

Northern Dynasty issues Technical Report: Southwest Alaska's Pebble Project hosts the world's most significant Rhenium resource

October 2, 2020 Vancouver – Northern Dynasty Minerals Ltd. (TSX: NDM; NYSE American: NAK) ("Northern Dynasty" or the "Company") has issued a Technical Report on Alaska's Pebble Project, including a revised mineral resource estimate announced in August (see Northern Dynasty August 20, 2020 news release) that establishes Pebble as the single most significant source of Rhenium in the world.

The '2020 Technical Report on the Pebble Project, Southwest Alaska, USA' dated September 30, 2020 can be accessed on www.sedar.com. According to the updated mineral resource estimate, at a 0.30% copperequivalent cutoff¹, the Pebble deposit contains:

- 2.6 million kg of Rhenium, 57 billion pounds of copper, 71 million ounces of gold, 3.4 billion pounds of molybdenum and 345 million ounces of silver within the 6.5 billion tonnes in the combined Measured and Indicated categories at a grade of 0.40% copper, 0.34 g/t gold, 240 ppm molybdenum, 1.7 g/t silver and 0.41 ppm rhenium; and
- **1.6 million kg of Rhenium,** 25 billion pounds of copper, 36 million ounces of gold, 2.2 billion pounds of molybdenum and 170 million ounces of silver within the 4.5 billion tonnes in the Inferred category at a grade of 0.25% copper, 0.25 g/t gold, 226 ppm molybdenum, 1.2 g/t silver and 0.36 ppm rhenium.

After Pebble, the most significant deposits of Rhenium in the world exist at copper porphyry mines in Chile, including Chuquicamata (3.8 million kg) and El Teniente (2.76 million kg)².

Rhenium is considered a strategic metal by US Congress, the US Geological Survey, the US Department of Interior and the US military due to its primary use as an alloying metal in jet engine turbine blades, combustion chambers and exhaust nozzles – applications that rely on the metal's ductility and high melting point. Jet engine and related military applications account for ~80% of annual US Rhenium consumption, in addition to industrial applications that employ Rhenium as a catalyst – including for the production of high octane, lead-free gasoline.

Last year, the US imported 39,000 kg of Rhenium from foreign producers, while producing just 8,400 kg at six domestic mining operations. The addition of Pebble's future Rhenium production to existing domestic supply has the potential to drastically reduce US import reliance³.

The vulnerability of the United States' strategic metals supply chain, including Rhenium, has been identified and reinforced through a number of federal government programs and initiatives. For instance:

Presidential Order 13817, issued by President Trump in December 2017, instructs the Secretary of the Interior to establish a list of critical minerals and to develop recommendations to streamline permitting, and increase the domestic production of these critical minerals.⁴

In publishing its 'Final List of Critical Minerals 2018,' which included Rhenium among 35 critical minerals, the US Department of Interior noted: "The United States is heavily reliant on imports of certain mineral commodities that are vital to the Nation's security and economic prosperity. This dependency of the United

¹ CuEQ uses metal prices of \$1.85/lb for copper, \$902/oz for gold and \$12.50/lb for molybdenum, and recoveries of 85% for copper 69.6% for gold, and 77.8% for molybdenum in the Pebble West zone and 89.3% for copper, 76.8% for gold, 83.7% for molybdenum in the Pebble East zone.

Contained metal is based on 100% recoveries. Further details on the mineral resource estimate are available in the August 20, 2020 news release.

² https://pubs.usgs.gov/pp/1802/p/pp1802p.pdf

 $^{^{3}}$ United States Dept of the Interior, US Geological Survey - $\it Mineral \, Commodities \, Summaries \, 2020 - \it Rhenium$

⁴ President of the United States, *Executive Order 13817 – A Federal Strategy To Ensure Secure and Reliable Supplies of Critical Minerals*, December 20, 2017 https://www.federalregister.gov/documents/2017/12/26/2017-27899/a-federal-strategy-to-ensure-secure-andreliable- supplies-of-critical-minerals



States on foreign sources creates a strategic vulnerability for both its economy and military to adverse foreign government action, natural disaster, and other events that can disrupt supply of these key minerals."⁵

A second Presidential Executive Order, issued September 30, further emphasizes the importance of developing mines that will provide a domestic supply of these critical minerals. The order "declares a national emergency with the aim of enhancing domestic mining production and processing for critical minerals, rare earth materials" with follow up timelines to enable the "United States to broadly enhance its mining and processing capacity, including for minerals not identified as critical minerals and not included within the national emergency declared in this order. By expanding and strengthening domestic mining and processing capacity today, we guard against the possibility of supply chain disruptions and future attempts by our adversaries or strategic competitors to harm our economy and military readiness."⁶

The primary source of Rhenium around the world is mining operations based on copper porphyry deposits like Pebble, which recover Rhenium as a by-product through the treatment of molybdenum concentrates.

As proposed, the Pebble Project will produce approximately 15,000 tons of molybdenum concentrate each year over 20 years of mining and mineral processing. The Rhenium content in Pebble's molybdenum concentrate is forecast to be in the range of 900 ppm.

The Final Environmental Impact Statement ("EIS") for Alaska's Pebble Project was released by the lead federal regulator, the US Army Corps of Engineers ("USACE"), in July 2020 following 2½ years of intensive study by 11 federal, state and local regulatory agencies, and extensive consultation with public stakeholders and Alaska Native tribes. The EIS found:

- Pebble will protect the water resources of southwest Alaska;
- Pebble will have no measurable impact on any fish population or fishery in the region; and
- Pebble will make a profound economic contribution to the state and the nation, and particularly to the struggling Alaska Native villages in the project area.

The USACE is expected to issue a final Record of Decision for the Pebble Project this fall.

The technical information in this release was reviewed and approved by Stephen Hodgson, P.Eng., and David Gaunt, P.Geo., Qualified Persons who are not independent of Northern Dynasty. David Gaunt is also responsible for the August 2020 resource estimate.

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 ("PLP"), is a 100% interest in a contiguous block of 2,402 mineral claims in southwest Alaska, including the Pebble deposit. PLP is the proponent of the Pebble Project, an initiative to develop one of the world's most important mineral resources.

⁵ Department of the Interior, *Final List of Critical Minerals 2018*, Federal Register, May 18, 2018 (Notices) https://www.federalregister.gov/documents/2018/05/18/2018-10667/final-list-of-critical-minerals-2018

⁶President of the United States, Executive Order - Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries – September 30, 2020 https://www.whitehouse.gov/presidential-actions/executive-order-addressing-threat-domestic-supply-chain-reliance-critical-minerals-foreign-adversaries/



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 US 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". All statements in this release, other than statements of historical facts, that address exploration drilling, exploitation activities and events or developments that the Company expects 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 issuance of a positive 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, (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 forwardlooking 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 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.

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 www.sedar.com