Kumtor Gold Company

- Kumtor is one of the highest gold deposits in the world.
- The deposit was discovered in the Central Tien Shan at an altitude of 4,200 meters in 1978.
- The Kumtor mine, located in the Kyrgyz Republic, is the largest gold mine operated in Central Asia.
- Centerra Gold Inc. is a Canadian gold mining company engaged in operating, developing, exploring and acquiring gold deposits in North America, Asia and other regions of the world.

- Kumtor Gold Company provides jobs for more than 3,792 people. 98% of the company full-time employees are Kyrgyz citizens.
Safety of employees, production processes and environmental protection are the main priorities of the Kumtor Gold Company.

At all stages of our operations we adhere to the slogan -

"No job is so important that we cannot take the time to do it safely"
To achieve its main goal - zero injury rate - the Company develops a culture of zero tolerance of violations in the field of health and operational safety at all its production facilities. To complete this task, the Company successfully implemented the “WORK SAFE - HOME SAFE” Program.

Work Safe/Home Safe Program is a program aimed at improving the safety culture and achieving a zero injury rate.

We firmly believe that: only safe operation is really successful.
Location of facilities

- Tailings Management Facility
- Lysyi Pit
- Petrov Lake
- Central Pit
- Sarytor Waste Dump
- Central Valley Waste Dump
- Mega Shop
- Mill
- Sarytor Pit
- SW Pit
- Davydov Glacier
• From 1997 to October 2018, 11.8 million ounces or 369.5 tons of gold were poured.
• In 2017, 562,749 ounces of gold were poured.
<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>LOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Tonnes Mined (millions)</strong></td>
<td>173.00</td>
<td>164.35</td>
<td>157.01</td>
<td>168.02</td>
<td>132.65</td>
<td>85.55</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>880.58</td>
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<tr>
<td><strong>Mining Rate (t/d) (millions)</strong></td>
<td>0.47</td>
<td>0.45</td>
<td>0.43</td>
<td>0.46</td>
<td>0.36</td>
<td>0.23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Mill Tonnes (millions)</strong></td>
<td>5.89</td>
<td>5.89</td>
<td>5.91</td>
<td>5.89</td>
<td>5.89</td>
<td>5.91</td>
<td>5.89</td>
<td>5.89</td>
<td>3.67</td>
<td>50.83</td>
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<tr>
<td><strong>Mill Grade (g/t)</strong></td>
<td>3.00</td>
<td>3.07</td>
<td>3.41</td>
<td>3.28</td>
<td>3.84</td>
<td>2.63</td>
<td>1.52</td>
<td>0.97</td>
<td>1.16</td>
<td>2.60</td>
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<tr>
<td><strong>Contained Oz</strong></td>
<td>567,324</td>
<td>581,653</td>
<td>647,662</td>
<td>621,555</td>
<td>727,677</td>
<td>497,921</td>
<td>289,288</td>
<td>183,783</td>
<td>136,990</td>
<td>4,253,853</td>
</tr>
<tr>
<td><strong>Recovery %</strong></td>
<td>78.90%</td>
<td>81.65%</td>
<td>80.06%</td>
<td>81.04%</td>
<td>78.68%</td>
<td>74.49%</td>
<td>64.68%</td>
<td>58.27%</td>
<td>54.13%</td>
<td>77.37%</td>
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<tr>
<td><strong>Carbon Fines Recovered Oz</strong></td>
<td>10,272</td>
<td>9,539</td>
<td>3,932</td>
<td>3,932</td>
<td>3,932</td>
<td>3,932</td>
<td>3,932</td>
<td>3,932</td>
<td>3,932</td>
<td>47,336</td>
</tr>
</tbody>
</table>
Expected LOM – Throughput, Grade, Recoveries and Oz

**TONNES OF ORE MILLED (MILLION)**

- 2018: 457,881
- 2019: 475,255
- 2020: 523,040
- 2021: 516,953
- 2022: 604,591
- 2023: 375,609
- 2024: 198,026
- 2025: 103,773
- 2026: 83,306

**Total Recovered, Oz**

- 2018: 3.67
- 2019: 5.89
- 2020: 5.91
- 2021: 5.89
- 2022: 5.89
- 2023: 5.91
- 2024: 5.89
- 2025: 5.89
- 2026: 3.67

**LIFE OF MINE**

- Mill Grade (g/t)
- Recovery %

<table>
<thead>
<tr>
<th>Year</th>
<th>Mill Grade (g/t)</th>
<th>Recovery %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>3.00</td>
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<tr>
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<td>2.63</td>
<td>74.49%</td>
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<td>0.97</td>
<td>58.27%</td>
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<td>1.16</td>
<td>54.13%</td>
</tr>
</tbody>
</table>
In 2018, geological exploration works were resumed at the Mine.

Planned exploration work is aimed at estimating the possible resources on the flanks of the South-West, Central Pit, North-East and Sarytor Areas.

The initial exploration program is scheduled for 2 years.

It is planned to drill a total of 156 exploration holes with a total volume of 56 thousand meters.

The potential increase in resources is 3.5 million ounces.

2018-2019 exploration costs will amount to $17 million.
• Mine operations are being performed on 24/7 schedule.
• People work in 2 shifts for 12 hours (1-hour break).
• In 2017, the open pit mine rock production amounted to 182 million tons, of which 5.0 million tons of ore.
• The average daily production in 2018 was 484 thousand tons / day.
Mine Equipment:

- **Trucks**
  - CAT 789 x 71 units
  - CAT 785 x 28 units
  - 785 converted fuel trucks x 2 units
  - 785 converted water trucks x 2 units
  - 777 converted water trucks x 2 units

- **Shovels**
  - Liebherr Shovel x 9 units
  - Hitachi Shovel x 5 units

- **Dozers**
  - CAT D10 x 15 units
  - CAT RTD x 6 units

- **Graders**
  - CAT 24M x 3 units
  - CAT 16 x 8 units

- **Loaders**
  - CAT 992 x 2 units
  - CAT 988 x 2 units
  - CAT 966 x 1 unit

- **Excavators**
  - CAT 374 x 2 units
  - CAT 329 x 1 units

- **Drills**
  - DR460 x 3 units
  - D55S x 5 units
  - Pre-Shear x 1 unit
Tailings dam crest is located at the elevation of 3670.5m asl. at the moment and is able to contain 95.69Mm3 of the mill waste. Current tailings contents amount to 86.17Mm3.

According to the current project, the Tailings Dam will be raised to the elevation of 3,674.0, which will ensure the capacity of the Tailing Storage Facility sufficient for the Mill waste until the end of 2024 of 109.45Mm3.

Completion of the dam raising project is scheduled by the end of 2020.
After completion of research works, the next stage is a design of the dam extension up to the elevation of 3,677.5, which will ensure capacity of the Tailing Storage Facility sufficient for the Mill waste until the LOM end (2027). Total capacity will amount to 117.89 Mm³.

The design will be prepared by:

- Scientific and Design Laboratory of Geotechnical Structures Stability
- BGC Engineering Inc. (Canada).
Ore process flow sheet

Pit → Crushing Section → Crushed Ore Stockpile → SAG Mill → Ball Mill

Grinding Section

Kumtor River → Crushing Section → Effluent Treatment Plant → Tailings

Froth Flotation Section

Thickener Section → Carbon in Leach

Electro Winning

Refining

Cyclones

Gold Dore
Mega Shop is intended to service all HD fleet operated on mine site, i.e. Off-Highway trucks CAT 785/789, dozers, drills, graders, Liebherr & Hitachi shovels are brought to the work shop for the overhauls and PMs.
Pit Shop is the shop to repair all auxiliary units, such as the dozers, drills (for hydro drilling), graders, and Liebherr cranes.
Environmental monitoring programs follow Kyrgyz and international standards, and include:

- Water quality and flow;
- Effluent quality and flow;
- Biodiversity;
- Air quality;
- Waste streams;
- Acid rock drainage;
- Meteorology.
Key Environmental Monitoring Locations
Effluent treatment process at the ETP

- Tailings Pond
- Pump Station #1
- Treatment Plant Chemicals
- Blowers
- pH adjustment for Discharge
- Pond #2
- Pond #1/Pump Station #2
- Discharge to Environment
- pH adjustment for Discharge
- Pond #3
- Compliance Sampling
- Pond #3
- Discharge to Environment
- Compliance Sampling
- Pond #3
Effluent treatment process at the ETP

- The untreated water from the tailings pond is pumped by the pumps located at the Pump Station #1 into Pond #1.

- Reagents are added to the water before being discharged into Pond #1. In Pond #1, effluents are aerated to ensure better water mix with reagents and improve the treatment process.

- In Pond #1, the main process of sodium cyanide decomposition takes place.

- Using the pumps located at the Pump Station #2, treated water, is pumped into Pond #2. During the pumping process, a reagent (ferrous sulfate) is added to water for better settling of insoluble solids.

- From Pond #2, the water flows through the crossflow into Pond #3, where the final treatment of water and settling of insoluble solids take place.

- Using the pumps of Pump Station #3, the treated water is pumped to be discharged into the Kumtor River.

- Every 6 hours, ETP operators make tests for the cyanide content in water before, during and after treatment.
Thanks for attention!