

**Northern Dynasty comments on recent S&P Global report: Urgent need for massive new copper supply to come online in the near future if there is to be any hope of achieving the goal of Net-Zero Emissions by 2050**

**July 18, 2022 Vancouver** – Northern Dynasty Minerals Ltd. (TSX: NDM; NYSE American: NAK) ("Northern Dynasty" or the "Company") comments on a recent report from world-renowned industry intelligence experts, S&P Global ("S&P"), entitled *The Future of Copper: Will the looming supply gap short-circuit the energy transition?* published on July 14, 2022. All currency numbers are USD unless otherwise specified.

The independent report (and a corresponding webinar), which is available at S&P's website<sup>1</sup>, was authored in response to the growing concern expressed by global authorities and governments that there are insufficient resources of copper – the "metal of electrification" – to support the global goal of Net-Zero Emissions by 2050. In its report, S&P concludes, "unless massive new supply [of copper] comes online in a timely way, the goal of Net-Zero Emissions by 2050 will be short-circuited and remain out of reach." This is consistent with comments and concerns that have been raised by Northern Dynasty and other key mining industry companies and organizations.

S&P further states that the demand for copper is forecast to double from 25 million metric tons (MMt) per annum, today, to nearly 50 MMt by 2035 and higher still by 2050. In its report, S&P evaluates two potential scenarios: the "Rocky Road Scenario" is predicated on flat capacity utilization and recycling rates, resulting in peak supply of 39 MMt; and the "High Ambition Scenario" assumes that production increases because of mined output and capacity utilization, resulting in peak supply of 47.3 MMt. In both scenarios the supply of copper is insufficient to meet the expected demand.

"It is clear to us that the U.S., and frankly the world, are not adequately planning to deliver the raw materials that are necessary to fuel policy initiatives. This is supported by the S&P conclusions that expected copper supply cannot meet copper demand, even if permitting and construction could be accelerated. Politicians, environmental activists and the general public should pay attention to the stark conclusions raised in this report," noted Ron Thiessen, President and CEO of Northern Dynasty.

The S&P report warns that, "[i]n the 21st century, copper scarcity may emerge as a key destabilizing threat to international security. Projected annual shortfalls will place unprecedented strain on supply chains. The challenges this poses are reminiscent of the 20th-century scramble for oil but may be accentuated by an even higher geographic concentration for copper resources and the downstream industry to refine it into products."

Similar to other recent prognostications, S&P makes the argument that the world will need to develop many large new copper mines, about three "tier one" mines per year for the next 29 years, in order to have enough new copper to achieve the lofty goals of net-zero carbon emissions.

"Pebble is the largest undeveloped copper deposit in the world<sup>2</sup> and the proposed Pebble Mine needs to be part of this solution, instead of being portrayed as part of the problem by misguided environmental activists who do not have a credible plan for reaching net-zero," Mr. Thiessen added.

The Final Environmental Impact Statement ("EIS") for Alaska's Pebble Project, published in 2020, describes a modern, environmentally-sound mine that can co-exist with clean water and healthy fisheries. The executive summary of the Final EIS can be found on the Pebble Partnership's website at the following link <https://pebblepartnership.com/executive-summary>. The Company is currently appealing a negative Record of Decision from the U.S. Army Corps of Engineers.

In a report titled *Economic Contribution Assessment of the Proposed Pebble Project to the US national and state economies*, published on February 28, 2022 (the "Economic Contribution Report")<sup>3</sup>, and available on the Company's website, the proposed Pebble Mine was shown to be capable of supporting thousands of high-paying jobs and billions of dollars of economic activity, much of which would be focused on Southwest Alaska, one of the most economically disadvantaged regions in the U.S. "It would also help the U.S. reduce its reliance on foreign

suppliers of copper and other metals,” Mr. Thiessen added. “For example, the annual State taxes during construction are expected to be \$30 million, State royalties and taxes of \$126 million per year, and Lake and Peninsula Borough severance taxes of \$25 million per year. In addition, the Pebble Performance Dividend would pay out \$3 million per year during construction and capital recovery and is projected at \$11 million annually, or \$2,175 per eligible and enrolled person, during operating years.”

More information on the Economic Contribution Report can be found on the Company’s website at the following link: <https://www.northerndynastyminerals.com/responsible-mining/economic-benefits/>.

### **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 1,840 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](http://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](http://www.sedar.com) and U.S. public filings at [www.sec.gov](http://www.sec.gov).

Ronald W. Thiessen  
President & CEO

U.S. Media Contact:  
Dan Gagnier, Gagnier Communications (646) 569-5897

### **Forward Looking Information and other Cautionary Factors**

This release includes certain statements that may be deemed "forward-looking statements" under the United States Private Securities Litigation Reform Act of 1995 and under applicable provisions of Canadian provincial securities laws. 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 include statements regarding (i) statements on the economic contribution of the Pebble Project to the Alaskan economy, which are based on the Company’s 2021 preliminary economic assessment of the Pebble Project (the “2021 PEA”) which is preliminary in nature, and the Economic Contribution Report, identified in NDM’s February 28, 2022 news release, (ii) the timing of the appeal process and the ability to successfully appeal the negative Record of Decision and secure the issuance of a positive Record of Decision by the USACE, (iii) the political and public support for the permitting process, (iv) the ability of the Pebble Project to ultimately secure all required federal and state permits, (v) future metals prices, including the price of copper, (vi) the right-sizing and de-risking of the Pebble Project, (vii) the design and operating parameters for the Pebble Project mine plan, including projected capital and operating costs, (viii) exploration potential of the Pebble Project, (ix) future demand for copper and gold, (x) the potential addition of partners in the Pebble Project, (ix) if permitting is ultimately secured, the ability to demonstrate that the Pebble Project is commercially viable, (xi) the EPA’s Proposed Determination process under the CWA and the impact of this process on the ability of the Pebble Partnership to develop the Pebble Project, and (xii) the ability and timetable of NDM to develop 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, achieve the required financing or develop the Pebble Project.

Forward-looking statements are necessarily based upon a number of factors and assumptions that, while considered reasonable by NDM as of the date of such statements, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Assumptions used by NDM to develop forward-looking statements include the following assumptions, all of which are subject to risks (i) the assumptions underlying the 2021 PEA, and the assumptions related to the Economic Contribution Report, (ii) the Pebble Project will ultimately obtain all required environmental and other permits and all land use and other licenses, (iii) any feasibility studies prepared for the development of the Pebble Project will be positive, (iv) NDM’s estimates of mineral resources will not change, and NDM will be successful in converting mineral resources to mineral reserves, (v) NDM will be able to establish the

commercial feasibility of the Pebble Project, (vi) NDM will be able to secure the financing required to develop the Pebble Project, and (vii) any action taken by the EPA in connection with the Proposed Determination will ultimately not be successfully in restricting or prohibiting development of 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) the 2021 PEA may not reflect the ultimate mine plan for the Pebble Project, (ii) 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, (iii) finalization of the mine plan for the Pebble Project, (iv) the completion of feasibility studies demonstrating that any Pebble Project mineral resources that can be economically mined, (v) completion of all necessary engineering for mining and processing facilities, (vi) the ability of NDM to secure a partner for the development of the Pebble Project, and (vii) 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. Investors should also consider the risk factors identified in its Annual Information Form for the year ended December 31, 2021, as filed on SEDAR and included in the Company's annual report on Form 40-F filed by the Company with the SEC on EDGAR, and the Company's Management Discussion and Analysis for the year ended December 31, 2021, as filed on SEDAR and EDGAR, for a discussion of the risks that may impact our forward-looking statements and the 2021 PEA.

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.

For more information on the Company, Investors should review the Company's filings with the United States Securities and Exchange Commission at [www.sec.gov](http://www.sec.gov) and its home jurisdiction filings that are available at [www.sedar.com](http://www.sedar.com).

---

<sup>1</sup> <https://ihsmarkit.com/Info/0722/futureofcopper.html>

<sup>2</sup> <https://www.canadianminingjournal.com/news/ranked-worlds-top-10-copper-mining-projects-2022/>

<sup>3</sup> The Economic Contribution Report was prepared by IHS Markit, which is now part of S&P