Northern Dynasty Minerals Ltd

THE PEBBLE PROJECT

HELPING TO SECURE AMERICA'S **GREEN FUTURE**

AUGUST 2021

TSX: **NDM**
NYSE AMERICAN: **NAK**

CAUTIONARY & FORWARD LOOKING INFORMATION

PLEASE REVIEW CAREFULLY

All statements of Northern Dynasty Minerals Ltd. ("NDM") in this presentation, other than statements of historical facts, that address the permitting, development and production for the Pebble Project are forward-looking statements. These statements include statements regarding (i) the mine plan for the Pebble Project, (ii) the social integration of the Pebble Project into the Bristol Bay region and benefits for Alaska, (iii) the political and public support for the permitting process, (iv) the ability to successfully appeal the negative Record of Decision by the US Army Corps of Engineers and the ability of the Pebble Project to secure state permits, (v) the right-sizing and de-risking of the Pebble Project, (vi) the design and operating parameters for the Pebble Project mine plan, (vii) exploration potential of the Pebble Project, (viii) future demand for copper and gold, and (ix) the potential partnering of the Pebble Project. Although NDM believes the expectations expressed in these forward-looking statements are based on reasonable assumptions, such statements should not be in any way be construed as guarantees that the Pebble Project will secure all required government permits, establish the commercial feasibility of the Pebble Project or develop the Pebble Project. Assumptions used by NDM to develop forward-looking statements include the assumptions that (i) the Pebble Project will obtain all required environmental and other permits and all land use and other licenses without undue delay, (ii) studies for the development of the Pebble Project will be positive, (iii) NDM's estimates of mineral resources will not change, (iv) NDM will be able to establish the commercial feasibility of the Pebble Project, and (v) NDM will be able to secure the financing required to develop the Pebble Project. The likelihood of future mining at the Pebble Project is subject to a large number of risks and will require achievement of a number of technical, economic and legal objectives, including (i) obtaining necessary mining and construction permits, licenses and approvals without undue delay, including without delay due to third party opposition or changes in government policies, (ii) finalization of the mine plan for the Pebble Project, (iii) the completion of feasibility studies demonstrating that any Pebble Project mineral resources that can be economically mined, (iv) completion of all necessary engineering for mining and processing facilities, (v) the inability of NDM to secure a partner for the development of the Pebble Project, and (vi) receipt by NDM of significant additional financing to fund these objectives as well as funding mine construction, which financing may not be available to NDM on acceptable terms or on any terms at all. NDM is also subject to the specific risks inherent in the mining business as well as general economic and business conditions, such as the current uncertainties with regard to COVID-19. For more information, Investors should review the risk factors and related discussions in NDM's filings with the US Securities and Exchange Commission (the "SEC") at www.sec.gov and its Canadian home jurisdiction filings available at www.sedar.com.

The National Environment Policy Act Environmental Impact Statement process requires a comprehensive "alternatives assessment" be undertaken to consider a broad range of development alternatives, the final project design and operating parameters for the Pebble Project and associated infrastructure may vary significantly from that contemplated in this presentation. As a result, the Company will continue to consider various development options and no final project design has been selected at this time.

This presentation also uses the terms "measured resources", "indicated resources" and "inferred resources". These terms are recognized and required by Canadian regulations (under National Instrument 43-101 Standards of Disclosure for Mineral Projects). The SEC has adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the U.S. Securities Exchange Act of 1934, effective February 25, 2019 ("The SEC Modernization Rules"). The SEC Modernization Rules include the adoption of definitions of the terms and the categories of resources which are "substantially similar" to the corresponding terms under Canadian regulations in 43-101. Under Canadian rules, estimates of inferred resources may not form the basis of feasibility or pre-feasibility studies, or economic studies except for a Preliminary Economic Assessment as defined under NI 43-101. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into reserves or be proven to be economically or legally mineable.

The technical information contained in this presentation has been reviewed and approved by qualified persons who are not independent of NDM. Information on geology, drilling and exploration potential was reviewed by James Lang, PGeo., Mineral Resources by David Gaunt, PGeo., and engineering by Stephen Hodgson, PEng.

INVESTMENT HIGHLIGHTS

COPPER: A CRITICAL METAL FOR AMERICA'S GREEN FUTURE

- A strategic metal for renewable energy & green technologies
- Critical metal for electric vehicles & associated infrastructure
- Renewable energy systems use up to 12 times more copper (per unit of energy produced) than conventional power systems
- Copper consumption predicted to rise 40% by 2035 & more than 100% by 2050[1]

PEBBLE: A U.S.-BASED WORLD CLASS RESOURCE

- Among the globe's greatest accumulations of metal
- Potential domestic solution to U.S. foreign supply chain dependence of critical minerals
- Cu/Au/Mo/Ag/Re grades facilitate near-term development
- Untapped exploration upside

PEBBLE: SIGNIFICANT SOCIAL & ECONOMIC BENEFITS EXPECTED [2]

- Local and regional capital investment
- GDP & government revenue growth expected
- *"The increase in job opportunities, year-round or seasonal employment, steady income, and lower cost of living ...would have beneficial impacts."*

PEBBLE: A PATH FORWARD

- Final EIS: Fisheries *"... would not be expected to result in long-term changes to the health of the commercial fisheries in Bristol Bay"*
- NDM's administrative appeal of U.S. Army Corps' denial of Federal ROD* has been accepted and the appeal process is underway
- Legal options being considered
- Experienced Management

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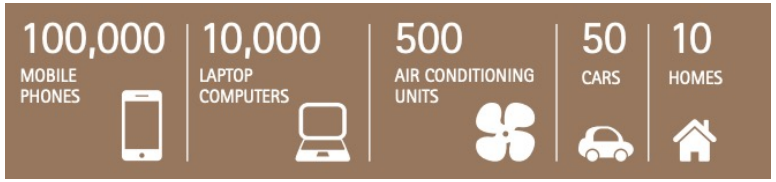
1. Source: https://copperalliance.org.uk/coverage-future-copper-demand/
2. Source: https://stockhead.com.au/resources/glencore-has-some-stunning-figures-on-the-levels-of-battery-metals-the-world-will-need-by-2050/
3. Source: Final Environmental Impact Statement for the Pebble Project July 2020

* ROD = Record of Decision

COPPER IS AN ESSENTIAL METAL FOR THE GREEN ECONOMY[1]

- **Copper is a strategic metal in powering renewable energy systems and green technologies due to its properties:**
  - **Electrical Conductivity** increases efficiency
  - **Thermal Management** allows rapid heating and cooling
  - **Durability** withstands pressure and extreme temperatures
  - **Anti-Corrosive** maintains integrity
  - **Versatile** processed for numerous industries & products
- **Copper based products increase economic efficiency and environmental performance in multiple applications across the energy, healthcare, IT, industrial, transportation and building sectors**



THE POWER OF ONE TONNE OF COPPER[2]

- **Global shift to green technologies expected to increase consumption >40% by 2035 & more than 100% by 2050**
  - Renewable power systems up-to twelve times more copper-intensive than conventional power systems
  - Average electric vehicle (EV) contains triple the copper of an internal combustion car
- **In 2020, globally, >$500 billion dollars invested in the carbon-free energy transition (renewables, electric heat, energy storage, and electrified transport)**
  - Includes $304 billion in renewable energy & $139 billion in electric transportation
  - Electric transportation investment growth predicted to outpace and exceed renewable energy by 2025 (20.8% vs. 0.1%)

1. Source: https://copperalliance.org/about-copper/the-copper-industry/
2. Source: https://copperalliance.eu/resources/coppers-contribution-low-carbon-future
3. Source: https://stockhead.com.au/resources/glencore-has-some-stunning-figures-on-the-levels-of-battery-metals-the-world-will-need-by-2050/

WHERE WILL THE U.S. GET ITS COPPER?

- **World's top copper projects predominantly located outside of the U.S**
  - 70% of contained copper in top copper projects is foreign based

- **Pebble ranks as <u>the largest</u> undeveloped copper project globally**
  - 21% of contained copper of top copper projects
  - 72% of contained copper of top U.S. located projects

COMPARATIVE SIZE OF WORLD'S TOP COPPER PROJECTS BY CONTAINED COPPER

Source: Mining Intelligence 2021

PEBBLE
A WORLD CLASS MINERAL RESOURCE

RESOURCES

- 6.5 B tonnes of Measured & Indicated
- 4.5 B tonnes of Inferred

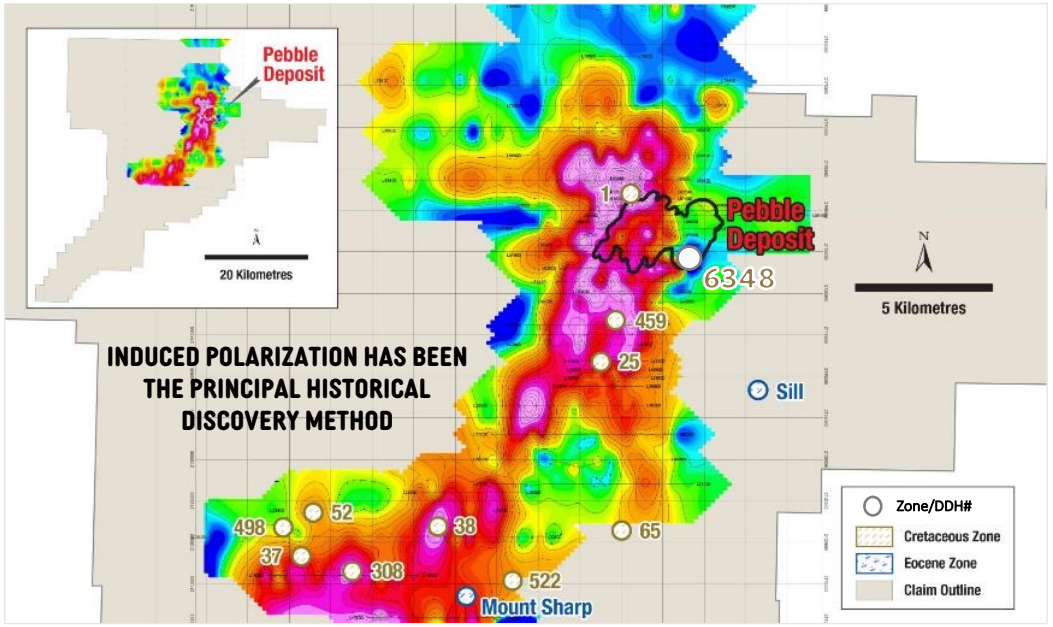
	MEASURED & INDICATED	INFERRED
COPPER	57 B LB	25 B LB
GOLD	71 M OZ	36 M OZ
MOLYBDENUM	3.4 B LB	2.2 B LB
SILVER	345 M OZ	170 M OZ
RHENIUM	2.6 M KG	1.6 M KG

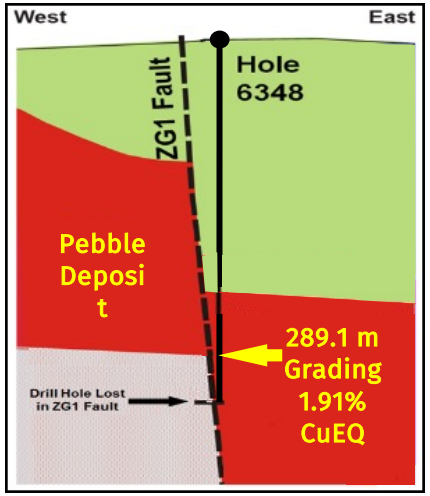
* Refer to table of Measured, Indicated and Inferred Resources in Appendix

PEBBLE UNTAPPED EXPLORATION POTENTIAL

WORLD'S MOST EXTENSIVE MINERAL SYSTEM[1]

- A zone of sulphide mineralization is indicated by an induced polarization chargeability anomaly at least 25 km by 7 km in size
- Sulphides and hydrothermal alteration confirmed by drilling that discovered mineralization in 11 zones outside the Pebble deposit
- Many other targets have been identified by magnetic and electromagnetic geophysical surveys and geochemical methods but have not been drill tested
- There is good potential for a cluster of deposits to occur in the vicinity of Pebble
- Pebble Deposit open at depth and to the east
  - Highest grades at Pebble offset by the East Graben
  - Faulting was a post-mineralization event; patterns west of the ZG1 may be repeated to the east
  - DDH-6348 intersected 289.1 m grading 1.91% CuEQ[2] below cover rocks in the graben - no follow up



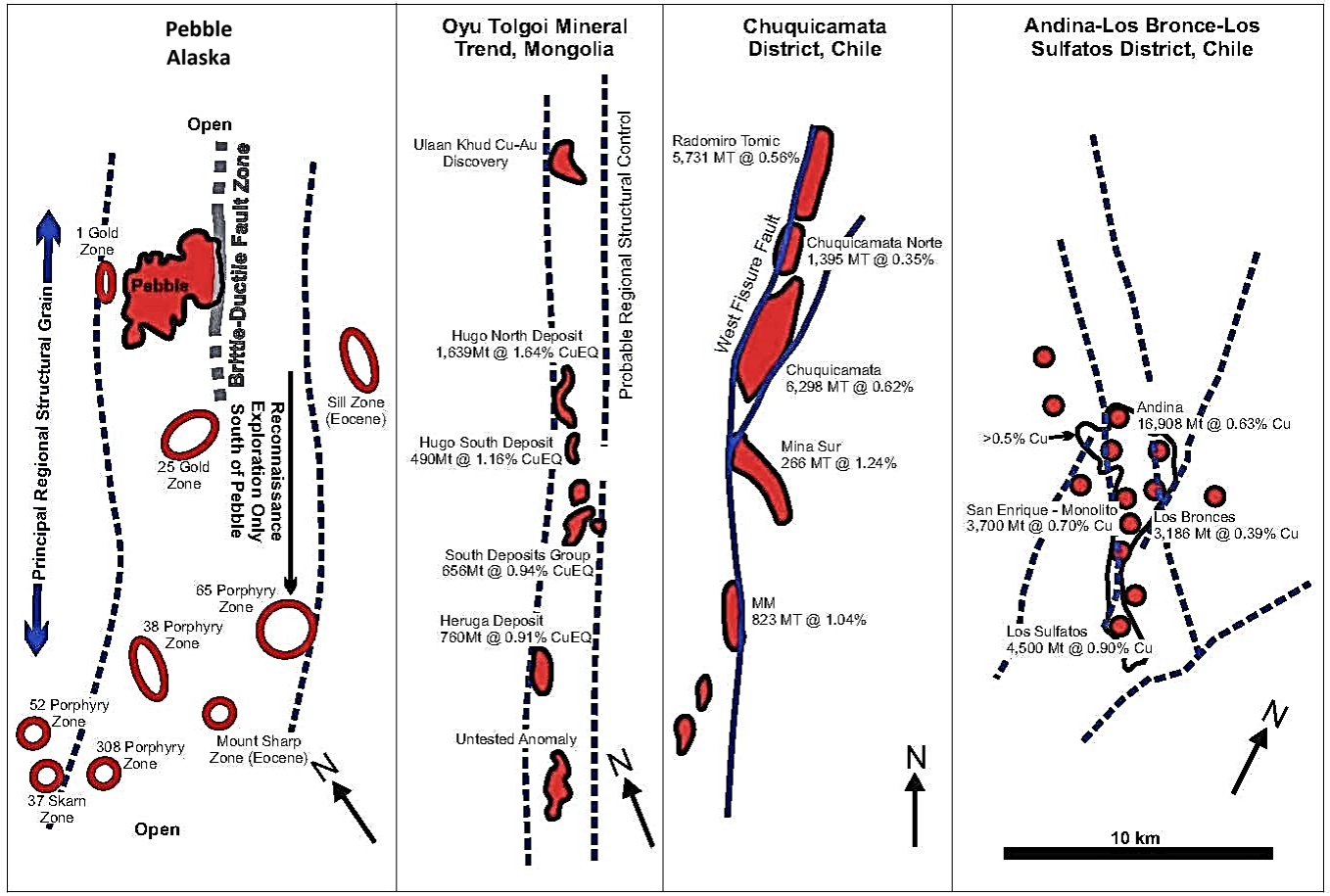


1. Source: USGS.
2. CuEQ uses metal prices: $3.00/lb Cu; $1,400/oz Au; $9.50/lb Mo. Individual grades are 1.24% Cu, 0.79 g/t Au, 0.042% Mo

PEBBLE
MAY HOST OTHER MAJOR DEPOSITS

- At ~11 Bt, Pebble is already one of the largest porphyry deposits ever discovered, yet there is significant geological potential to discover other major porphyry deposits, which commonly occur in clusters

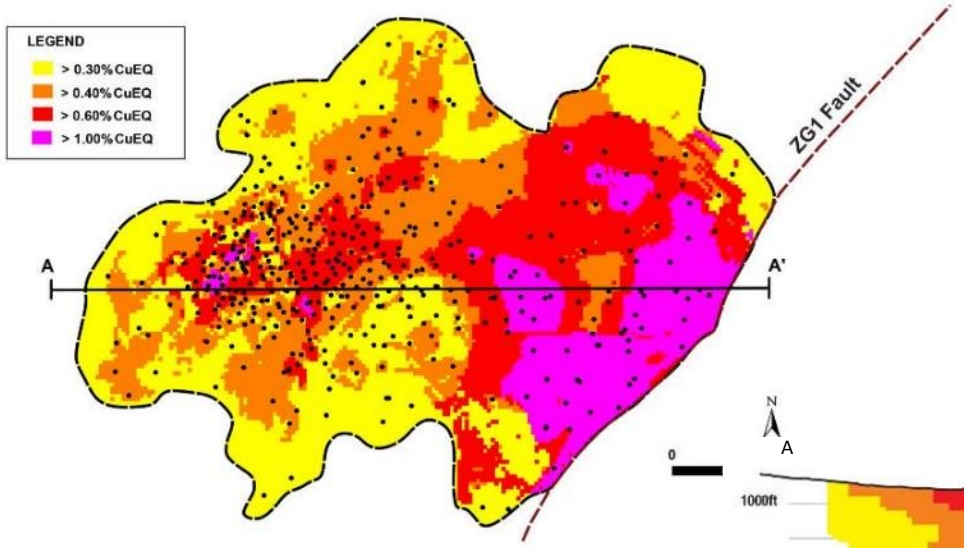
- The extent of mineralization at Pebble is comparable to:
  - Oyu Tolgoi
  - Chuquicamata
  - Los Bronces/ Andina
- Exploration potential at deposit and within region is noteworthy



Each area is shown at the same scale

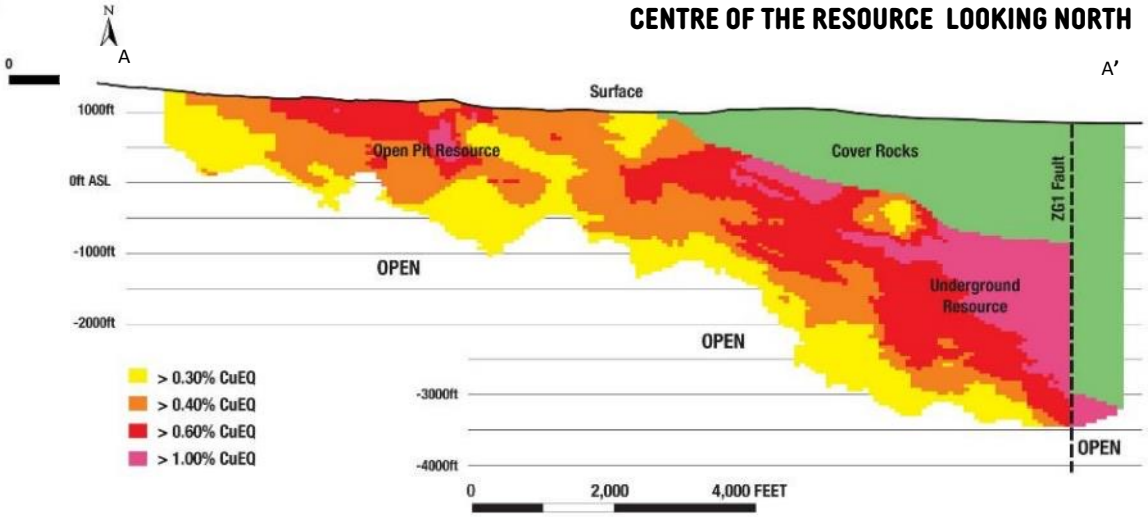
PEBBLE
PLAN VIEW AND CROSS SECTION

- The Pebble resource is based on 699 diamond core holes and >59,000 samples.
- Mineralization extends over a 4km by 3km area



PLAN VIEW AT THE TOP SURFACE OF CRETACEOUS ROCK TYPES

EAST-WEST CROSS SECTION THROUGH THE APPROXIMATE CENTRE OF THE RESOURCE LOOKING NORTH

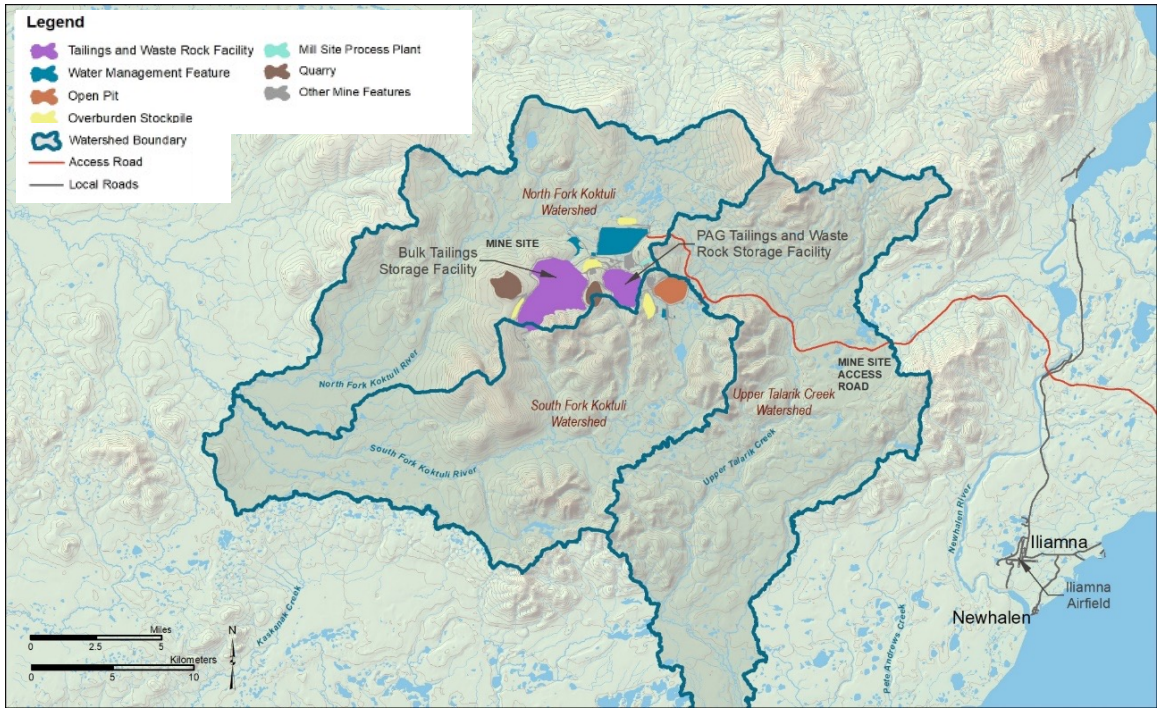


Note: Metal prices used for copper equivalent (CuEQ) are same as for resource (see Page 40).

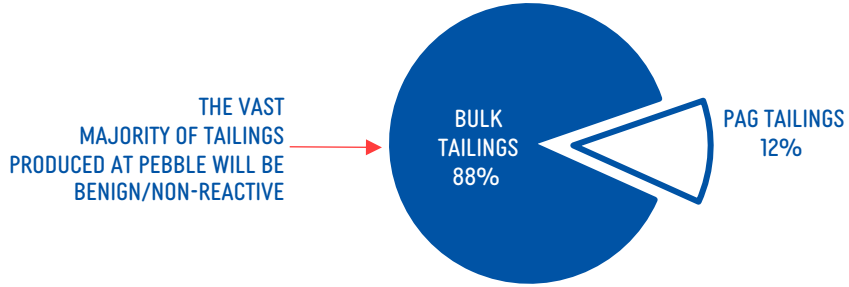
PEBBLE KEY ENVIRONMENTAL DESIGN FEATURES

- **Robust water management plan**
  - 76 years of data
- **Compact project footprint**
  - 0.025% of Bristol Bay watershed
  - No impact on critical fish habitat
  - No permanent waste rock piles
- **Potentially acid-generating (PAG) tailings & waste rock separated and stored underwater in fully-lined facility**
  - Transferred to open-pit for safe, permanent storage at closure
- **Enhanced bulk tailings storage**
  - Enhanced buttresses and conservative (2.6:1) slope angles achieve 'factor of safety' well-above industry norms
  - Flow-through embankment vastly reduces failure likelihood & consequence
  - No long-term water quality effects
  - Drained during operation, capped and dry post-closure
- **No mine facilities in Upper Talarik/Kvichak drainage**
- **Benign processing reagents – no cyanide**

PRIMARY MINE FACILITIES & LOCAL HYDROGRAPHY



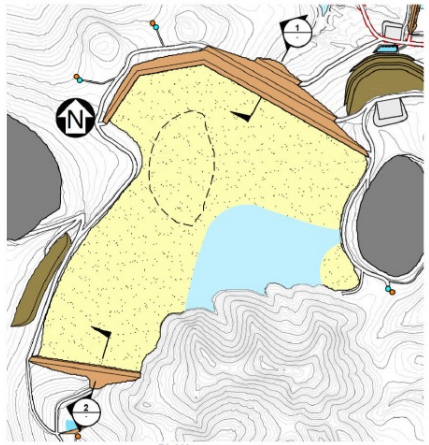
ALL PRIMARY MINE FACILITIES WILL BE SITED IN THE NORTH/SOUTH FORK KOKTULI DRAINAGE: AN AREA THAT PRODUCES 0.08% OF BRISTOL BAY SOCKEYE.

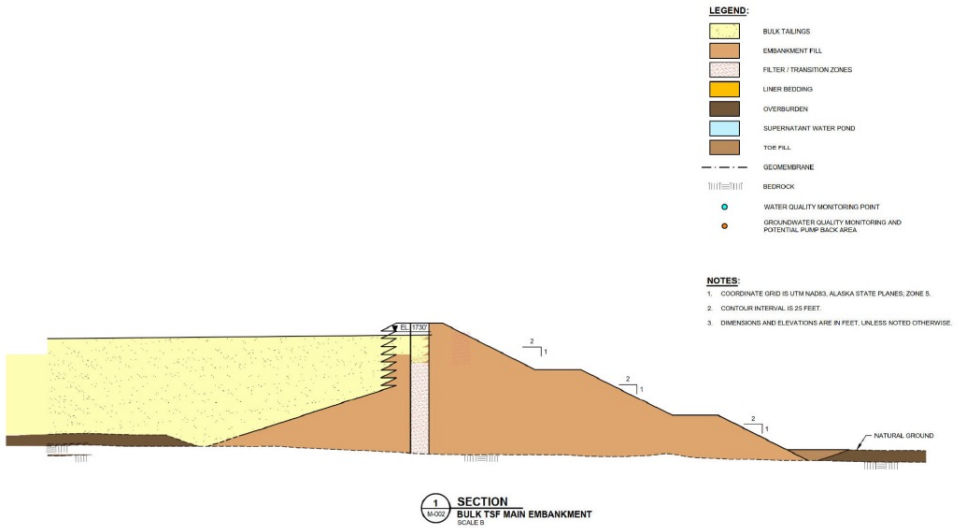


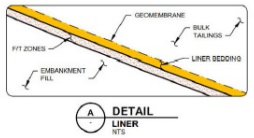
Note: See Disclosures Page 2

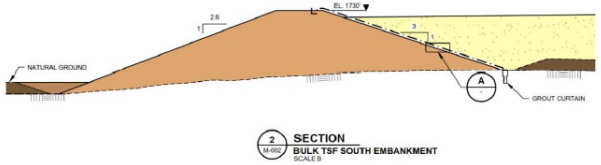
PEBBLE TAILINGS STORAGE FACILITY (TSF) (PROPOSED DESIGN)

- Two engineered facilities to segregate PAG (0.1 billion tons) and non-PAG tailings (1.1 billion tons)
- Non-PAG facility designed with a flow-through main embankment (530 feet high)
- PAG tailings stored with PAG waste rock in a separate lined facility
- PAG tailings and waste rock to be relocated to the pit at closure
- Enhanced buttresses and improved Factor of Safety
  - Conservative 2.6:1 (horizontal : vertical) slope angle





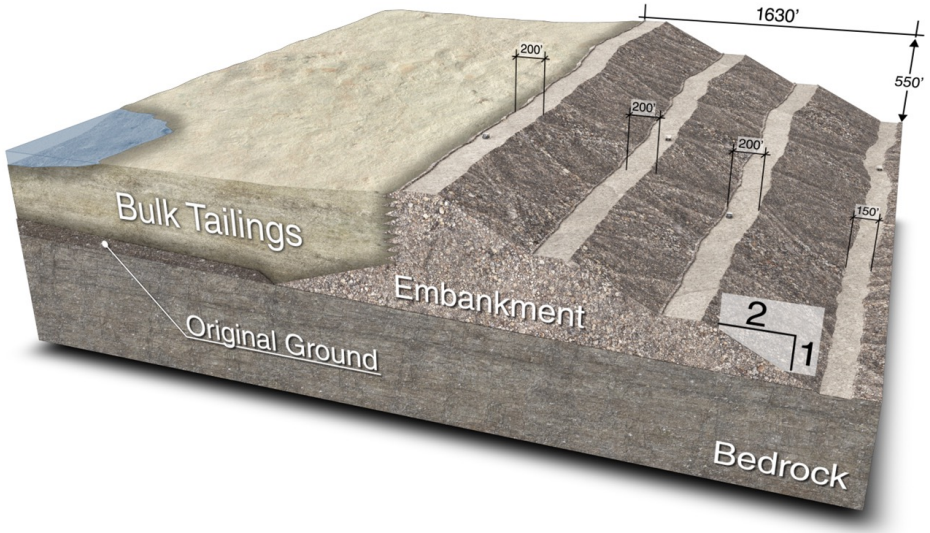




Note: See Disclosures Page 2

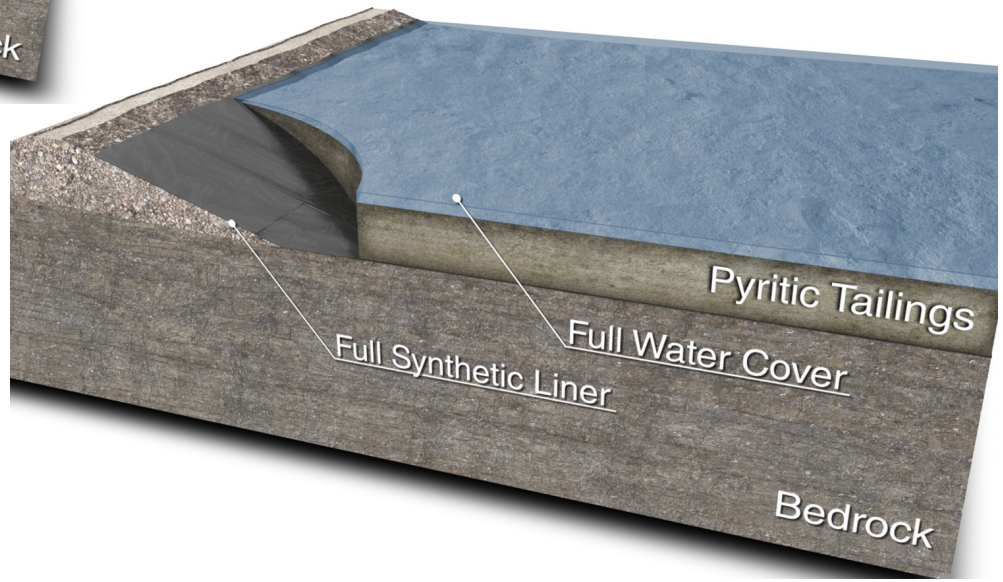
PEBBLE TAILINGS STORAGE FACILITY (TSF)

- Separate TSFs to manage bulk/non-PAG and pyritic/PAG material



- Pyritic tails must be stored under water to prevent oxidation
- Synthetic liner to capture the water
- PAG rock to be stored with pyritic tails
- Rock and tails reclaimed to pit at closure and site decommissioned and reclaimed

- Bulk tailings can be stored sub-aerially
- Flow through main embankment
- Lined southern embankment
- Flattened slopes
- Founded on bedrock
- Extended beach
- Reduced water storage



PEBBLE: POTENTIAL BENEFITS FOR ALASKA[1]

- Alaska's ongoing fiscal crisis exacerbated by COVID-19 and declining oil & gas pricing/investment

- **Pebble represents:**
  - Capital investment and GDP growth
  - Jobs and economic diversification
  - Much needed government revenue
  - New transportation and power infrastructure

- **Southwest Alaska/Bristol Bay region characterized by:**
  - High levels of unemployment and underemployment
  - Among America's highest cost of living
  - Decreasing population, outmigration and school closures

JOBS	**~850 DIRECT ~2,000 TOTAL** **AVERAGE MINING WAGE = US$100K+**
CONTRIBUTION TO ALASKA GDP	**OPERATING BUDGET OF US$400M+** (ANNUAL)
STATE TAXES & ROYALTIES	**US$49M - US$66M** (ANNUAL) **US$970M - US$1.32B OVER 20 YEARS**
LAKE & PENINSULA BOROUGH REVENUE	**US$19M - US$21M** (ANNUAL) **US$377M - US$420M OVER 20 YEARS**

Note: The information in this section is indicative only and is based on the mine development case submitted in the 404 permit application. As part of the EIS preparation process the Corps will undertake a comprehensive alternatives assessment and consider a broad range of development alternatives. See disclosure on Page 2. As a result, we will continue to consider various development options and no final project design has been selected at this time. The information is intended to provide information about general economic effects/contribution of a development at Pebble to Alaska and the Lake and Borough Peninsula region. It should not be used to evaluate the Pebble Project's impact on Northern Dynasty. Includes estimates of mineral licensing tax, corporate tax, and state royalties

1. Estimated Potential Economic Impact of Pebble Project over 20 years of mine life.

PEBBLE FINAL EIS: FINDINGS

- **On subsistence fish & wildlife resources:**
  - *"Overall, impacts to fish and wildlife would not be expected to impact harvest levels. Resources would continue to be available because no population level decrease in resources would be anticipated."*

- **On the Bristol Bay commercial fishery:**
  - *"No measurable change in the number of returning salmon and the historical relationship between ex-vessel values and wholesale values…or processor operations."*
  - *"… would not be expected to have a measurable effect on fish numbers and result in long-term changes to the health of the commercial fisheries in Bristol Bay."*

- **On water quality:**
  - *"…direct and indirect impacts of treated contact waters to off-site surface water are not expected to occur."*
  - *"…no effects on any community groundwater or surface water supplies"*

- **On local communities:**
  - *"The increase in job opportunities, year-round or seasonal employment, steady income, and lower cost of living …would have beneficial impacts."*
  - *"The project could reduce or eliminate the current local population decline because of the increase in employment opportunities and indirect effects on education"*

PEBBLE LODGES APPEAL OF USACE RECORD OF DECISION

- Under U.S. regulatory law, permitting decisions for major development projects must be based on an 'administrative record' – which, in Pebble's case, includes the Final EIS published by the USACE in July 2020.
- Northern Dynasty believes the USACE has based its permitting decision on a Public Interest review (PIR) that is inconsistent with, and at times diametrically opposed to, findings in the Final EIS.

SUMMARY OF INCONSISTENT AND DIAMETRICALLY OPPOSED FINDINGS

SUBSTANTIVE ISSUE	FINDINGS IN FINAL EIS	PERMITTING DECISION BASED ON PIR
POTENTIAL 'ECONOMIC CONTRIBUTION' TO THE BRISTOL BAY REGION AND STATE OF ALASKA	*"An estimated $64 million annually in state corporate taxes during the operations phase. It was estimated that the operations phase could also generate $41 million annually from State mining license taxes. The project could generate $20 million annually (in 2011 dollars) in state royalty payments during the operations phase."* (4.3-11)	In supporting documents for its ROD, the USACE claims the Pebble Project's economic benefits are "*speculative*" and "*would be primarily received by the private applicant*"
POTENTIAL EFFECTS ON 'WATER QUALITY'	*"There would be no effects on any community groundwater or surface water supplies from the changes in groundwater flows at the mine site."* (ES 67)	In supporting documents for its ROD, the USACE claims Pebble would *"cause water quality degradation"*
POTENTIAL EFFECTS ON 'SUBSISTENCE FISHING AND HUNTING'	*"Overall, impacts to fish and wildlife would not be expected to impact harvest levels. Resources would continue to be available because no population level decrease in resources would be anticipated."* (ES 51)	In supporting documents for its ROD, the USACE claims Pebble would lead to "*reduced subsistence opportunities*"
LIKELIHOOD AND CONSEQUENCE OF A 'CATASTROPHIC TAILINGS STORAGE FACILITY FAILURE'	*"The Applicant's bulk TSF design is different than that of most other historic and current TSFs. The proposed design is especially distinct when compared to most historic mines that have experience large failures."* (K4.27-4)	In supporting documents for its ROD, the USACE found that in *"the event of human failure and/or a catastrophic event (at Pebble), the commercial and/or subsistence (fisheries) resources would be irrevocably harmed."*

Source: https://northerndynastyminerals.com/site/assets/files/4881/december_3-_2020.pdf

THANK YOU

COPPER:
A CRITICAL METAL FOR THE U.S. GREEN FUTURE

PEBBLE:
A U.S.-BASED WORLD CLASS RESOURCE

PEBBLE:
SIGNIFICANT BENEFITS IN THE PUBLIC INTEREST

PEBBLE:
A PATHWAY FORWARD

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