

## Northern Dynasty: Pebble Project facilities would be unaffected by recent 8.1M earthquake in Alaska

Robust engineering design for key mine-site facilities reflects commitment to environmental leadership

**August 10, 2021 Vancouver** – Northern Dynasty Minerals Ltd. (TSX: NDM; NYSE American: NAK) ("Northern Dynasty" or the "Company") reports that its 100%-owned US-based subsidiary Pebble Limited Partnership ("Pebble Partnership") has determined the 8.1 magnitude ("M") earthquake experienced in Alaska on July 28, 2021 resulted in substantially less ground movement at the project site than the seismic events considered in the assessment of the stability of its proposed tailings facility designs.

"We determined the 8.1 M earthquake that occurred last month south of the Alaska Peninsula, about 300 miles from our site, created ground acceleration at Pebble that is 20 – 30 times less than the design earthquakes we've evaluated," said Ron Thiessen, Northern Dynasty President & CEO. "To put that into perspective, the 8.1 M earthquake recorded July 28 is the largest seismic event in the United States in the past 50 years."

'Seismic risk' is measured as ground acceleration as a proportion of gravity ("g"). The Pebble Partnership has assessed seismic risk at the Pebble site so that proposed tailings embankments and other mine facilities would not fail under even the most severe seismic events, which are extraordinarily unlikely. This is a course of action that will continue throughout the state permitting process and life of mine.

The extreme seismic events modeled to test the stability of proposed tailings embankments and other mine-site facilities at Pebble include:

- o a repeat of the 9.2 M megathrust event that occurred in Alaska's Prince William Sound in 1964 (the second largest seismic event ever recorded);
- an 8.0 M earthquake occurring ~50 miles east of the Pebble Project site, similar to but of larger magnitude than the 7.1 M event that occurred north of Anchorage in November 2018;
- a 7.5 M event along the entire length of the Lake Clark Fault, including those portions closest to the Pebble site for which no evidence of movement for more than 10,000 years has been detected; and,
- a 6.5 M event occurring immediately below the proposed Pebble mine site, where no evidence of a fault exists.

"The highest ground acceleration at the Pebble site produced as a result of these potential, extreme seismic events is estimated to be 0.6 g (or 60% of the rate of acceleration due to gravity). It is these types of extreme ground movements that our proposed tailings facilities are designed to withstand," Thiessen explained. "By comparison, the extremely rare 8.1M event recorded last month created ground movement at Pebble of about 0.02 to 0.03 g, or 20-30 times less than what we have considered.

"When it comes to engineering and environmental solutions to protect the long-term integrity of downstream water quality and aquatic habitat, our solutions bring modern and technically sound performance standards for American mining," Thiessen said. "We're proud of it. We continue to believe it is the right approach for this important project in this unique location."

## **About Northern Dynasty Minerals Ltd.**

Northern Dynasty is a mineral exploration and development company based in Vancouver, Canada. Northern Dynasty's principal asset, owned through its wholly owned Alaska-based U.S. subsidiary, Pebble Limited Partnership, is a 100% interest in a contiguous block of 2,402 mineral claims in southwest Alaska, including the Pebble deposit, located 200 miles from Anchorage and 125 miles from Bristol Bay. The Pebble



Partnership is the proponent of the Pebble Project, an initiative to develop one of the world's most important mineral resources.

For further details on Northern Dynasty and the Pebble Project, please visit the Company's website at www.northerndynastyminerals.com or contact Investor services at (604) 684-6365 or within North America at 1-800-667-2114. Review Canadian public filings at www.sedar.com and U.S. public filings at www.sec.gov.

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## Forward Looking Information and other Cautionary Factors

This release includes certain statements that may be deemed "forward-looking statements" under applicable law. All statements in this release, other than statements of historical facts, which address 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 and secure the issuance of a positive Record of Decision by the U.S. Army Corps of Engineers and the ability of the Pebble Project to secure state permits, (v) the rightsizing 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, (ix) the potential partnering of the Pebble Project, and (x) the ability and timetable of NDM to develop the Pebble Project and become a leading copper, gold and molybdenum producer. 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.

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 currently contemplated. As a result, the Company will continue to consider various development options and no final project design has been selected at this time.

For more information on the Company, Investors should review the Company's filings with the United States Securities and Exchange Commission and its home jurisdiction filings that are available at <a href="https://www.sedar.com">www.sedar.com</a>