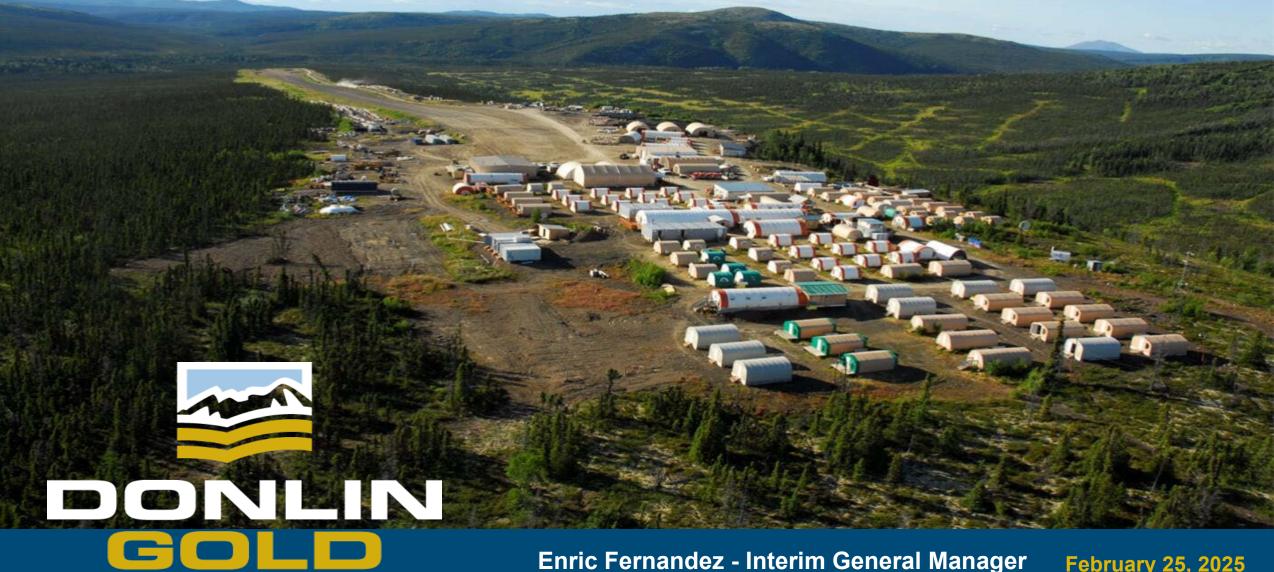
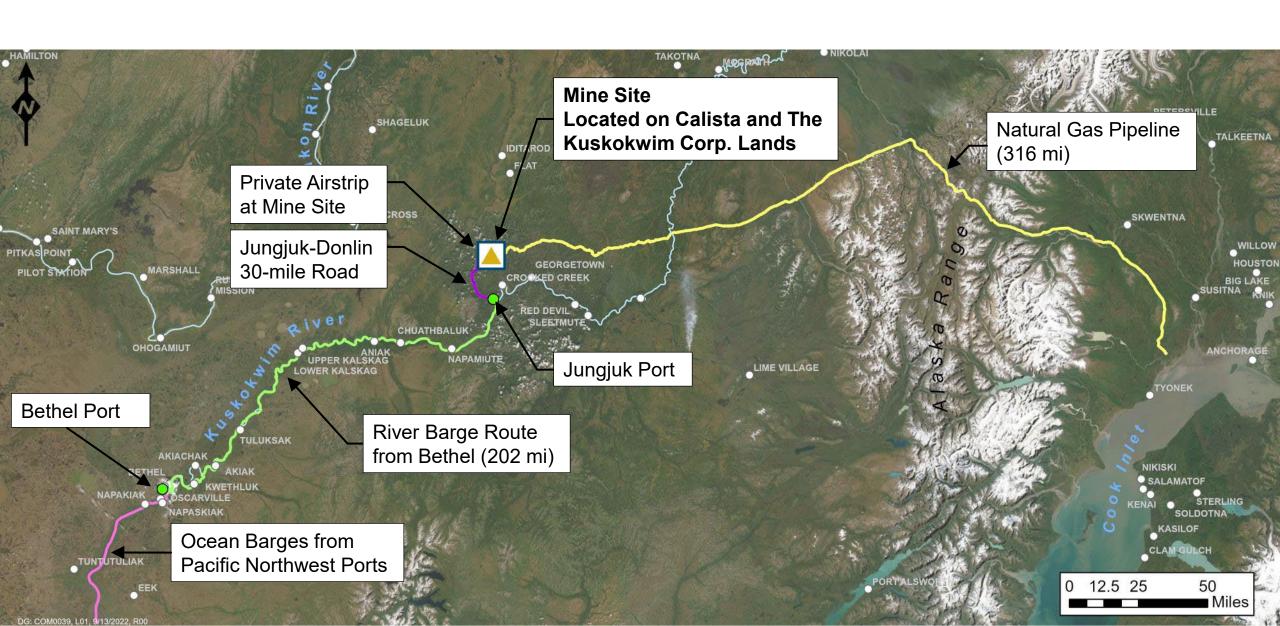
## **Energy Requirements for the Donlin Gold Project**

Presentation to the Alaska State Legislature Energy Committee, Alaska House of Representative



## MINE TRANSPORTATION AND BARGE ROUTE OVERVIEW





# **Project Benefits**



#### **Donlin Workforce Village Representation**



#### **PROJECT SUMMARY**

- Reserves: 33.9 million ounces of gold
- Mine Life: ~ 27 years
- Production: ~ 1 million ounces/year
- Operation: Open pit

#### **FISCAL BENEFITS**

- \$1.7 billion total payroll during construction
- \$118 million annual payroll during operations
- Royalties to Calista Corporation shared with other Native corps. under 7(i) and 7(j) revenue-sharing provisions of ANCSA
- State mining license and corporate income taxes.

#### **EMPLOYMENT**

- Construction will generate up to 3,200 jobs for three to four years
- Statewide employment: up to 1000 jobs for 27+ years with contractual preference to hire Calista and TKC shareholders.
- Rotational work schedule allows locals to live in their home community and continue subsistence and traditional livelihoods

Note: The above information is based on current plans.

## **Energy Needs**



## **Key Operational Drivers:**

## Mill Throughput:

- 59,000 tons/day

#### **Equipment:**

- 69 haul trucks 400 tons each, Diesel or potentially LNG (95% LNG and 5% Diesel)
- Electric shovels

#### **Electric Power Plant:**

- Dual-fueled (Natural gas [**NG**] as primary and diesel as backup) reciprocating engine power plant.
- 2 Engine Rooms, each with 6 reciprocating engines, and a single separate steam turbine.
- Total connected load of 227 megawatts (MW), average running load of 153 MW, and a peak load of 184 MW.



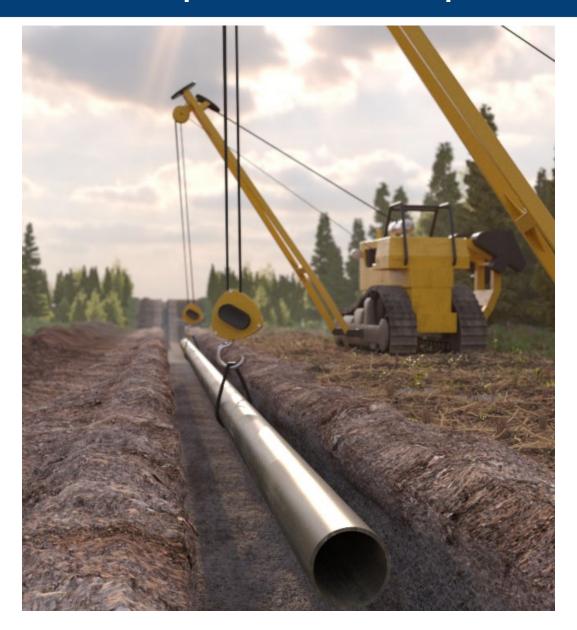
### **Peak Fuel Demand:**

| Key Operational Drivers             | NG – Annual (Bscf/Year) | Diesel – Annual (Mgal/Year) |
|-------------------------------------|-------------------------|-----------------------------|
| Mine with Diesel Trucks (Base Case) | 11.2                    | 42.3                        |
| Mine with LNG Trucks                | 15.5                    | 13.3                        |

Bscf = Billion standard cubic feet Mgal = Million Gallons

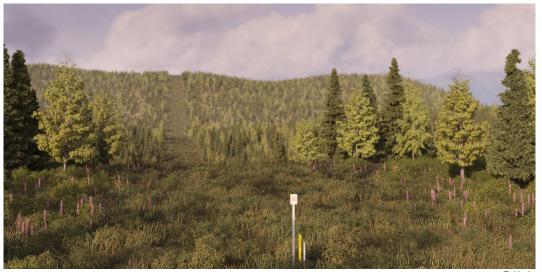
# Donlin Pipeline Description





- Origin: Beluga 20-inch pipeline (BPL) ENSTAR.
- Diameter: 14-inch diameter steel pipeline.
- Length: 316 miles, buried pipeline.
- Key Facilities: 1 compressor station, 1 metering station,
   2 pigging stations.
- The design capacity: 73 MMscf/day (26.7 Bscf/year)
- Utilized capacity: 11.2 Bscf/year to 15.5 Bscf/year

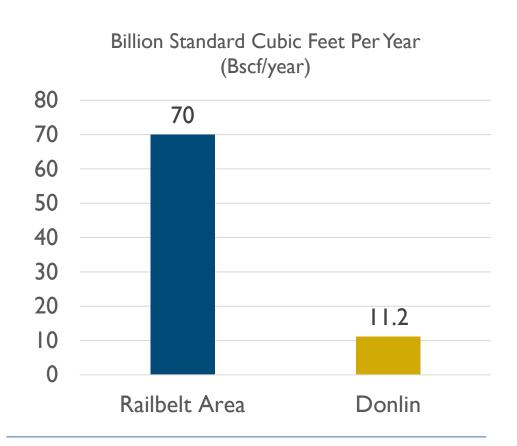
~42 to 58% utilized



## Source of the NG



# Donlin, would be a significant buyer NG



- The Donlin NG pipeline will link to the Southcentral NG distribution system. The decline in Cook Inlet NG has been anticipated for a long time, and that the solutions would entail either NG imports or North Slope gas. The project was planned for and permitted with NG imports as the fuel source.
- The development of the in-state infrastructure necessary to move gas from the North Slope can provide a more cost-effective, reliable source of energy for the Donlin project.
- Donlin has the potential to be a significant in-state buyer of NG, which could reduce the price of delivered gas to Southcentral.

# Potential Energy Benefits to the Y-K Region





- The Y-K region faces high energy costs, primarily relying on diesel. The Donlin project has the potential to bring lower cost energy NG into the Y-K region.
- NG delivery infrastructure in the Y-K region could by multi-modal (e.g. smaller diameter pipelines as gas or as generated electricity through transmission lines).
- The State's plan to use in-state natural gas to meet Southcentral's demand presents a potential solution for Southcentral, the Y-K region, and the Donlin project through AGDC's North Slope natural gas pipeline.

#### **Project Timeline**

- The Donlin Gold has yet to make a decision regarding the construction of the project.

  We are working diligently to position the project in such a way that this decision can be made. However, the cost associated with the necessary infrastructure to bring in natural gas is a significant factor affecting the economics of the Donlin project.
- A crucial question remains: what will the delivered cost of gas be? Until this is determined, no decisions can be made.
- Nevertheless, we are enthusiastic about collaborating with Alaskans to develop a solution that meets the needs of Southcentral, the Y-K region, and the Donlin project.