

**FACT SHEET**  
**PEBBLE COPPER- GOLD PROJECT, ALASKA**  
**(advanced exploration phase)**

**Name and Ownership**

Through option agreements, the Pebble copper-gold project is currently controlled by Northern Dynasty Mines, a wholly owned subsidiary of the Canadian junior exploration company, Northern Dynasty Minerals, Ltd. Northern Dynasty Minerals, in turn, is a wholly owned subsidiary of the private company, Hunter Dickinson, Inc. Private placements, notably with Galahad Gold PLC, a major stockholder of Northern Dynasty, are the current source of funds for exploration and related expenditures.

**Location and Access**

The Pebble Project is located on state land in the Bristol Bay region of southwest Alaska. Covering 87 square miles, the property is approximately 17 miles northwest of the village of Iliamna, in the Nushagak-Big River Hills. Presently, access to the project is by fixed-wing aircraft from Anchorage, 236 miles away.

**Issues of Concern**

Situated just north of Lake Iliamna, Alaska's biggest lake, the Pebble Project is in the heart of some of Alaska's most pristine and robust wildlife habitat. Local villages, such as Nondalton, Iliamna, and Newhalen, depend on the Mulchatna caribou herd and rich salmon runs for subsistence. The Nushagak-Mulchatna river system and the Lake Iliamna watershed, including the Kvichak River, host the world's largest runs of Chinook and sockeye salmon, respectively. In addition, the area is renowned for sport fishing and is the only designated Trophy Rainbow Trout region in Alaska. There are several sport fishing and hunting lodges that contribute significantly to the local economy.

Local residents and businesses that depend on the rich biological resources and the remote, pristine nature of the Lake Iliamna region are concerned that the development of a hardrock open pit mine will adversely affect existing uses. Modern hardrock mines cover thousands of acres, have large ancillary processing facilities, and require an extensive network of roads and power lines. Such an industrial complex, no matter how carefully designed and constructed, will diminish the remote and wild nature of Lake Iliamna and nearby creeks and rivers, such as the Kvichak. Additionally, water pollution from a mine, such as elevated levels of contaminants from the milling process or an accidental release of cyanide could potentially wipe out fish stocks<sup>1</sup>.

Mines also "privatize" public lands, such as those containing the Pebble Project, by denying public access during the life of the mine. And while the law requires a mining company reclaim a mine site after closure, this doesn't mean the landscape isn't permanently altered. Strip mining results in large open pits (some of the largest can be over a mile wide), waste rock dumps covering hundreds of acres and sacrificed stream drainages used as permanent storage for contaminated tailings and mine waste.

**Type of Deposit and Resource**

Pebble is a copper-gold porphyry – a type of igneous rock characterized by large, visible crystals embedded in a fine-grained groundmass. Copper porphyry deposits are typically low grade (less than 1% copper), and mined by open pit methods, with most pits averaging one to five miles wide. Recent resource estimates prepared by Norwest Corporation indicate 26.5 million ounces of gold

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<sup>1</sup> In 2000, for example, an accidental cyanide release at a Romanian mine killed much of the aquatic life in the Tisza River, a tributary of the Danube River in central Europe. Hundreds of tons of fish were killed in the Tisza, and the fish kill extended hundreds of kilometers downstream through Hungary and into Serbia. <http://www.zpok.hu/cyanide/baiamare/>.

and 16.5 billion pounds of copper contained within an Inferred Mineral Resource of 3 billion tons grading 0.55% copper-equivalent (0.27% copper, 0.05% molybdenum, and 0.009 ounces/ton gold above a cut-off grade of 0.30% copper-equivalent)<sup>2</sup>. Copper and gold equivalent estimates used metal prices of \$0.80/pound for copper and \$350/ounce for gold. The contained copper and gold values represent contained metal in the ground, and have not been adjusted for metallurgical recoveries (i.e. how much copper and gold can actually be extracted through processing) of these metals<sup>3</sup>. Presently there are limited data on how much copper, gold and molybdenum is economically recoverable.

### **Property Option Agreements**

Teck Cominco, which operates the Red Dog zinc mine in western Alaska and is developing the Pogo gold mine in Interior Alaska, controls claims containing the Pebble resource. In the summer of 2001 Hunter Dickinson, Inc. (HDI) staked additional claims. Teck Cominco and HDI first entered into an agreement whereby HDI had the right to purchase a 100% interest in the known Pebble resource and 50% interest in surrounding exploration lands. In October, 2001, HDI and NDM entered into an agreement that assigned an 80% interest with rights to acquire a 100% in these options to NDM. Through further agreements with Teck Cominco, NDM can purchase 100% interest in the 36 claims covering the Pebble resource by paying Teck \$10 million prior to November 30, 2004. In addition, NDM must purchase the remaining 20% in the resource lands held by HDI at its independently appraised value. NDM also has the option to gain 50% interest in surrounding exploration lands controlled by Teck and HDI by completing 60,000 feet of drilling by the same date. Once NDM has fulfilled its exploration earn-in requirement, Teck Cominco has a one-time option to enter into a 50-50 joint venture with NDM<sup>4</sup>.

### **Current Status of Project**

NDM proposes to spend in excess of \$20 million during the 2004 exploration season. A drilling program to delineate measured and indicated resources (a key step that must be completed prior to feasibility studies) is scheduled, as well as other exploratory drilling in unexplored areas of the property. In addition, baseline sampling programs are scheduled. These programs are designed to collect the geotechnical, environmental and socioeconomic baseline data necessary to produce a Bankable Feasibility Study in 2005. NDM has also signed a Memorandum of Understanding with the State of Alaska whereby NDM will reimburse the State all personnel costs and expenses related to the review and preparation of their operating permits, and through which the State will provide a dedicated regulatory team to expedite permit review and approval.

### **Proposed Operation, Infrastructure and Estimated Costs**

The Pebble Project is an advanced exploration project. Although metallurgical and reserve estimation work has not been completed, NDM has publicly stated that Pebble will be a mine, and one of immense size. According to the company, the mine will cost about \$1 billion to construct and will employ between 700 and 1,000 people<sup>5</sup>. NDM also estimates that the mine will require at least 100 megawatts of power, which is more power than is used by the entire Kenai Borough. According to a May 2004 press release, the company, in conjunction with the State of Alaska, is soliciting Requests for Proposals from local utilities and other interested parties for power options. Evaluation of transportation options is already underway. The Alaska Department of Transportation is investigating potential port sites at Iniskin Bay and Iliamna Bay on Cook Inlet, as well as transportation corridors for supplies and concentrate (processed metal ore) haulage from the proposed mine 65 miles distant.

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<sup>2</sup> *Resource Estimate, Pebble Copper-Gold Project, Iliamna Lake Area, Alaska*, Norwest Corporation, Feb. 20, 2004

<sup>3</sup> *Ibid.*

<sup>4</sup> *Summary Report on the Pebble Copper-Gold Porphyry Project, Iliamna Lake Area, Southwestern Alaska, USA*, Rebagliati & Haslinger, February 7, 2003

<sup>5</sup> *Massive Mine Gains Momentum*, Alaska Journal of Commerce, reprinted with permission on Canadian Mining News, April, 2004