study	A comprehensive study of a deposit in which all geological, engineering, operating, economic and other relevant factors are considered in sufficient detail that it could reasonably serve as the basis for a final decision by a financial institution to finance the development of the deposit for mineral production.
fire assay	The assaying of metallic ores, in particular gold and silver, at high temperatures with an assay furnace.
flotation	A milling process by which some mineral particles are induced to become attached to bubbles of froth and float. Others are left to sink so that the valuable minerals are concentrated and separated from the remaining rock or mineral material.
fresh	Rock surface that has not been subjected to or altered by surface weathering, such as a rock newly exposed by fracturing.
g/t	Grams per tonne.
geotechnical drilling	Drilling for the purpose of collecting information to be used in rock stability analyses.
grade	The amount of mineral in each tonne of ore.
gravimetric	Of or relating to measurement by weight.
gravity concentration	The separation of grains of minerals using a concentration method based on the different densities of those minerals.
host rock	The body of rock in which mineralization of economic interest occurs.

hydrothermal alteration	Alteration of rocks or minerals by the reaction of hydrothermal water with pre-existing solid phases.
infill drilling	Drilling within a defined mineralized area to improve the definition of the known mineralization.
intrusive	Rock which, while molten, penetrated into or between other rocks but solidified before reaching the surface.
IsaMill	A high intensity, stirred mill used in the fine grinding of mineral ores. It was developed by Mount Isa Mines in the 1990s.
kriging	A commonly used method to compute resources using a weighted moving average to interpolate values (grades) from a sample data set onto a grid.
leach	To extract minerals or metals from ore with chemicals.
lens	A body of ore or rock that is thick in the middle and converges toward the edges, resembling a convex lens.
matrix	The non-valuable minerals in an ore.
micron	Former term for micrometer, meaning a unit of length equal to one-millionth of a metre.
mill	A processing facility where ore is finely ground and thereafter undergoes physical or chemical treatment to extract the valuable metals.
mineral reserves	The economically mineable part of a measured or indicated mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A mineral reserve includes diluting materials and allowances for losses that may occur when the material is mined. ***Proven mineral reserve:*** The economically mineable part of a measured mineral resource demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified. ***Probable mineral reserve:*** The economically mineable part of an indicated mineral resource, and in some circumstances a measured mineral resource, demonstrated by at least a preliminary feasibility study. This study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
mineral resources	A concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge.

	Measured mineral resources: That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity. ***Indicated mineral resources:*** That part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed. ***Inferred mineral resources:*** That part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
mineralization	The concentration of minerals within a body of rock.
net smelter return ("NSR") royalty	A royalty payment made by a producer of metals, normally to a previous property owner, based on gross mineral production from the property, less deduction of certain costs.
nugget effect	Grade variation due to measurement errors and short-range special variation at short distances.
open pit mine	A mine that is entirely open to the surface.
ore	A metal or mineral, or a combination of these, of sufficient quality and quantity to enable it to be mined at a profit.
ounces (oz)	Troy ounces = 31.103 grams.
oxidation	A chemical reaction caused by exposure to oxygen that results in a change in the chemical composition of a mineral.
pit design	An open pit contour surface based on an optimized pit shell that has been engineered in detail by adding access ramps and by smoothing of the pit walls. Pit designs are supported by detailed mining plans.
pit shell	A non-engineered open pit contour surface produced by optimization software at a particular gold price, without consideration to equipment access and mining plans.
placer	A deposit of sand or gravel that contains particles of gold or other heavy, valuable minerals. The common types are stream gravels and beach sands.
preg-robbing	When leaching ore, a dilute cyanide solution is used to dissolve the gold to produce a pregnant solution. When carbon mineralization is present in the ore it may re-absorb some of the gold from the pregnant solution. This process is referred to as preg-robbing.
pulp	A mixture of ground ore and water capable of flowing through suitably graded channels as a fluid.

pyrite	An iron sulfide mineral, normally of little value and sometimes referred to as fool's gold.
recovery	The proportion of valuable material obtained as a result of processing an ore. It is generally stated as a percentage of valuable metal in the ore that is recovered compared to the total valuable metal present in the ore.
refractory ore/material	Ore from which it is difficult to recover valuable substances. Refractory material must be pre-treated before gold can be recovered from it through conventional cyanidation.
reserves	Means mineral reserves.
resources	Means mineral resources.
roasting	A method of oxidizing refractory ore using very high temperatures to thermally decompose the sulphide minerals encapsulating the gold, which is ultimately recovered using conventional cyanide leaching.
schist	A strongly foliated crystalline rock that can be readily split into thin flakes or slabs due to the well-developed parallelism of more than 50% of the minerals present in it.
sedimentary rocks	Secondary rocks, such as lime, shale and sandstone, formed from material derived from other rocks.
semi-autogenous (SAG) grinding	A method of grinding rock into fine sand, in which the grinding media consist of larger chunks of rock and steel balls.
shear key	The removal of weak materials in a specified area and replacement with engineered fills to provide improved shear resistance and impermeability in the foundation of a dam.
shearing	Deformation resulting from stresses that cause, or tend to cause, contiguous parts of a body to slide relative to each other.
slurry	A suspension of fine solid particles in a liquid, not thick enough to consolidate as a sludge.
stockwork	A mineral deposit consisting of a three-dimensional network of planar to irregular veinlets closely enough spaced that the whole mass can be mined.
strike	The horizontal direction or trend of a geologic structure.
strip (or stripping) ratio	The tonnage or volume of waste material that must be removed to allow the mining of one tonne of ore in an open pit.
tailings	The material that remains after recoverable metals or minerals of economic interest have been removed from ore through milling.
tailings dam	A natural or man-made confined area suitable for depositing tailings.
tellurides	Ores of the precious metals (chiefly gold) containing tellurium, a semi-metallic, trigonal mineral.
thrust	An overriding movement of one crustal unit over another.
vein	A sheet-like body of minerals formed by fracture filling or replacement of host rock.
waste	Barren rock in a mine, or mineralized material that is too low in grade to be mined and milled at a profit.

SCHEDULE A -
AUDIT COMMITTEE CHARTER

Purpose

The purpose of the Audit Committee is to assist the Board of Directors in fulfilling its oversight responsibilities in relation to (a) the external auditor, (b) the internal auditor, (c) financial reporting, (d) compliance with legal and regulatory requirements related to financial reporting and certain corporate policies, and (e) internal controls over financial reporting and disclosure controls.

Composition

The members of the Audit Committee and its Chair shall be appointed annually by the Board on the recommendation of the Nominating and Corporate Governance Committee. The Audit Committee shall consist of at least three and not more than six members. Each member will be independent and financially literate (as such terms are defined in National Instrument 52-110 – Audit Committees, as amended from time to time).

Meetings

The Audit Committee will meet at least four times annually and as many additional times as the Audit Committee deems necessary to carry out its duties effectively. The Audit Committee will meet privately with each of the external auditor, the internal auditor and management at each regularly scheduled meeting.

Notice of every meeting will be given to each member, the Chair of the Board, the external auditor and the internal auditor.

A majority of the members of the Audit Committee shall constitute a quorum. No business may be transacted by the Audit Committee except at a meeting of its members at which a quorum of the Audit Committee is present.

The Audit Committee may invite such officers, directors and employees of the Corporation and such other persons as it may see fit from time to time to attend meetings of the Audit Committee and assist in the discussion and consideration of any matter.

A meeting of the Audit Committee may be convened by the Chair of the Audit Committee, a member of the Audit Committee, the external auditor or the internal auditor.

Duties and Responsibilities

Financial Reporting

1. Review and recommend to the Board for approval the audited annual financial statements and related management's discussion and analysis.
2. Review and recommend to the Board for approval all interim financial statements and quarterly reports and related management's discussion and analysis.
3. Before the release of financial statements and related disclosures to the public, obtain confirmation from the CEO and CFO as to the matters addressed in the certifications required by the securities regulatory authorities.
4. Review and recommend to the Board for approval all other press releases containing financial information based upon the Corporation's financial statements prior to their release.
5. Review and recommend to the Board for approval all other financial statements that require approval by the Board before they are released to the public, including financial statements for use in prospectuses or other offering or public disclosure documents and financial statements required by regulatory authorities.
6. Review status of significant accounting estimates and judgments (e.g., reserves) and special issues (e.g., major transactions, changes in the selection or application of accounting policies, off-balance sheet items, effect of regulatory and financial initiatives).
7. Review management's assessment and management of financial risks (e.g., hedging, insurance, debt).
8. Review any litigation, claim or other contingency that could have a material effect on the financial statements.

9. Discuss with the external auditor the quality, not just the acceptability, of the Corporation's accounting principles as applied in its financial reporting.
10. Discuss with the external auditor any (i) difference of opinion with management on material auditing or accounting issues and (ii) any audit problems or difficulties experienced by the external auditor in performing the audit.
11. Discuss with management and the external auditor any significant financial reporting issues considered and the method of resolution.

External Auditor

12. Recommend to the Board the external auditor to be nominated for appointment or re-appointment by the shareholders.
13. Evaluate the external auditor's qualifications, performance and independence.
14. Review the Corporation's policies for hiring employees and former employees of the external auditor.
15. Review and approve the external auditor's plans for the annual audit and interim reviews including the auditor's fees.
16. Review and pre-approve all non-audit service engagement fees and terms in accordance with applicable law.
17. Consider any matter required to be communicated to the Audit Committee by the external auditor under applicable generally accepted auditing standards, applicable law and listing standards, including the auditor's report to the Audit Committee (and management's response thereto).
18. Require, in accordance with applicable law, that the external auditor report directly to the Audit Committee.

Internal Auditor

19. Review and approve the appointment or removal of internal auditor.
20. Review and approve the mandate of internal auditor and the scope of the internal auditor's annual work plan.
21. Require that the internal auditor report directly to the Audit Committee.
22. Review significant audit findings and status updates on recommendations.
23. Review the internal auditor's ongoing assessments of the Corporation's business processes and system of internal controls.
24. Review the effectiveness of the internal audit function.

Compliance

25. Review procedures adopted by the Corporation to ensure that all material statutory deductions have been withheld by the Corporation and remitted to the appropriate authorities.
26. Monitor compliance with the Code of Ethics Policy and the Policy on International Business Conduct.
27. Review with legal counsel any legal matters that could have a significant effect on the Corporation's financial statements.
28. Review with legal counsel the Corporation's compliance with applicable laws and regulations and inquiries received from regulators and governmental agencies to the extent they may have a material impact on the financial position of the Corporation.
29. Oversee procedures in the Code of Ethics Policy for (i) the receipt, retention and treatment of complaints regarding accounting, internal accounting controls or auditing matters and (ii) the confidential, anonymous submission by employees of concerns regarding such matters.
30. Review reports of compliance with the Corporation's Financial Risk Management Policy and report to the Board thereon, and recommend to the Board any amendments to such policy.
31. Review and approve financial risk management programs.

Internal Controls and Disclosure Controls

32. Oversee management's review of the adequacy of the internal controls that have been adopted by the Corporation to safeguard assets from loss and unauthorized use and to verify the accuracy of the financial records.
33. Review any special audit steps adopted in light of material control deficiencies.
34. Review the controls and procedures that have been adopted by the Corporation to confirm that material information about the Corporation and its subsidiaries that is required to be disclosed under applicable law or stock exchange rules is disclosed.

Other

35. Review a report, at least annually, from the Reserves Committee on the Corporation's mineral reserves and resources.
36. Review and pre-approve all proposed related party transactions and situations involving a director's, a senior officer's or an affiliate's potential or actual conflict of interest that are not required to be dealt with by an independent committee pursuant to securities law rules, other than routine transactions and situations arising in the ordinary course of business, consistent with past practice.
37. Review the appointment of the CFO and review with the CFO the qualifications of new key financial executives involved in the financial reporting process.
38. In conjunction with Human Resources and Compensation Committee, review succession plans for the CFO and the Controller.
39. Review on an annual basis expenses submitted for reimbursement by the CEO.
40. Provide orientation for new members and continuing education opportunities for all members to enhance their expertise and competencies with finance and accounting.

Reporting

The Audit Committee will report regularly to the Board on all other significant matters it has addressed and with respect to such other matters that are within its responsibilities.

Review and Evaluation

The Audit Committee will annually review and evaluate the adequacy of its mandate and recommend any proposed changes to the Nominating and Corporate Governance Committee. It will also participate in an annual performance evaluation by the Nominating and Corporate Governance Committee.

Chair

Each year, the Board will appoint one member to be Chair of the Audit Committee. If, in any year, the Board does not appoint a Chair of the Audit Committee, the incumbent Chair will continue in office until a successor is appointed.

Removal and Vacancies

Any member of the Audit Committee may be removed or replaced at any time by the Board and shall cease to be a member of the Audit Committee upon ceasing to be a director. The Board may fill vacancies on the Audit Committee by appointment from among its members. If and whenever a vacancy shall exist on the Audit Committee, the remaining members may exercise all its powers so long as a quorum remains in office. Subject to the foregoing, each member of the Audit Committee shall remain as such until the next annual meeting of shareholders after that member's election.

Access to Outside Advisors

The Audit Committee may, without seeking approval of the Board or management, select, retain, terminate, set and approve the fees and other retention terms of any outside advisor, as it deems appropriate. The Corporation will provide

for appropriate funding, for payment of compensation to any such advisors, and for ordinary administrative expenses of the Audit Committee.