

NORTHERN DYNASTY MINERALS LTD.

Ready to Re-Partner and Re-Rate Higher

INVESTMENT THESIS

Northern Dynasty's 100%-owned Pebble Cu-Au-Ag-Mo project in southwestern Alaska is a generational asset that is strategically too important not to be developed at some point in the future. It is a project that will likely attract a number of "mega cap" JV partners; a company-making catalyst event for Northern Dynasty that we believe is achievable in the short-term. Plagued by past permitting issues, a recent settlement with the US Environmental Protection Agency ("EPA"), we believe, has paved the way for project re-partnering and advancement. We are initiating coverage with a Buy rating and \$3.75/share (C\$5.00/share) target.

VALUATION

Pebble is simply too large, too high quality, and too important globally for it to not wind up in the project pipelines belonging to the majors. Once in production (much longer term), Pebble will eventually be scaled up to what we believe will be the world's single largest mining operation, comprised of both an open-pit component and underground block cave. The stock is inexpensive by any and all metrics, with the current share price essentially pricing in only "option" value. Owning NAK/NDM ahead of **IV-partnering** a announcement, we believe an excellent asymmetric risk/reward trade.

FOCUS POINTS

- Management Focus The legal settlement with the EPA removes the overhang of preemptive action and allows NAK/NDM access to normal course permitting.
- Lining Up A JV We believe a consortium of potential large-tier JV partners are lining up to provide capital and expertise to move the Pebble project forward.

Sales/Trading — Toronto: (416) 363-5757, (866) 442-4485

Recommendation: BUY

Symbol/Exchange: NAK/NYSE, NDM/TSX
Sector: Metals & Mining

All dollar values in US\$ unless otherwise noted.

 Current price:
 \$1.53; C\$2.05

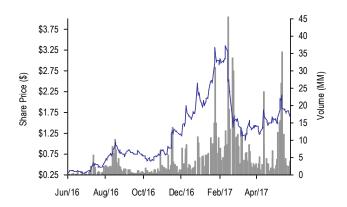
 One-year target:
 \$3.75, C\$5.00

 Return to Target:
 145.1%

 Cash on hand:
 C\$39.7MM

Financial summary

Shares O/S (M)	303.4	52-week	range	C\$0.3	7 - C\$4.54	
Market cap (C\$M)	C\$622	Avg. wee	Avg. weekly vol. (MM)			
Market float (C\$M)	C\$600	Fiscal ye	31-Dec			
Pebble	MMt	% Cu	g/T Au	BBlb Cu	MMoz Au	
P&P	-	-	-	-	-	
M&I (incl. P&P)	6,439	0.40%	0.34	56.76	70.38	
Inferred	4,460	0.25%	0.26	24.55	37.25	
Total Resource	10,899	0.34%	0.31	81.31	107.63	



Company profile: Northern Dynasty's 100%-owned Pebble project in Alaska is the world's largest undeveloped Cu-Au project. In the past it has attracted interest from Anglo American, Mitsubishi, and Rio Tinto.

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See disclosure and a description of our recommendation structure at the end of this report.

SUMMARY AND RECOMMENDATION

We are initiating coverage of Northern Dynasty Minerals Ltd. (NAK-NYSE, NDM-TSX) with a Buy recommendation and a \$3.75/share (C\$5.00/share) target price based on a valuation of 1.0x NAVPS_{7.5%} (rounded) plus a forward multiple of 2.5x operating cash flow on year 1 of production. This methodology is discussed later in the report, and is meant to ascribe value for the "fat tail" aspect of the multi-decade mine life. A long-term gold/copper price deck of \$1,300/oz and \$2.80/lb, respectively, drives our DCF-based NAVPS. The sheer size of the Pebble resource is supportive of what we believe will be, at some point in the future, the world's largest singular mining operation, eclipsing both the Bingham Canyon open-pit (Rio Tinto) and the El Teniente underground blockcave (Codelco) mines in the United States and Chile, respectively. Our DCFbased NAVPS is driven via our best estimate as to what the production ramp-up schedule and eventual optimal throughput rate Pebble will be expanded to, over a mine life better measured in decades, rather than years. Given the sizeable initial CAPEX hurdle (Cantor estimate \$4.3 BB), Northern Dynasty has been very transparent insofar as that it will need to find a large-tier JV partner (or partners, more likely) to help fund development. As such, our DCF-based NAVPS incorporates a base case joint venture structure whereby a large-tier partner(s) earns into 50% of Pebble by providing Northern Dynasty an upfront cash payment and funding the first 17% of CAPEX. This is based on a recent precedent transaction and discussed in detail later in the report. Sensitivities to various JV structures are provided in this report and are a key determinant in our NAVPS estimate.

In our view, absent a better capitalized partner, the project will never advance to construction. As such, for the institutional or retail investor that believes Pebble will never attract a large-tier JV partner(s), Northern Dynasty is not a stock to own. However, to put it simply, given the recent resolution with the EPA and the size/grade of Pebble, the project is simply too strategic not to be able to attract a number of potential JV partners, which we believe is a catalyst potentially over the short-term. Similarly, Pebble, as an economic driver for the state of Alaska and the various Native group stakeholders, is too important to lay dormant any longer. At current levels the stock is not "pricing in" any potential for a JV partner and in the event that a deal is struck similar to the original Anglo earn-in, the upside potential in Northern Dynasty is massive. As a result, we view NAK/NDM as an excellent asymmetric risk-reward trade.

We believe Northern Dynasty will be able to execute an accretive JV deal in the very near term (3-6 months) and around year-end will trigger the start of a normalized permitting process (the history of the Pebble project is outlined in detail later in this report). This is the central point of our investment thesis. In our view, Northern Dynasty represents a very attractive "asymmetric trade" both short-term and long-term. The downside risk is the scenario in which a JV partner fails to materialize, and Pebble/Northern Dynasty "treads water" until either the economic/fiscal climate in Alaska continues to worsen, the NGO narrative changes, and/or the Bristol Bay Native Corp. ("BBNC") adjusts its opinion. Conversely, if and when the company "partners up", Northern Dynasty will retain an equity stake (dependent upon the JV structure) in a mine capable of eventually producing ~1 MM oz Au and ~900 MM lb Cu annually over an +80 year mine life. On an AuEq or CuEq basis, this is effectively the equivalent of either Newcrest Mining (NCM-AU, Not Covered) or First Quantum Minerals (FM-TSX, Not Covered), with enterprise values of \$8.6 BB and \$16.9 BB,



respectively. Under this scenario, the potential share price upside for Northern Dynasty is massive.

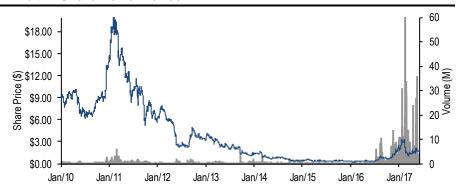
We believe JV-partners are lined up, and a transaction will be finalized in the very near term. This would drive material upside in the share price, and would arguably be the single largest catalyst in the company's history. As such, in the short-term, we regard the stock as a timely buy ahead of the asymmetric risk/reward "company-making" catalyst. Over the long-term, if and when a JV agreement is reached, Northern Dynasty will likely become a core holding for mining/natural resource, and generalist investors given the appeal of owning a company generating strong cash flows over a life spanning +80 years. Northern Dynasty and Pebble have many qualities highly desired by both investors, and the large-tier miners. These include:

- Resource Size: In terms of in-situ mineral inventory, Pebble is the world's largest undeveloped copper and gold resource. The total M&I+Inferred 43-101 compliant resource (completed in 2014) stands at 10.9 BBt grading 0.34% Cu and 0.31 g/T Au (81.3 BBlb Cu, 107.6 MMoz Au). To put this in context, Northern Dynasty has a copper resource base 5x that of Ivanhoe Mines (IVN-TSX, Not Covered), 2/3 the size of First Quantum (FM-TSX, Not Covered) and a gold resource base on par with Goldcorp (G-TSX, GG-NYSE, Not Covered), just shy of Newmont (NEM-NYSE, Not Covered). While it is effectively a moot point, we note that the mineralized envelope at Pebble remains open in multiple directions. There is no stated P&P reserve at the present time, though when a feasibility study is completed, we expect the vast majority of resources to ultimately convert to reserves.
- The "Fat Tail" Effect: In our view, the most likely potential JV partners for Pebble are the mega-cap diversified miners and/or base metal producers (BHP, Glencore, Freeport, Southern Copper, etc.) These are companies that tend to favour, and will pay large premiums for, long-life "fat tail" assets. We point to recent M&A in the base metal space, most notably Goldcorp's acquisition of Exeter Resources and consolidation of Cerro Casale, Zijin Mining's purchase of 50% of Kamoa-Kakula, and Freeport's acquisition of Reservoir Minerals. Northern Dynasty's Pebble project eclipses all of these in terms of size and scale.
- Project Scarcity: The vast majority of the world's top-tier mining companies have been unable to replace mined out reserves and resources. Exploration budgets are down as the focus remains on cost cutting across the board. Moreover, given the lower metal price environment over the last several years, most producers (large and small) are "high-grading" where possible, and either writing-off lower grade / marginal material or sterilizing it from the future mining schedule. Many development stage assets and projects that were acquired in the 2006-2011 period are being shelved and/or written off, and new discoveries are not being made at nearly the same rate as in the recent past. As a result, projects such as Pebble, which can meaningfully boost the production profile of even the top-tier mining companies, becomes a highly strategic and much sought after asset. Not only is Pebble large enough to "move the needle" for the large-cap miners, but it also represents a cornerstone asset, given its projected multi-decade mine life.



- ➤ Leverage to Metal Prices: The Pebble project has massive leverage to metal prices given its size and scale. A 10% move (long-term) in Cu and Au price alters the project NPV_{7.5%} by 30.7% and 15.6%, respectively.
- ➤ Current Valuation: Admittedly, properly valuing Northern Dynasty is difficult. Running a DCF for example, effectively ascribes almost zero value for anything beyond year 20 in the mine plan, unfairly discounting +60 years of robust cash flow. On strictly a project NPV_{7.5%} basis (no JV structure, unfunded), Northern Dynasty currently trades at 0.30x NAVPS of \$5.03/share. Based on our JV-model NPV_{7.5%} estimate (50% of project economics, fully financed, fully diluted), the company trades at 0.57x NAVPS of \$2.69/share, well below intrinsic value. In terms of "in-situ" value, Northern Dynasty currently trades at \$0.005/lb (EV/Total Resource CuEq) relative to its large-scale undeveloped Cu-Au peer group at \$0.007/lb. We note that for a potential acquirer or JV-partner, a transaction with Northern Dynasty would likely be highly accretive on P/NAV, and EV/Resources.

Exhibit 1. Share Performance



Source: Bloomberg

PEBBLE PROJECT OVERVIEW AND BACKGROUND

The Pebble project is located in the Bristol Bay region of southwest Alaska, approximately 200 miles southwest of Anchorage and 60 miles west of the Cook Inlet. The project area is characterized by tundra and gently rolling hills, 750-1,000 feet above sea level, and is comprised of 266,880 contiguous acres of Alaskan state land designated for mineral exploration. To date, approximately \$750 MM has been spent advancing the project since the initial discovery was made (originally by Cominco) in 1987. Over 1,350 drill holes have been completed totaling +300,000 m of core. The history of Northern Dynasty and the Pebble project has been complex and contentious to put it mildly. There has been, and still is, very strong support in favour of the project from certain groups (past JV partners, nearby native villages, shareholders, independent review panels, etc.) and fierce opposition from others (NGO's, the Bristol Bay Native Corp, past government agencies/EPA, etc.) These elements are all discussed in detail throughout the report. An abbreviated history of the Pebble project is also provided.



ECONOMIC BENEFIT TO THE STATE AND MUNICIPALITY

The budgetary problems facing the State of Alaska and its people today, will only become worse should the world continue moving away from the carbon-producing fossil fuel industries, which we believe is a serious risk over the longer term, and one that is almost always overlooked. With the Alaska state economy so heavily dependent on the production of oil, it is imperative over the longer term that the people of Alaska seek to develop other industries. Additionally, most of Alaska's Native Corporations rely significantly on revenues generated directly and indirectly from the petroleum industry.

Development of the Pebble project, in our view, is the single best solution to plugging the budget deficit in Alaska, and that this is largely lost on the states' population, given that the NGO's opposed to Pebble currently control the narrative. Simply put, in our view, eventually Alaska will no longer be able to afford to keep the Pebble project "on the shelf." Contrary to the NGO narrative, we strongly believe that Pebble is *not* all risk and no reward for Alaska and its stakeholders. If/when Pebble gets up and running, it will employ +15,000 people directly and indirectly in the region, the State, and the Lower 48.

According to the Alaska Department of Revenue, 2017 Unrestricted General Fund ("UGF") revenue for the state of Alaska is projected at \$1.6 BB, with petroleum revenue (taxes, royalties, income tax, etc.) accounting for over 70% of this figure (\$1.2 BB). 2017 revenues projected from mining taxes and fishery related taxes are \$0.01 BB and \$0.02 BB respectively. We note that in 2017 the state of Alaska is projected to run a \$3 BB budget deficit, based on Alaska North Slope ("ANS") oil prices of \$50.05/BBL.

Once Pebble achieves steady-state optimal capacity (year 10+), at our long-term metal price forecast, the mine will generate +\$700 MM in tax revenue per year, for the remainder of its life (+70 years). Of this amount, +\$250 MM will be payable to the State, and +\$30 MM will be payable to the municipality (Lake and Peninsula Borough), per year, for +70 years. The 20 cities / Native villages located within the Lake and Peninsula and Bristol Bay Boroughs, have a combined population of 2,500 making them among the most sparsely populated counties in the United States. The Lake and Peninsula Borough has an area of 32,922 square miles, covering 4.96% of Alaska's total land mass. The Bristol Bay Borough has an area of 505 square miles, covering 0.08% of Alaska's total land mass. The total surface imprint of Pebble, based on its 2011 PEA, (that is in the process of being materially scaled down), was 34 square miles, 0.10% of the Lake and Peninsula Borough. No site or supporting infrastructure is located within the neighbouring Bristol Bay Borough.



NORTH SLOPE

NORTH STAR

NOME

YUKON-KOYUKUK

DENALL SOUTHEAST

DENALL SOUTHEAST

DENALL SOUTHEAST

OCROOMA

ANCHORAGE

PERINSULA

RENN

RENN

RENN

PERINSULA

NAGOON (part)

STAA

PERINSULA

RODIAK

SLAND

PRINCE OF WALES

RECHIKAN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

ANCHORAGE

PRINCE OF WALES

RECHIKAN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

GATEWIN

ANCHORAGE

PRINCE OF WALES

RECHIKAN

GATEWIN

Exhibit 2. Municipalities of Alaska

NGO OPPOSITION TO THE PROJECT

Source: CensusFinder

The Pebble project has faced fierce opposition from a consortium of NGOs since the mid-2000s. Led by the Natural Resource Defense Council ("NRDC") and to a lesser extent Trout Unlimited, NGO opposition is primarily focused on the potential impact Pebble could have on the salmon fishing industry of Bristol Bay, approximately 100 miles SW of the project. In our view, while this focal point makes grabby headlines, and no doubt yields generous donations to the NGOs, the real issue is "NIMBY" or, "not in my backyard" bias. At full capacity, Pebble will produce ~900 MMlb of copper per annum, approximately 2% of global copper output, and equivalent to one third of the total copper being mined in the Democratic Republic of Congo. If NGO opposition to Pebble truly had nothing to do with NIMBY, and was more concerned about environmental protection and sustainability on a global basis, the focus would be on the central African copper belt, a region with far less environmental and social oversight relative to the rigorous US Standards required to build and operate a mine. In any case, the arguments made by the various NGO's as related to Pebble's potential impact on the salmon industry in Bristol Bay are at best misleading, and at worst, outright false. This is presented in further detail later in the report.

Exhibit 3. Largest Hard Rock Surface Mines in North America

Operation	Company	Nearest Major City	Distance To City
Bingham Canyon	Rio Tinto	Salt Lake City, UT	25 miles
Cortez	Barrick	Elko, NV	70 miles
Fort Knox	Kinross	Fairbanks, AK	20 miles
Goldstrike	Barrick	Elko, NV	35 miles
Henderson	Freeport	Denver, CO	50 miles
Highland Valley Copper	Teck Resources	Kamloops, BC	45 miles
Source: Cantor Fitzgerald			

BRISTOL BAY AND ITS SOCKEYE SALMON

The Pebble project, including most supporting infrastructure (roads, pipelines, the proposed power station, etc.) is located within the Lake and Peninsula Borough, approximately 100 miles northeast of Bristol Bay. The primary message cultivated and fortified by the NGOs (and backed by an eclectic mix of sport



fisherman, celebrity chefs, actors, and even jewellery makers), is that the Pebble tailings management facility ("TMF") will be located in an earthquake zone upstream from Bristol Bay, which by all accounts supplies a significant proportion of the world's sockeye salmon. We note that approximately 80% of commercial fishing licenses in Bristol Bay are owned by non-Bristol Bay residents and less than 50% of the fishing licenses in Bristol Bay are owned by Alaskans overall.

In general, our view is that no large scale engineering project, be it a bridge, hydroelectric dam, deep water port, LNG plant, off or on-shore oil rig, etc. carries zero risk. Pebble is the most contentious and most heavily scrutinized mining project in the World, without question. As a result, Northern Dynasty and its eventual JV partner(s) will be held to the most strict and rigorous oversight, as they should be, by the U.S. Army Corps. of Engineers, the EPA, local, state and federal government agencies, and all stakeholders. This ensures that the Pebble project will be built and operated to the highest technical and environmental standards, with factors of safety incorporated into every design element of the operation. In short, our view is that the economic benefit to the municipality and State of Alaska will be proven to far outweigh the infinitesimal risk of a TMF failure, even one caused by an earthquake. Our comments on the various elements raised by the NGOs are below.

- ➤ **NGO viewpoint:** The Pebble mine will be located in the heart of the Bristol Bay watershed and on the shore of Bristol Bay.
- ➤ **Reality:** This is not supported by fact. The surface/underground operation and TMF will be located approximately 100 miles northeast of Bristol Bay.
- ➤ **NGO** viewpoint: The TMF will be located in a known earthquake zone.
- Reality: The NRDC refers to the 9.2 magnitude earthquake that occurred in Prince William Sound (approximately 400 miles from Bristol Bay) in 1964. While other coastal cities and islands in Alaska were affected, there was no reported physical impact, nor was there any measured change in water flow in the Bristol Bay area. Similarly, when a 7.1-magnitude earthquake occurred near Cook Inlet in January 2016, we can find no reports of any impact at the proposed Pebble project site. In any case, and as detailed in the section on the Site G TMF, while there has been no evidence of seismic movement along the nearby Lake Clark Fault (which according to USGS surveys does not extend onto the Pebble concessions to begin with) since the last glaciers retreated over 10,000 years ago, the Site G TMF was none the less engineered to treat the Lake Clark Fault as if it was active, and designed to withstand a seismic event equivalent to slippage along the entire fault.
- ➤ **NGO viewpoint:** Pebble will destroy the Bristol Bay salmon industry.
- Reality: There is an infinitesimally small risk of a TMF failure in our view, even one caused by the unlikely event of an earthquake that manages to impact the Bristol Bay or project area in some way. That said, if this highly improbable event was to occur, in a submission to the EPA in response to its 404(c) action in 2014, Northern Dynasty demonstrated that only 0.10-0.15% of all streams that comprise the Bristol Bay fishery could potentially be affected. Moreover, according to

¹ According to the study conducted in 1964 on the Prince William Sound earthquake, documented in Professional Papers on file with the USGS for the State of Alaska.



the Alaska Department of Fisheries data, the sockeye salmon production potentially affected in the Pebble project area represents less than one half of one percent of total sockeye salmon production in the entire Bristol Bay area.

- ➤ **NGO viewpoint:** Pebble cannot mitigate its impacts on wetlands and fish habitat. Essentially, one cannot improve upon "mother nature."
- Reality: This is factually incorrect and unsupported by more than five decades of real-world data and study. As a result of \$150 MM invested in the environmental studies and mitigation planning, Northern Dynasty has identified dozens of opportunities to mitigate whatever possible impacts development of Pebble may have on wetlands and aquatic habitat. Modern compensatory mitigation science and best practice is a culmination of decades of study and implementation often at the behest of US Federal government agencies, including the EPA. It is "established" science and includes measures such as wetlands preservation offsets, salmon ladders, beaver dam work-arounds, strategic flow control to improve habitat availability, and restoration of relic stream channels. As part of the normal NEPA permit approval process Pebble will submit a compensatory mitigation plan to provide mitigation of impacts Pebble development may have on wetlands and fish habitat.

BRISTOL BAY NATIVE CORPORATION ("BBNC")

The Pebble project, including almost all supporting infrastructure (roads, pipelines, the proposed power station, etc.) is located within the Lake and Peninsula Borough, approximately 100 miles away from Bristol Bay. As currently structured, and depending on the size of the project built at Pebble, Lake and Peninsula Borough tax revenues could equate to +\$30 MM/yr when the mine reaches full capacity and this revenue stream will go entirely to the citizens of Lake and Peninsula Borough, not the Bristol Bay Borough. Lake and Peninsula Borough is comprised of 17 cities / Native Villages, (Chignik Bay, Chignik Lagoon, Chignik Lake, Egegik, Igiugig, Iliamna, Ivanof Bay, Kokhanok, Levelock, Newhalen, Nondalton, Pedro Bay, Perryville, Pilot Point, Port Heiden, Port Alsworth, and Ugashik), and Bristol Bay Borough is comprised of three, (Naknek, South Naknek, and King Salmon). Native Villages in the Lake and Peninsula Borough have voiced their support in favour of Pebble in the past, whereas Bristol Bay Native Corporation (based in Dillingham, outside of the Lake and Peninsula Borough) is the only Alaska Regional Native Corporation opposed.

The Pebble project is located on state-owned land, not on land owned by any of the 12 Regional Native Corporations in Alaska, one of which (and the nearest one by far) being the BBNC. Due to this fact, as currently structured, BBNC would only receive indirect benefits from development of the project. Northern Dynasty has tried to engage with BBNC in the hope of reaching a commercial agreement with them, but thus far, has only been met with push-back. The company is also open to advancing discussions with any of the other 11 Regional Native Corporations in Alaska, but has not announced any progress to date.

Many precedents have been set in Alaska whereby mines have been built and operated amicably (and very profitably) with full co-operation and the partnership of Native Corporations. We point to Teck Resources' (TECK.B-TSX, TCK-NYSE, Not Covered) long-operating Red Dog zinc mine and Trilogy Metals' (TMQ-TSX, Not Covered) Ambler copper project, that have both forged economic partnerships with NANA, an Alaskan Native Corporation directly



owned by over 14,000 Iñupiat of northwest Alaska. NANA owns and controls an area covering 550 square miles in the Northwest Arctic Borough (approximately 600 miles northwest of the Bristol Bay Borough) and is one of the 12 Regional Native Corporations created via the Alaska Native Claims Settlement Act ("ANCSA") passed by Congress and signed into law by President Nixon in 1971. The BBNC is one of the other 11 Regional Native Corporations. The benefits to NANA at both the Red Dog mine and Ambler project are outlined below:

- ➤ Teck Resources Red Dog Zinc-Lead Mine Northwest Arctic Borough, Alaska
 - o NANA is the land-owner, and the concessions are leased from them by Teck, the mine operator.
 - o NANA received a 4.5% royalty until the initial capital costs were recovered (1989 through 2007).
 - The NSR was then gradually adjusted and increased, and as of the mine's 25th anniversary in 2014, Teck had paid over \$1 BB in royalties to NANA.
 - NANA shareholders make up 54% of the mine's work force. In 2015, the average NANA shareholder employed at the Red Dog mine received \$65,000 in wages plus employee benefits.
 - o The mandate of the agreement between NANA and Teck articulates that the mine protects subsistence and the Iñupiac way of life, provides opportunities for NANA's youth and acts as a catalyst for regional economic benefits.
- > Trilogy Metals Ambler Copper-Zinc Project Northwest Arctic Borough, Alaska
 - o NANA is the land-owner, and the concessions are leased from them by Trilogy, the eventual mine operator.
 - o Net Smelter Royalty of 1.0-2.5%
 - Option for NANA to become an equity partner (16-25%) or receive a net proceeds royalty of 15% NPI.
 - o Promote employment for NANA shareholders and scholarships.
 - Oversight committee created comprised of three subcommittees (subsistence, workforce development, and communications).

We also note that under ANCSA, NANA distributes 70% of its profits from natural resource extraction, the vast majority of which are driven via the Red Dog mining partnership, to the other 11 Regional Native Corporations and Village Corporations in Alaska *including* the BBNC. In effect, the BBNC is already directly benefiting from existing mining operations elsewhere in Alaska yet it remains unwilling to advance projects within its own region. Again, we view the BBNC/NGO dissension with the Pebble Project as a NIMBY issue rather than an environmental one.

EPA, THE 404(C), AND NEPA

Under the Clean Water Act Section 404(c), the EPA is authorized to prohibit, restrict, or deny the discharge of dredged or fill material at defined sites in waters of the United States (including wetlands) whenever it determines, after notice and opportunity for public hearing, that use of such sites for disposal would have an



unacceptable adverse impact on one or more of various resources, including fisheries, wildlife, municipal water supplies, or recreational areas. Since Richard Nixon passed the Clean Air and Water Act in 1972, the 404(c) has been invoked only 13 times. It has never been invoked on a project that has been permitted by the U.S. Army Corps of Engineers unless the project either failed to operate to permitted specifications, or proper procedure was not followed through the permitting process itself. Now that the legal settlement with EPA has been achieved, and normal course permitting of Pebble can resume under the wellestablished National Environmental Policy Act ("NEPA") guidelines, it is of paramount importance that Northern Dynasty's Environmental Impact Assessment ("EIA") be all encompassing and exhaustive. One of the mandates of NEPA as it relates to the 404 (protection of Wetlands) is to ensure waters of the United States, as defined under the Clean Water Act, are protected. However, also under NEPA, the U.S. Army Corps. of Engineers is mandated to consider the Least Environmentally Damaging Practical Alternative ("LEDPA") to any and all elements of the Pebble project, including those defined under the 404. As an example, the Pebble Tailings Management Facility ("TMF") is a contentious issue, put mildly. NEPA will ensure that, if there is a better environmental option than Northern Dynasty's proposed Site G location, the TMF will need to be situated there, if practical, even though it may not be the most economical alternative. We note that Northern Dynasty has already spent ~\$750 MM on the project including \$150 MM on environmental base line work, and hundreds of millions on engineering work including evaluating alternative locations for any/all site infrastructure including location of the mill, TMF, power plant, road network, pipelines, etc. When Northern Dynasty files the Project Description (which includes the Plan of Operations) with the U.S. Army Corps. of Engineers closer to year end, it will initiate the permitting process under well-established NEPA guidelines.





PEBBLE PROJECT HISTORY

November 2001: Northern Dynasty obtains an option to earn into 100% of the Pebble project from Teck Resources and Hunter Dickinson Group Inc. a related party.



July 2003: Shambhala Gold Ltd., a private mine financing company and whollyowned subsidiary of London-based Galahad Gold, files with the SEC that it has acquired 19.9% of Northern Dynasty with options on an additional 7.0%.

November 2004: Northern Dynasty is listed on the AMEX under the symbol NAK (later became NAK-NYSE MKT).

June 2006: Northern Dynasty completes payments and work requirements to earn into a 100% interest in Pebble. Teck retains a 4% pre-payback and 5% post-payback NPI.

June 2006: Rio Tinto (RIO-NYSE, Not Covered) acquires a 9.9% stake in Northern Dynasty in a direct private placement, secondary offering, for C\$87.5 MM (a \sim 30% premium).

June 2006: Rio Tinto purchases an additional 10% of the company from London-based Galahad Gold, half of Galahad's position.

February 2007: Mitsubishi acquires 8.3 MM shares in the market (in a block trade with Galahad) bringing its stake in Northern Dynasty up to ~9.1%. This effectively exits Galahad from the entirety of its position in NAK/NDM.

July 2007: Northern Dynasty establishes the "Pebble Partnership" with Anglo American (AAL-LSE, Not Covered). To earn into a 50% interest in the project, Anglo is required to commit \$1.425-1.500 BB to the project (operations/exploration/permitting).

October 2007: NDM lists on the TSX.

April 2008: The Pebble Partnership approves 2008 budget of \$140.1 MM.

August 2008: Alaska votes 57-43 in favour of supporting the state's existing regulatory framework related to water quality standards applying to hard rock mines and the Pebble project.

March 2009: The Pebble Partnership approves 2009 budget of \$59 MM (primarily for permitting), later increased to \$70 MM.

July 2009: The Trustees for Alaska (an environmental law firm) on behalf of a consortium of NGO's, files a lawsuit against the Alaska Department of Natural Resources (DNR) alleging that the granting of exploration and temporary water use permits to the Pebble Partnership was a violation of the state constitution.

February 2010: The Pebble Partnership approves 2010 budget of \$73 MM.

May 2010: Six Native Alaskan tribes petition the EPA, under Section 404(c) of the Clean Water Act ("CWA"), to pre-emptively block the Pebble project prior to the Pebble Partnership submitting a proposed development plan and/or applying for any Federal/State permits.

February 2011: Positive PEA Technical report is completed outlining three possible scenarios, a mine life of 25, 45 and 78 years.

February 2011: In response to the petition from the six Native Alaskan tribes (May 2010), the EPA commissions a study on the environmental impacts of a potential (hypothetical) mine.

March 2011: Mitsubishi sells the entirety of its equity stake in Northern Dynasty in a secondary offering. It is speculated that NAK/NDM was unwilling to discuss off-take agreement terms given the early stage of Pebble at this point, prompting Mitsubishi to sell its equity stake in the company.



May 2011: The Pebble Partnership approves 2011 budget of \$91 MM.

October 2011: Alaska's Superior Court rules in favour of the State of Alaska and the Pebble Partnership related to the case filed in July 2009.

October 2011: Southwest Alaska's Lake & Peninsula Borough vote in favour (by a very narrow 53-47% margin) of a municipal ordinance that would restrict future development of an area necessary to advance the Pebble project. In the Company's view, the ballot contained misleading language. The initiative was driven and funded via several NGO's and environmental activists with the focus on protecting salmon. We note that less than three years later, in May 2014, the Alaska Peninsula Corp. (one of the largest landowners in the Bristol Bay and Lake & Peninsula Boroughs) *joined the suit with Northern Dynasty, against* the EPA as coplaintiffs.

October 2011: The Pebble Partnership initiates a legal challenge against the municipal ordinance in Alaska Superior Court.

November 2011: The State of Alaska files a constitutional challenge in Alaska Superior Court to overrule the municipal ordinance. The Alaska Department of Law argues that the Lake & Peninsula Borough ordinance is invalid as "a small majority of voters in a local community cannot usurp the more comprehensive state authority and eliminate the entire state permitting process."

February 2012: The Pebble Partnership releases the \$150 MM, seven year, Environmental Baseline Document, a 27,000-page report characterizing all physical, chemical, biological and social conditions in the project area.

May 2012: The Pebble Partnership approves 2012 budget of \$107 MM.

May 2012: The EPA publishes the draft of its Bristol Bay Watershed Assessment ("BBWA") report that concludes a hypothetical large-scale mining operation would be in violation of Section 404(c) of the Clean Water Act, effectively beginning the pre-emptive blocking of the Pebble project by circumventing the well established Federal and State permitting process under the U.S. Army Corps. of Engineers.

May-November 2012: A peer review and public comment process follows. Various comments are made by Northern Dynasty and the Pebble Partnership, primarily focused around the fact that the BBWA was completed in approximately 14 months, an inadequate amount of time to properly study the required +33,000 square miles of Lake & Peninsula and Bristol Bay Boroughs. Moreover, the ruling is widely criticized as being based on a "hypothetical" mining scenario for which development plans at Pebble were far from finalized. Northern Dynasty calls on the EPA to expand and extend the roles of independent experts in a review of the BBWA. A critique of the BBWA is completed by Northern Dynasty and submitted. A panel consisting of 12 external reviewers (academics, scientists, consultants, etc.) present their criticisms of the EPA's BBWA in a public forum in Anchorage, Alaska. The final judgement, summarizing the flaws in the EPA's decision, is released in November.

October 2012: Anglo American announces that Cynthia Carroll would stepdown as CEO of the company.

April 2013: The Pebble Partnership approves 2013 budget of \$80 MM.

April 2013: Mark Cutifani is appointed the new CEO of Anglo American.



April 2013: The EPA publishes a revised draft of the BBWA that reaches the same conclusions. The EPA upholds its view that under section 404(c) of the Clean Water Act, it can pre-emptively veto the permitting process of Pebble. Following this, the public review period was reduced to 30-days from 60, and no public meetings were permitted to be held with the independent Peer Review panel.

June 2013: Northern Dynasty files a 205-page submission with the EPA calling for public comments to be held on the revised BBWA.

September 2013: Following the change in leadership, and reflecting severe balance sheet liquidity constraints, Anglo adopts a more conservative capital allocation strategy and announces its intent to withdraw from the Pebble JV.

December 2013: Anglo formally withdraws, with no residual equity interest in the project, from the Pebble JV after spending \$573 MM on its advancement. Northern Dynasty again assumes 100% of the asset.

December 2013: Rio Tinto undertakes a strategic review of its equity stake in Northern Dynasty, including possible divestment.

January 2014: The EPA publishes the final version of its BBWA, continuing to argue the case for pre-emptively vetoing the Pebble Permitting process.

February 2014: Northern Dynasty appoints Tom Collier to CEO of the Pebble Limited Partnership.

February 2014: The EPA initiates a process under the Clean Water Act to investigate potential impacts on habitats and fisheries associated with mine development in southwest Alaska. In the news release, the EPA states "based on input EPA receives... the agency could decide that further review under Section 404(c) is not necessary."

April 2014: Northern Dynasty submits legal, policy and scientific arguments against EPA overreach at Pebble.

April 2014: Rio Tinto donates the entirety of its stake in Northern Dynasty to various Alaskan charities who sell the shares several weeks later.

May 2014: Northern Dynasty files "Statutory Authority" lawsuit in US District Court for Alaska to halt the EPA veto process under 404(c). State of Alaska and Alaska Peninsula Corp. (a Native Village Corp.) *join suit against* the EPA as coplaintiffs.

September 2014: The US Federal court in Alaska releases an order recognizing that the EPA has agreed to delay advancing the next steps under 404(c) until at least January 2, 2015.

September 2014: The US Federal court in Alaska dismisses the Statutory Authority case that challenges the EPAs authority to pre-emptively impose the veto process prior to receiving a formal development plan. The case is dismissed on legal "ripeness" rather than on merits.

November 2014: In Pebble Limited Partnership "PLP's" separate Federal Advisory Committee Act ("FACA") lawsuit, the US Federal court in Alaska grants a "Preliminary Injunction" to halt the EPA regulatory process at the Pebble project. While this does not overturn the EPAs ability to pre-emptively veto under 404(c), it does impede the EPA from taking further steps along this path. Granting of a Preliminary Injunction signifies the Federal Court's view that PLP had a likeliness of prevailing on the merits of its FACA case.



June 2015: The Preliminary Injunction halt is upheld by the US Federal court in Alaska after an appeal is made by the EPA.

October 2016: The Pebble Partnership and EPA agree to mediation to resolve ongoing litigation. Mediation is subsequently superseded by direct PLP-EPA negotiations.

November 2016: US Election, Donald Trump is elected the 45th President of the United States. Part of Mr. Trump's platform is to dramatically downsize and overhaul the EPA.

February 2017: US Congressional Committee calls on EPA Administrator to withdraw Pebble project veto.

March 2017: With PLP-EPA ongoing negotiations to resolve litigation, Northern Dynasty and the EPA file a joint motion to extend the "stay" of proceedings (conclusion date) to May 4, 2017.

April 2017: Scott Pruitt is appointed as new head of the EPA.

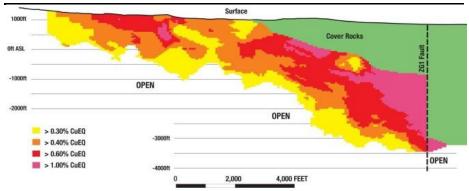
May 2017: Northern Dynasty reaches a settlement with the EPA. Pebble is allowed to proceed with normal course permitting with the US Army Corps. of Engineers. The company must apply for the permit within 30 months and is given a four year window to complete an Environmental Impact Statement after which, the EPA will evaluate whether or not the scientific justification exists to exercise the 404(c) provision.

GEOLOGICAL OVERVIEW

The Pebble deposit is comprised of the contiguous Pebble West and Pebble East zones. Mineralization of the massive calc-alkalic porphyry system (copper, gold, silver, and molybdenum) is associated with several coalescing hydrothermal centres formed around small granodiorite stocks. Pebble West outcrops at surface, and plunges shallowly (~20°) to the east (Pebble East). In general, mineralization tends to be higher grade toward the deeper, eastern area of the deposit. At the present time, the mineralized envelope technically terminates at the ZG1 fault, with insufficient drilling having been conducted beyond its eastern limit. It is highly likely that the fault was a post-mineralized event, and as a result, mineralization continues to the east, albeit at greater depth. This is evidenced by hole 6348 (completed in 2006), the only hole that has tested the area east of the ZG1 fault. The diamond drill hole returned 289 m grading 1.24% Cu and 0.74 g/T Au before being terminated (lost in the fault). This is among the best holes ever completed on the property. The Pebble resource has been drill defined over a continuous strike length (east-west) of 3.0 miles, and measures 2.0 miles in width, beginning at surface, down to a depth of 0.9 miles. The resource remains open to the east, north, south, and at depth (Exhibit 5 and 6). Locally, mineralization occurs as hypogene pyrite, chalcopyrite, molybdenite, and in the Pebble East area, some bornite (higher copper concentration). Pebble West, at surface has only minor oxidation (top 30 m), followed by a thin (~100 m) subordinate zone of supergene mineralization. Pebble East is comprised entirely of hypogene mineralization. Since the initial discovery of Pebble, a total of +300,000 m of drilling has been completed.

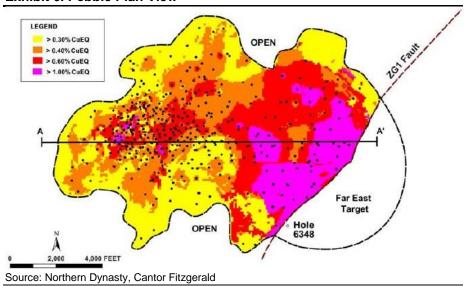


Exhibit 5. Pebble Cross Section



Source: Northern Dynasty, Cantor Fitzgerald

Exhibit 6. Pebble Plan View



RESOURCE ESTIMATE

In terms of total 43-101 compliant resources across all categories, Pebble is the largest and most important singular copper and gold resource in the world. In our view, it will eventually support the largest operating underground and openpit mine globally, spanning a project life of +80 years. The resource was last updated in 2014. At a cut-off grade of 0.3% CuEq, on an M&I+Inferred basis Pebble contains 10.9 BBt grading 0.34% Cu, 0.31g/T Au, 0.02% Mo, and 1.47g/T Ag (81.1 BBlb Cu, 107.6 MMoz Au, 5.6 BBlb Mo, and 514 MMoz Ag). This equates to 147 BBlb CuEq or 316 MMoz AuEq based on our LT metal price deck of \$2.80/lb Cu and \$1300/oz Au. We note that the resource estimate is based on 699 core holes, and hole 6348 is *not* included in the 43-101 resource estimate.



Exhibit 7. Pebble Resource Statement

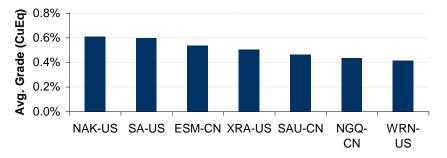
Cut-off	Ore		Gr	ades		Contained Metal			
Grade	Tonnes	Cu	Au	Мо	Ag	Cu	Au	Мо	Ag
(% CuEq)	(MMt)	(%)	(g/T)	(ppm)	(g/T)	(BBlb)	(MMoz)	(BBlb)	(MMoz)
			Me	easured a	& Indica	ated			
1.0	1,439	0.76	0.51	342	2.42	24.11	23.60	1.08	112
0.6	3,729	0.54	0.41	291	1.98	44.38	49.15	2.39	237
0.4	5,681	0.44	0.35	253	1.75	55.09	63.92	3.17	320
0.3	6,439	0.40	0.34	240	1.66	56.76	70.38	3.40	344
				Infe	rred				
1.0	360	0.69	0.45	377	2.27	5.41	5.14	0.30	26
0.6	1,290	0.48	0.37	291	1.79	13.66	15.35	0.83	74
0.4	2,630	0.33	0.30	266	1.39	19.14	25.38	1.55	118
0.3	4,460	0.25	0.26	222	1.19	24.55	37.25	2.18	170
				То	tal				
1.0	1,799	0.75	0.50	349	2.39	29.52	28.74	1.38	138
0.6	5,019	0.52	0.40	291	1.93	58.04	64.50	3.22	312
0.4	8,311	0.41	0.33	257	1.64	74.23	89.30	4.72	437
0.3	10,899	0.34	0.31	233	1.47	81.31	107.63	5.58	514
Source: Nort	hern Dynas	ty, Can	tor Fitz	gerald					

RESOURCE ESTIMATE COMPARABLES

Pebble is not only the world's largest undeveloped copper and gold resource in terms of size. In terms of grades, it is materially better than the majority of its porphyry peer group (Exhibit 8). We note that in terms of size, Northern Dynasty has a copper and gold equivalent resource on par with some of the world's largest and most well established mining companies. As an example, in terms of total 43-101 compliant resources (on a copper or gold equivalent basis) Northern Dynasty and Pebble are approximately equivalent to First Quantum on the base metal side, and larger than Goldcorp on the precious metal side.

Exhibit 8. Comparable Single-Asset Cu-Au (+Mo-Ag) Porphyry Projects

		•	<u> </u>		
Company	Asset	Location	% Cu	g/T Au	% CuEq
Northern Dynasty	Pebble	Alaska, US	0.34%	0.31	0.61%
Seabridge	KSM	BC, Canada	0.26%	0.44	0.60%
Eurosun Mining	Rovina Valley	Romania	0.16%	0.55	0.54%
Exeter Resources	Caspiche	Chile	0.18%	0.48	0.50%
St. Augustine Gold	King-King	Philippines	0.25%	0.32	0.46%
NGEx Resources	LH+JM	Chile	0.34%	0.16	0.43%
Western Copper & Gold	Casino	YT, Canada	0.17%	0.19	0.42%



Source: Company Reports, Cantor Fitzgerald



MINING OVERVIEW

Wardrop Engineering (Tetra Tech) completed a preliminary economic assessment ("PEA") on Pebble in 2011. Over the last several years however, the project size/scope/footprint etc. has materially changed, rendering the 2011 PEA obsolete. Northern Dynasty does not plan on completing an updated PEA/Pre-Feasibility or Definitive Feasibility Study at Pebble pending re-partnering, and in our view, this is prudent. The reality is that the Company will need to find a larger-tier partner(s) for the project to move forward, and the JV partner(s) will ultimately determine the construction schedule and scale that Pebble should be ramped-up to, and engineered towards. Northern Dynasty will put forth the initial plan around the end of this year as part of its Permit Application, that once filed, will be made public. The Permit Application includes the Project Description and Environmental Baseline Documents and is filed with the U.S. Army Corps. of Engineers, the permitting body for all large scale engineering projects in the United States, particularly where wetlands are involved. The initial project size/scale/footprint will be key components of the Permit Application. We note that while Northern Dynasty will initially decide on the size of Pebble, all potential JV-partners that are currently under Confidentiality Agreements ("CA's") have been made aware of and will provide feedback on what Northern Dynasty will be submitting in the Permit Application.

For the purpose of our DCF based NAVPS for Pebble, we have modelled initial production, via traditional open-pit methods, beginning at Pebble West in 2028, at the rate of 100,000 tpd. We forecast mining continuing at this sub-optimal (low) rate for five years, what we consider to be a "grace period." Through these initial five years, Northern Dynasty and its JV-partner(s) will need to demonstrate their social license, ability to operate safely, in an environmentally sustainable manner, and in the best interests of all stakeholders and Native groups. Essentially, Pebble will need to *earn the right* to expand, and we believe it will. In year 6+, we envisage a mill expansion to 200,000 tpd and Pebble bringing on an underground block-cave component at Pebble East, operating at the rate of 100,000 tpd and complementing ongoing open-pit production at Pebble West. Similar to the initial surface operation, we forecast underground production at Pebble East to remain at the suboptimal 100,000 tpd rate for five years, again with Northern Dynasty and its JV partner(s) earning the right to expand.

Ultimately, we envisage the combined open-pit and underground block cave operations feeding a centralized processing plant at the combined, total rate of 380,000 tpd. This throughput rate is based on 200,000 tpd at a 2:1 strip ratio from the open-pit and 180,000 tpd from the underground block cave. These production rates are based on the peak production rates achieved at Bingham Canyon and El Teniente, currently the world's largest open-pit and underground mines, respectively. Based on the total 43-101 compliant resource at Pebble, at this throughput rate, the mine will be in operation for over 80 years, without accounting for any exploration upside.

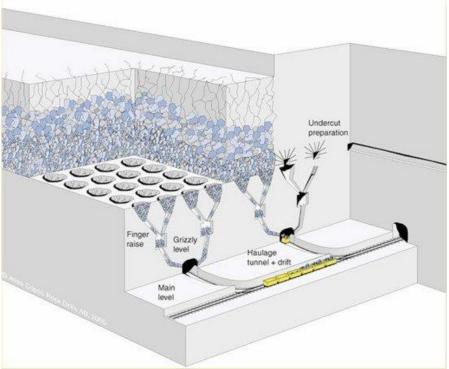
For the purposes of our DCF-based NAVPS, we estimate owner-operator surface mining costs of \$1.55/T, and underground block cave mining costs of \$5.00/T. These unit mining costs are based on first principles, and are largely inline with the costs recently outlined in a PEA completed by Seabridge (SEA-TSX, SA-NYSE, Buy, C\$20.00 target) on its KSM project, an excellent comparable to Pebble, located in Northern British Columbia, Canada. CAPEX at Pebble is discussed on pages 22 and 23. Average head grades to the mill are in-line with the average resource grades (0.34% Cu, 0.31 g/T Au, 1.47 g/T Ag, 0.02% Mo).



We envisage initial production at the 100,000 tpd rate (open-pit only) being achieved in 2028 after a 4.5 year construction schedule, with complementary production from the underground block cave coming on-stream in 2032.

Exhibit 9. Global Base Metal Block Caving Operations and Illustration

Company	Operation	Country
Rio Tinto	Oyu Tolgoi	Mongolia
Rio Tinto	Northparkes	Australia
Rio Tinto	Palabora	South Africa
Codelco	El Teniente	Chile
Codelco	El Salvador	Chile
Codelco	Andina	Chile
NewGold	New Afton	Canada
Freeport	DOZ	Indonesia
Freeport	Henderson	USA
Philex	Padcal	Philippines
Newcrest	Ridgeway Deeps	Australia



Source: Cantor Fitzgerald, Infomine

UNDERGROUND BLOCK CAVING EXPLAINED

Block caving is a *relatively* new practice in the global mining industry, suitable to large, continuous, and deep ore deposits. On a per tonne basis, it is the lowest cost underground mining method, and the least labour intensive. Excluding the diamond industry (smaller scale) there are 11 well-established operating large scale block cave operations, including two that have been successfully commissioned in the very recent past (Oyu Tolgoi and New Afton). Block caving is the only underground mining method that can rival surface mining in terms of production



rates. It involves essentially undercutting the deposit, creating an artificial void (or cave), which then allows the orebody to collapse slowly over time, into preconstructed underground "draw points." This material is then mucked out and transported to the process plant.

PROCESSING OVERVIEW

Northern Dynasty conducted a significant amount of metallurgical test work at Pebble from 2004 through 2010, and our DCF-based NAVPS and production profile incorporates the metallurgical process design outlined in the 2011 PEA. Run-of-mine ("ROM") ore from the open-pit (and eventually the underground block cave) will be crushed and conveyed to the concentrator, which will initially be built to the nameplate capacity of 100,000tpd and then expanded in series. Using industry standard flotation processes (bulk flotation, rougher, scavenger, cleaner, re-cleaner, etc.) several concentrates will be produced, as well as a minor amount of dore on-site. A bulk copper/molybdenum sulphide concentrate will undergo molybdenum separation, to produce a molybdenum sulphide concentrate that will be bagged and trucked to port facilities on Cook Inlet (as an industry comparable, this is very similar to the Moly circuit at Teck Resources' Highland Valley operation in British Columbia). The molybdenum separation process generates a copper concentrate (containing most of the recovered gold) that will be pumped via pipeline to the port site. The remaining pyrite concentrate will report to a secondary gold recovery circuit where gold-silver dore and bagged carbon-bearing fines will be processed and shipped off-site. The pyrite tailings will report to a tertiary gold recovery circuit, where the gold and silver will be recovered to produce dore. The gravity concentrate will also be sent to the secondary gold recovery circuit, where the gold and silver will also be recovered in the dore. Combined overall recoveries are projected at 86.6% (Cu), 71.5% (Au), 45.0% (Ag), and 84.8% (Mo). We project processing costs of \$5.75/T and G&A costs of 0.75/T.

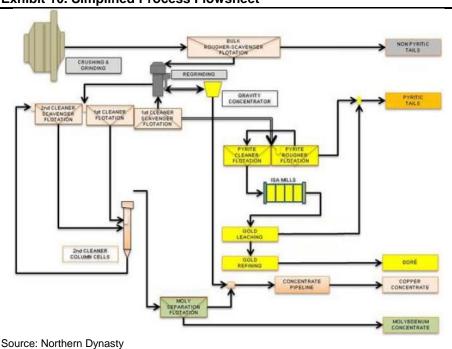
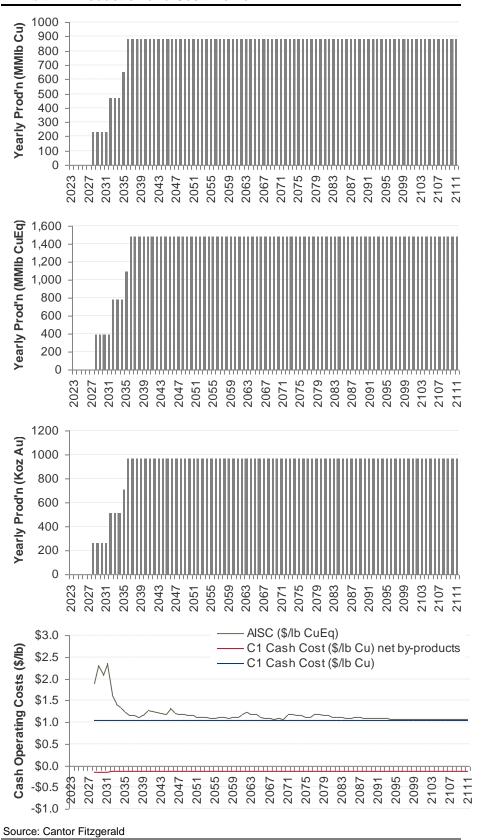


Exhibit 10. Simplified Process Flowsheet



Exhibit 11. Production and Cost Profile





TAILINGS DAM OVERVIEW

The tailings deposition location will also be a significant component of the Permit Application to be submitted closer to year end. In the application, Northern Dynasty will select its preferred method/location for tailings deposition, and will also provide several other potential options to be reviewed by all stakeholders and the U.S. Army Corps of Engineers. We reiterate that the Permit Application will be a public document, and a community comment period will follow, such that the Company and the U.S. Army Corps of Engineers can evaluate potential alternatives to any/all aspects put forward in the Application (within the context of feedback provided by all stakeholders), including the tailings deposition location. In the 2011 PEA, Northern Dynasty identified an area approximately three miles west of the proposed open pit location to store the first ~25 years of tailings, referred to as Site G. The ultimate height of the Site G TMF would be 685 feet in a series of multiple lifts, and the design features of the impoundment are extremely conservative. As an example, while there has been no evidence of seismic movement along the nearby Lake Clark Fault since the last glaciers retreated over 10,000 years ago, the Site G TMF was engineered to treat the Lake Clark Fault as if it was active, and designed to withstand a seismic event equivalent to slippage along the entire fault. We also note that there is no evidence that the Lake Clark fault extends onto Pebble's mineral concessions according to USGS surveys, and as an example, when a 7.1-magnitude earthquake hit near Cook Inlet in January 2016, nothing was felt at the Pebble site (~125 miles away). Moreover, the Site G TMF design incorporates significant factors of safety and preventative systems related to any and all potential seepage risks, including:

- ➤ Overburden and broken rock at the top of the bedrock will be excavated to solid bedrock at the upstream toe of the embankment. A grout curtain will be injected below that point to minimize potential seepage below the embankment.
- A geotextile membrane will be laid up the face of the embankment, further reducing potential seepage through the embankment. This membrane will be keyed into a concrete plinth constructed above the grout curtain, thus ensuring interconnection of the primary seepage control mechanisms.
- A seepage collection system will be installed downstream of these design elements to capture any potential seepage that does migrate through them. Any potential seepage collected in this system will be pumped either back to the Site G TMF, or the process plant.
- Further downstream, wells will be drilled to monitor the groundwater quality. These can be converted to recovery wells if necessary.

200 feet

Exhibit 12. Tailings Dam Northern Embankment Cross Section

Source: Northern Dynasty, Cantor Fitzgerald



INFRASTRUCTURE/CONSTRUCTION OVERVIEW

We believe that the initial site layout of Pebble as currently envisaged by Northern Dynasty and its potential JV partners is materially different than the 2011 PEA. The Permit Application, to be filed around year end, will showcase Pebble as a much smaller operation initially (Cantor estimate of 100,000 tpd vs. the PEA at 219,000 tpd) with a much smaller surface and overall environmental footprint. Related to infrastructure, Pebble does have more challenges than many of its However, in our view, the infrastructure investment is more than warranted given the size/scale of the Pebble resource, and its ability to eventually support a mining project with an +80 year multi-generational operating life. Simply put, the Pebble project is too important not to warrant the related infrastructure investment. That being said, putting all site related infrastructure aside (maintenance facilities, offices, worker accommodation, process plant, tailings management facility, etc.), Pebble will also require installation of a deep water port (for concentrate offloading), several access roads, pipelines for concentrate and fuel transport to/from the port, and an electrical power generation station. Similar to the TMF, the locations of each of these infrastructure requirements will be included in the Permit Application and subject to extensive public comment, followed by the review of potential alternatives by Northern Dynasty and the U.S. Army Corps of Engineers, taking into consideration the questions/concerns raised by all stakeholders and Native groups. We note that the Alaska Industrial Development and Export Authority ("AIDEA") will likely have a significant role to play in the future development of Pebble as well (discussed on the following page).

Source: Northern Dynasty

Exhibit 13. 2011 PEA Site Footprint Will Be Materially Reduced

CAPITAL EXPENDITURES OVERVIEW

We estimate total up-front CAPEX of \$4.3 BB for the initial phase of open-pit operations (100,000 tpd) and all related ancillary infrastructure. This was derived via first principles, and compared/vetted relative to the CAPEX figures outlined in the PEA recently completed by Seabridge Gold at its KSM project. We note that in the 2011 PEA completed by Northern Dynasty at Pebble, initial CAPEX at a much higher 219,000 tpd throughput rate, was estimated at \$4.7 BB. We estimate total sustaining capital over the life of mine, including capital to expand the open-pit and develop the underground block cave, of \$17.5 BB. Discussed in more detail later in the report, based on our long-term metal price forecast,



cash flows at Pebble will pay back the initial capital investment and expansionary capital at the open pit and underground block cave in year 10. After the 10 year payback period (and ramp-up), from year 11 through year 80+, Pebble will generate, on average, after-tax free cash flow of \$1.5 BB. We have layered in a significant amount of conservatism in our initial CAPEX estimate, and note that AIDEA will likely play a significant role in Pebble's future, and share in a portion of CAPEX related to supporting infrastructure. This potential benefit is not included in our initial CAPEX estimate for Pebble, but could potentially save Northern Dynasty \$0.5-1.0 BB (with a subsequent increase in operating costs) depending on AIDEA's level of involvement.

THE ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY ("AIDEA")

AIDEA is a public corporation of the State of Alaska with many mandates, one of which is to provide various means of financing for, as it relates to Pebble, long-term infrastructure development. AIDEA has financed projects including industrial roads linking mine sites and transportation infrastructure, rail route expansion, intermodal nodes facilitating cargo switching, port expansions, energy interconnections, etc. In our view, it is likely that AIDEA will end up constructing, owning and operating the power plant and port facility supporting the Pebble site, with Northern Dynasty and its JV-partner(s) being the base load and primary customer. We note that AIDEA is currently working with the U.S. Army Corps. of Engineers in the permitting of a 200-mile industrial access road that would connect the Ambler Mining District (Trilogy Metals) to the Dalton Highway in northwest Alaska. AIDEA also owns the Red Dog (Teck Resources) port facility and access corridor.

TAXATION RATES, ROYALTIES, ETC.

The Alaska state royalty is calculated at 3% of net income from mining operations, and the Lake and Peninsula Borough, where the Pebble project is located, has enacted a municipal severance tax of 1.5% of net income from mining product sales. The Alaska state income tax rate is 9.4% and is deductible from the US federal income tax rate of 35%. The combined statutory income tax rate for the Pebble Project will approximate 41.1% of taxable income.

FAT TAIL

In our experience, the large-cap miners (potential JV partners for Pebble) tend to think much longer term than the average institutional or retail investor, who can liquidate a stock or a bond far more easily than a corporate can liquidate an operating mine. As such, potential JV partners appreciate the "fat tail" of a project like Pebble far more than investors tend to give Northern Dynasty credit for in its share price. Admittedly, this makes the Company difficult to value. Running a DCF for example, effectively ascribes almost zero value today to the ~\$1.5 BB in annual after-tax free cash flow in years 20 through 80+ of Pebble's operating life. In short, while 60+ years of free cash flow totalling ~\$90 BB beginning 30 years from now may not pique the interest of institutional or retail investors, it is of great interest to large-tier miners. As an Alaskan example, Red Dog is the world's largest zinc mine, producing approximately 10% of global supply per annum. It began operating in 1989 and eventually recouped the initial capital spend in 2007, 18 years later. Following several expansions, the mine is



expected to continue operating until 2031, giving the Alaskan operation a mine life of 42 years in total.

POTENTIAL JV PARTNERS

To be clear, for the retail or institutional investor that believes Pebble will never attract a large-tier JV partner, Northern Dynasty is not a stock to own. We believe, however, that the potential for a JV partner in the short-term is likely, and as a result, view NAK/NDM as an excellent asymmetric risk-reward trade. In our view, at current levels the stock is not "pricing in" any potential for a JV partner and in the event that a deal is struck similar to the original Anglo earn-in, the upside potential in Northern Dynasty is massive. A consortium JV deal is likely to mitigate the risk, and we believe a domestic partner or partner(s) would be the preferable option to move the project forward. Companies such as Freeport-McMoRan (FCX-NYSE, Not Covered), Newmont, Goldcorp and Glencore (GLEN-LSE, Not Covered) have all been vocal in recent months acknowledging the need for M&A to sustain and grow their businesses. We also note that Pebble will ultimately be capable of producing ~3 MMoz Ag per annum, representing approximately 1% of revenue. Selling a stream on this silver and/or portion of the gold production would likely draw a number of competitive suitors including Franco-Nevada (FNV-NYSE/TSX, Not Covered), Royal Gold (RGLD-NYSE, Not Covered) and Wheaton Precious Metals Corp (WPM-NYSE/TSX, Not Covered). We estimate a sale of the full silver stream could net Northern Dynasty up to \$300 MM (Cantor Estimate) based on precedent transactions. A sale on a portion of the gold stream could yield multiples of this amount.

SCARCITY VALUE, ATTRACTIVE M&A TARGET

Top-tier mining companies favour both size and grade, and look for cornerstone assets that have a "fat tail" (a mine life of multiple decades). These projects are few and far between, with those located in favourable jurisdictions ever more rare, and those that are permitted the rarest of all. While Northern Dynasty still has a long way to go toward permitting, the recent legal settlement with the EPA providing access to normal course permitting as well as their commitment to begin the process to withdraw the pre-emptive veto under 404(c) is a promising start. In our view, the EPA's decision gives the large-tier miners the confidence they need to advance discussions on potentially partnering with Northern Dynasty and Pebble. We believe a partnering scenario is far more likely than an outright takeout, and point to the metrics in Exhibit 14 as to what in-situ resources have been recently been acquired for. Over the last several years, development stage gold and copper companies have been acquired for ~\$21/oz and \$0.04/lb in-situ. Applying this valuation to Northern Dynasty's total resource base implies a fair-value (comparable value) takeout price of \sim \$18.50/share (\sim C\$25.00/share).



Exhibit 14. Recent M&A in Gold and Copper Sectors (Pre-Production)

Recent Deve	lopment	Stage Gold N	л&А	•		
Announced	Au Price	Acquirer	Acquired	Location	Stage	EV/oz Au
5/16/2017	\$1,237	Eldorado	Integra	Canada	Feas	\$168
6/19/2016	\$1,278	Teranga	Gryphon	Burkina Faso	Feas	\$17
6/8/2016	\$1,243	Fortuna	Goldrock	Argentina	Feas	\$21
5/12/2016	\$1,268	Goldcorp	Kaminak	Canada	Feas	\$70
3/4/2016	\$1,259	Endeavour	True Gold	Burkina Faso	Constr.	\$53
2/28/2016	\$1,226	Perseus	Amara	Cote D'Ivoire	Feas	\$9
11/6/2015	\$1,089	Evolution	Phoenix Gold	Australia	Feas	\$9
10/15/2015	\$1,180	Alamos	Carlisle	Canada	PEA	\$5
7/30/2015	\$1,085	OceanaGold	Romarco	United States	Constr.	\$97
2/17/2015	\$1,209	Timmins	Newstrike	Mexico	PEA	\$5
1/19/2015	\$1,277	Goldcorp	Probe	Canada	Exp'n	\$96
					Median	\$21
Recent Deve	lopment	Stage Coppe	er M&A			
Announced	Cu Price	Acquirer	Acquired	Location	Stage	EV/lb Cu
4/28/2017	\$2.67	Goldcorp	C.Casale (25%)	Chile	Feas	*\$0.04
4/28/2017	\$2.67	Goldcorp	Exeter	Chile	Feas	*\$0.01
4/24/2016	\$2.25	Nevsun	Reservoir	Serbia	PEA	\$0.34
4/24/2016	\$2.25	Reservoir	Timok (Freeport)	Serbia	PEA	\$0.08
8/27/2015	\$2.28	Goldcorp	El Morro (30%)	Chile	Feas	\$0.04
5/26/2015	\$2.78	Zijin	Kamoa (50%)	DR Congo	Exp'n	\$0.02
*CuEq.					Median	\$0.04
Source: Cantor	Fitzgerald					

MANAGEMENT AND BOARD OF DIRECTORS

Ron Thiessen, President, CEO & Director: A Chartered Professional Accountant (FPCA, FCA) with more than 25 years of corporate development experience, Ron Thiessen is President and CEO of Northern Dynasty Minerals Ltd. and also a Director of the Pebble Limited Partnership. Mr. Thiessen leads Northern Dynasty's corporate development and financing activities and is CEO of Hunter Dickinson Inc.

Tom Collier, CEO Pebble Limited Partnership: A regulatory lawyer and former Chief of Staff in the U.S. Department of Interior, Mr. Collier has extensive experience in federal permitting, specifically the Environmental Impact Statement ("EIS") process under NEPA and 404 wetland permitting under the Clean Water Act. Prior to being appointed CEO of the Pebble Limited Partnership in February 2014, Mr. Collier had a 40+ year legal career with Washington DC-based Steptoe & Johnson, with a specialty for guiding companies through federal environmental permitting processes. Mr. Collier has worked on numerous Alaska resource projects including re-authorization of the Trans-Alaska Pipeline System, Alpine oil development and Conoco Phillips' CD-5 project.

Marchand Snyman, CFO: Marchand Snyman is a chartered accountant with more than 20 years of experience in corporate finance, 18 of which have been in the mining industry working on international projects. Mr. Snyman is responsible for financial/corporate management and financing activities at Northern Dynasty Minerals Ltd. and is Chief Operating Officer for Hunter Dickinson Inc.



Bruce Jenkins SVP, Corporate Development – Bruce Jenkins is an environmental and government relations executive with more than 40 years of experience in project and corporate management. He supports the Pebble Partnership and helps guide environmental and permitting activities. Mr. Jenkins is also Executive Vice President of Environment and Sustainability for Hunter Dickinson Inc.

Stephen Hodgson, VP Engineering: Stephen Hodgson is a professional engineer with 40 years of experience in mine operations, mine development and project engineering. He is Director of Engineering for the Pebble Partnership and Executive Vice President of Engineering for Hunter Dickinson Inc.

Sean Magee, VP Public Affairs – Sean Magee is a former journalist, speechwriter, media trainer and corporate communication consultant whose 25 year career includes more than 20 years of experience in natural resource development. Mr. Magee is Executive Vice President of Strategic Communications and Public Affairs for Hunter Dickinson Inc.

Doug Allen, VP, Corporate Communications: Mr. Allen is an asset management industry specialist with more than 35 years of experience on both the sell-side and the buy-side of the investment industry. Mr. Allen serves as the primary liaison with the broker-dealer and asset management industries, and also works on corporate development activities.

Trevor Thomas, Company Secretary: Trevor Thomas is the company secretary to Northern Dynasty Minerals. Mr. Thomas has practiced in the areas of corporate commercial, corporate finance, securities and mining law since 1995, both in private practice environment as well as in-house positions and is currently in-house General Counsel for Hunter Dickinson Inc.

Robert Dickinson, Executive Chairman: An economic geologist with more than 40 years of mineral exploration experience, Robert Dickinson is Executive Chairman of Northern Dynasty Minerals Ltd. and a Director of the Pebble Partnership. Mr. Dickinson leads Northern Dynasty's project development activities and is Chairman of Hunter Dickinson Inc. Mr. Dickinson is an inductee into the Canadian Mining Hall of Fame.

John Shively, Chairman of the Board, Pebble Limited Partnership: Mr. Shively came to Alaska in 1965 as a Volunteers in Service to America ("VISTA") volunteer. This one-year assignment eventually turned into a career invoving issues that have shaped Alaska. Mr. Shively worked with NANA Regional Corporation to negotiate development of the Red Dog zinc mine. He served under two governors, including a term as National Resources Commissioner. He served as CEO of Pebble Limited Partnership 2007-2014, and has been a Trustee for the Alaska Permanent Fund, a Regent at the University of Alaska, and a board member for the Alaska State Chamber of Commerce and the Resource Development Council of Alaska. Mr. Shively received the Bill Egan Award as the State Chamber's Alaskan of the year in 2009 and has also been recognized by the Alaska Federation of Natives with its prestigious Denali Award.

Desmond Balakrishnan, Director: Desmond Balakrishnan is a lawyer practicing in the areas of Corporate Finance and Securities, Mergers and Acquisitions, Lending, Private Equity and Gaming and Entertainment for



McMillan LLP, where he has been a partner since 2004. Mr. Balakrishnan has been lead counsel on over \$500 million in financing transactions and in mergers and acquisitions aggregating in excess of \$1 billion. He also serves as a director and/or officer of several resource, finance and gaming firms. He holds CLA and BA from Simon Fraser University and a Bachelor of Laws (With Distinction) from the University of Alberta.

Steven Decker, Director: Steven Decker is a Chartered Financial Analyst® charterholder with more than 20 years of investment experience as an Analyst and Portfolio Manager. He holds an MBA in Finance from the Marshall School of Business at the University of Southern California where he received the Marcia Israel Award for Entrepreneurship and was a manager of the California Equity Fund.

Gordon Keep, Director: Gordon Keep is a Professional Geologist with extensive business experience in investment banking and creating public natural resource companies, Mr. Keep is CEO of Fiore Management & Advisory Corp., a private financial advisory firm. He also serves as an officer and/or director for several natural resource companies. He holds a B.Sc. in Geological Science from Queen's University and an MBA from the University of British Columbia.

David Laing, Director: David Laing, COO Trek Mining, is a mining engineer and executive, with 40 years' experience in mining operations, projects, engineering studies, mining finance, investor relations, mergers and acquisitions, corporate development and company building. He has also held senior positions in mining investment banking and technical consulting.

Christian Milau, Director: Christian Milau, CEO Trek Mining, is a Chartered Professional Accountant (CA) and mining executive, recently as CEO of True Gold Mining, with experience in acquisition, financing, development, and operation of mines. Mr. Milau also has background in finance and capital markets, and government and stakeholder relations, including successfully negotiating with governments on various community, security, fiscal and tax matters.

Ken Pickering, Director: Ken Pickering is a Professional Engineer and mining executive with 40 years of experience in a variety of capacities in the natural resources industry. He has led the development, construction and operation of world-class mining projects in Canada, Chile, Australia, Peru and the United States, focusing on operations, executive responsibilities and country accountabilities. Mr. Pickering is also a Director of Teck Resources and Endeavour Silver.

PROJECT ADVISORY COMMITTEE

On May 18, 2017, Northern Dynasty announced a Project Advisory Committee consisting of five founding members, all prominent Alaskan and National figures. The intention is for the Advisory Committee to engage all stakeholders, improve dialogue with the BBNC, and facilitate a transparent permitting process via the U.S. Army Corps. of Engineers. We note that not all members of the Committee are openly supportive of the project. The committee consists of:

Willie Hensley: A respected Alaska Native leader, former Alaska legislator and current Visiting Professor of Business and Public Policy.



Kim Williams: A former Executive Director of Nunamta Aulukestai, Chief of the Curyung Tribal Council and Bristol Bay Native Corporation director.

Jim Maddy: A former President of the League of Conservation Voters and National Park Foundation, in addition to other leadership roles in conservation organizations.

General Joseph Ralston: A former Vice Chairman of the Joint Chiefs of Staff, whose tenure as a military and government leader spans both Alaska and Washington, DC.

Terrence Salt: A former Deputy Assistant Secretary to the U.S. Army Corps. of Engineers.

OWNERSHIP & SHARE STRUCTURE

Approximately 24% of Northern Dynasty's common shares outstanding are owned by institutional investors, the largest being Stirling Global Value, Ostvast Capital, Tiff Advisory, Millennium Management, Wellington, and Vertex One. Northern Dynasty exited Q1/17 with C\$39.7 MM in cash and no debt. In January 2017 the company completed a \$37.4 MM bought deal equity financing (upsized from \$25 MM) at \$1.85/share. Cantor Fitzgerald participated as co-lead. There are 303.4 MM shares issued and outstanding shares along with 58.6 MM options and warrants of which approximately 55.2 MM are in the money with the potential to raise gross proceeds of C\$33.7 MM. Insiders and management hold approximately 10.8 MM shares representing 3.6% of the common shares The Company's Founder and Chairman Robert Dickinson, outstanding. personally owns 4.5 MM shares, and Ron Thiessen, CEO, personally owns 3.2 MM shares representing 1.5% and 1.0%, respectively, of Northern Dynasty shares. 31.3 MM of the company's shares, 10.3% of its market float, is currently short.

JV MODEL STRUCTURE - BASE CASE

In our view, the only way that Pebble will advance toward construction is for Northern Dynasty to be either acquired outright by a large-tier mining company, or for Pebble to find a better capitalized partner(s), the latter being the far more likely case. While we do not rule out a straight takeout, with an enterprise value of ~\$460 MM and an upfront CAPEX requirement of ~\$4.3 BB, a total price tag of ~\$4.8 BB for Northern Dynasty/Pebble (which excludes any takeover premium) is a hefty price tag even for the largest mining companies globally, many of which are still in the process of deleveraging. Our base case JV structure is modeled after the Premier Gold-Centerra transaction (50/50 JV on the development stage Hardrock Gold project in Ontario) originally announced in February of 2015. The details and metrics of that transaction are summarized and applied to Northern Dynasty/Pebble in Exhibit 15:



Exhibit 15. Premier and Centerra JV Relevant Metrics

	Premier/Centerra	NDM, NAK/Various
Date Announced:	Feb 5, 2015	-
Project Name:	Hardrock	Pebble
Project Location:	Northern Ontario	Southern Alaska
Project Stage:	Feasibility	Feasibility
Permitted:	No (2018)	No (2020+)
Gold Price @ Announcement:	\$1,266	-
Upfront Cash Purchase (MM\$):	C\$85	\$333 *
CAPEX Contributions (MM\$):	C\$215	\$747 *
Stake in Project Purchased:	50%	50%
Project NPV - 7.5%, \$1300/oz (MM\$):	C\$454	\$1,780
Project Upfront CAPEX (MM\$):	C\$1,247	\$4,333
Upfront Payment P/NPV (50%):	0.4x	0.4x
CAPEX Contributions (% of total):	17%	17%
*Implied from Dramier/Centerre valuation		

*Implied from Premier/Centerra valuation

Source: Cantor Fitzgerald

In February 2015, Centerra (CG-TSX, Not Covered) and Premier Gold (PG-TSX, Buy, C\$4.40 target) entered into a transaction whereby Centerra would earn into a 50% stake in Premier's Hardrock project by funding the first C\$215 MM of construction CAPEX in addition to making an upfront cash payment of C\$85 MM to Premier. The C\$300 MM total equated to 17% of the initial CAPEX requirement (C\$215 MM of C\$1,247 MM) and 0.4x NPV on the project economics (C\$85 MM on 50% of the C\$454 MM project NPV). Our base case IV-funding scenario at Pebble is conservatively modelled on these metrics, and implies a cash purchase price of \$333 MM for 50% of Pebble (0.4x standalone project NPV of +\$1.7 BB), followed by an earn-in of \$747 MM covering 17% (effectively the first year) of Northern Dynasty's initial CAPEX commitment. Our base case JV-funding scenario results in an after-tax project NPV_{7.5%} net to Northern Dynasty (50%) of +\$1.3 BB. We acknowledge that the structure of a potential IV is completely unknown and highly variable at this point. Given the size, scarcity, and potential ultimate scale of Pebble relative to Hardrock, we believe Northern Dynasty will be able to enter into a JV agreement on far better terms than Premier was able to with Centerra, and as such, our "base" case IVfunding scenario should be viewed as the "most conservative" case scenario. Our DCF-based NAVPS and target price as a result have a material bias to the upside. Project NPV sensitivities to various other JV combinations are provided in Exhibit 16.

Exhibit 16. Project NPV (MM\$) Sensitivities to Varying JV Structures

		Upfront Purchase Price (MM\$) 50/50 JV					
		\$333	\$400	\$500	\$600	\$700	
בַּ	\$747	\$1,348	\$1,388	\$1,448	\$1,508	\$1,567	
earn- 5)	\$800	\$1,364	\$1,404	\$1,464	\$1,523	\$1,583	
Remaining ea in (MM\$)	\$900	\$1,395	\$1,434	\$1,494	\$1,554	\$1,613	
ية ج ج	\$1,000	\$1,425	\$1,465	\$1,524	\$1,584	\$1,643	
ا ي	\$1,100	\$1,455	\$1,495	\$1,554	\$1,614	\$1,673	
æ	\$1,200	\$1,485	\$1,525	\$1,584	\$1,644	\$1,704	
Source: C	antor Fitzgerald						



Exhibit 16 provides sensitivities to the project NPV, with our base case scenario (\$333 MM purchase price and \$747 MM earn-in) generating an NPV of +\$1.3 BB (C\$1.7 BB). This drives a fully financed, fully diluted NAVPS of \$2.69 (C\$3.57) for Northern Dynasty (50% JV model). It incorporates a 70/30 debt equity split on Pebble's unfunded capital requirement of ~\$1.8 BB (Northern Dynasty's 50%), with all equity raised at \$1.50/share, slightly below the current share price. We note that this equity can be raised in tranches over the project's 4-year construction phase, likely at much higher prices (minimizing dilution). Moreover, in lieu of equity, we view the sale of a silver and/or gold stream as the more likely and far better alternative. As such, our NAVPS estimate, the primary driver of our target price, is extremely conservative. Exhibit 17 provides a breakdown of our NAVPS for Northern Dynasty and Exhibit 18 provides a NAVPS sensitivity to various debt/equity components and financing prices. Exhibit 19 is a straight DCF-based NAVPS (unfinanced, undiluted) on the basis of Northern Dynasty maintaining a 100%-interest in the Pebble project.

Exhibit 17. JV Case NAVPS Breakdown, Fully Financed, Fully Diluted

Asset		Value (\$MM)	\$ Per Share	% of NAV
Pebble - 50%	DCF-7.5%	\$1,348.5	\$1.88	70%
Other		\$0.0	\$0.00	0%
Total Mining Assets		\$1,348.5	\$1.88	70%
Total Mining Assets (C\$)		C\$1,793.5	C\$2.50	70%
Cash (exit 2017E)		\$12.8	\$0.02	1%
Cash from ITM options/	warrants	\$24.5	\$0.03	1%
Cash fully financed		\$1,793.2	\$2.50	28%
Debt fully financed		(\$1,255.2)	(\$1.75)	
Debt (exit 2017E)		\$0.0	\$0.00	0%
Net Asset Value, fully dilu	ıted	\$1,348.5	\$2.69	100%
Net Asset Value, fully dilut	ted	C\$2,558.5	C\$3.57	100%
P/NAV			0.57x	
Source: Cantor Fitzgerald				

Exhibit 18. Debt/Equity Sensitivities to JV Case

		Equity Raise Price (\$/share)							
Debt/Equity	\$1.35	\$1.40	\$1.45	\$1.50	\$1.55	\$1.60			
80/20	\$2.80	\$2.84	\$2.88	\$2.92	\$2.96	\$3.00			
75/25	\$2.66	\$2.71	\$2.75	\$2.79	\$2.84	\$2.88			
70/30	\$2.54	\$2.59	\$2.64	\$2.69	\$2.73	\$2.77			
65/35	\$2.45	\$2.50	\$2.55	\$2.60	\$2.64	\$2.69			
60/40	\$2.37	\$2.42	\$2.47	\$2.52	\$2.56	\$2.61			
55/45	\$2.30	\$2.35	\$2.40	\$2.45	\$2.50	\$2.54			
50/50	\$2.23	\$2.29	\$2.34	\$2.39	\$2.44	\$2.49			
Source: Cantor Fitzg	gerald								

P/NAV VALUATION

We note that in addition to trading at the lower end of its peer group in terms of EV/resource (\$3.11/oz AuEq, \$0.007/lb CuEq, refer to Exhibit 21) Northern Dynasty also represents deep value relative to recent development stage take-outs in the space (Exhibit 14). We prefer to look at Northern Dynasty's price to intrinsic value P/NAV as the better metric. On this basis, and fully financed assuming a 70/30 debt/equity split on our base case 50/50 JV scenario, Northern



Dynasty currently trades at 0.57x its NAVPS_{7.5%} of \$2.69 (C\$3.57). This NAVPS is driven via our long-term gold/copper price deck of \$1,300/oz Au and \$2.80/lb Cu. On an undiluted, unfinanced, 100%-project ownership basis, Northern Dynasty trades at 0.30x its NAVPS_{7.5%} of \$5.03 (C\$6.68).

Exhibit 19. NAVPS Breakdown, Unfinanced, Undiluted

Asset		Value (\$MM)	\$ Per Share	% of NAV
Pebble - 100%	DCF-7.5%	\$1,780.2	\$4.92	98%
Other		\$0.0	\$0.00	0%
Total Mining Assets		\$1,780.2	\$4.92	98%
Total Mining Assets (C	\$)	C\$2,367.6	C\$6.54	98%
Cash (exit 2017E)		\$12.8	\$0.04	1%
Cash from ITM option	s/warrants	\$26.1	\$0.07	1%
Debt (exit 2017E)		\$0.0	\$0.00	0%
Net Asset Value, fully o	diluted	\$1,819.0	\$5.03	100%
Net Asset Value, fully di	luted	C\$2,419.3	C\$6.68	100%
P/NAV			0.30x	
Source: Cantor Fitzgerald				

Exhibit 20. Sensitivity to Metal Prices, NAVPS, Operating Metrics

	Long-term Copper Price (\$/lb)							
NAVPS	\$2.20	\$2.40	\$2.60	\$2.80	\$3.00	\$3.20		
2.5%	\$14.41	\$16.33	\$18.24	\$20.16	\$22.08	\$23.99		
5.0%	\$4.34	\$5.15	\$5.96	\$6.77	\$7.58	\$8.39		
7.5%	\$1.45	\$1.86	\$2.27	\$2.69	\$3.10	\$3.51		
10.0%	\$0.53	\$0.77	\$1.00	\$1.24	\$1.47	\$1.71		
12.5%	\$0.27	\$0.42	\$0.56	\$0.70	\$0.85	\$0.99		
		Long	g-term Gold	Price (\$/o	z)			
NAVPS	\$1,000	\$1,100	\$1,200	\$1,300	\$1,400	\$1,500		
2.5%	\$17.02	\$18.07	\$19.11	\$20.16	\$21.21	\$22.26		
5.0%	\$5.44	\$5.89	\$6.33	\$6.77	\$7.22	\$7.66		
7.5%	\$2.01	\$2.24	\$2.46	\$2.69	\$2.91	\$3.14		
10.0%	\$0.85	\$0.98	\$1.11	\$1.24	\$1.37	\$1.49		
12.5%	\$0.47	\$0.55	\$0.62	\$0.70	\$0.78	\$0.86		
	Operating	Costs	Cu, Au G	Cu, Au Grades		overies		
NAVPS	+10%	-10%	+10%	-10%	+10%	-10%		
2.5%	\$18.33	\$21.99	\$22.04	\$18.14	\$24.21	\$16.11		
5.0%	\$6.00	\$7.54	\$7.97	\$5.51	\$8.48	\$5.06		
7.5%	\$2.29	\$3.08	\$3.40	\$1.95	\$3.56	\$1.82		
10.0%	\$1.01	\$1.46	\$1.67	\$0.79	\$1.73	\$0.74		
12.5%	\$0.57	\$0.84	\$0.98	\$0.42	\$1.00	\$0.40		
Source: Cantor	Fitzgerald							

SENSITIVITIES

Virtually all of the capital and operating costs for Northern Dynasty at Pebble will be denominated in US dollars, and so the fact that the revenue stream is approximately 30% weighted to gold (the majority weighted to copper), provides a natural currency hedge. The project is obviously highly sensitive to copper and gold prices with a 10% move in either of the metals impacting NPV by 30.7%



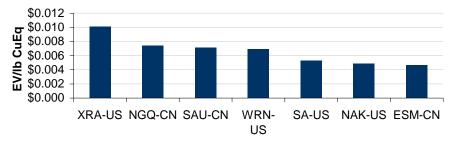
(Cu) and 15.6% (Au). Exhibit 20 provides an overview of sensitivities to various project inputs.

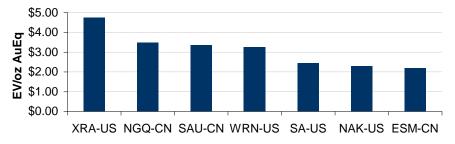
EV / RESOURCE VALUATION

On an enterprise value per resource basis, Northern Dynasty currently trades at \$0.005/lb CuEq or \$2.29/oz AuEq at the lower range of its peer group. In the case of Pebble however, the term "peer group" is a bit of a misnomer insofar as that Pebble is materially larger in every case, with only Seabridge's KSM project in Northern British Columbia being in what could be considered the same tier. That said, the single asset Cu-Au porphyry peer group averages \$0.007/lb CuEq or \$3.11/oz AuEq on an EV/contained metal basis with Northern Dynasty trading at a discount of approximately 30%.

Exhibit 21. Comparables & EV/oz AuEq, CuEq Valuation

Company	Asset	Own	Location	MMoz Au	BBlb Cu
Exeter Resources	Caspiche	100%	Chile	6.4	24.8
NGEx Resources	Los Helados	60%	Chile	32.8	22.7
St. Augustine Gold	King-King	25%	Philippines	6.4	12.0
Western Copper & Gold	Casino	100%	Yukon	10.1	16.7
Seabridge	KSM	100%	Canada	34.9	83.7
Northern Dynasty	Pebble	100%	Alaska	81.3	107.6
Eurosun Mining	Rovina Valley	100%	Romania	1.4	7.2





Source: Cantor Fitzgerald

WHY OWN IT NOW? WHY NOT WAIT FIVE YEARS?

Northern Dynasty will not advance the Pebble project alone; it will need a larger-tier partner or partners. The window to submit the environmental permits is 30 months and the opportunity to complete the EIS has been defined (four years), a process that Northern Dynasty is confident it can complete in three years. In our view, a JV partner(s) will want to lead this EIA process and will therefore need to come to the table sooner rather than later. As mentioned previously, for the retail or institutional investor that believes Pebble will never attract a large-tier JV partner, Northern Dynasty is not a stock to own. For investors that believe the likelihood of Pebble re-partnering is more than zero, the option value



in owning NAK/NDM is excellent. In our view, the best time to own Northern Dynasty is ahead of the re-partnering event, which depending on its structure, has the potential to be the single largest de-risking event in the company's history, and would re-rate the stock significantly higher. After a re-partnering event, the risk in owning NAK/NDM will be materially lower; but the asymmetric opportunity will be gone.

UPCOMING CATALYSTS AND THE PLAN GOING FORWARD

We believe Northern Dynasty is on the cusp of re-partnering Pebble and expect there are no shortage of potential suitors. If and when the Company can finalize a JV agreement, and should the terms be similar to the original agreement with Anglo (likely) or on par/better with the conservative JV-structure that drives our NAVPS and target price (highly likely), in our view, it would be the single largest de-risking event in the Company's history. We would expect the stock to re-rate materially higher as a result, likely close to our estimate of its intrinsic value (NAVPS), though potentially much higher. On a parallel track, closer to year end, Northern Dynasty will file the updated and re-scoped Project Description, including the Plan of Operations with the U.S. Army Corps. of Engineers, this will trigger the start of the standardized permitting process under NEPA.

CURRENT TARGET PRICE AND VALUATION METHODOLOGY

Cantor Fitzgerald Canada Mining Research typically values development-stage projects on a DCF-based P/NAVPS only. Northern Dynasty is admittedly difficult to value, insofar as that it is not a typical project. The resource base of 81.3 BBlb Cu and 107.6 MMoz Au, has the potential to support a mine that could eventually be scaled up to the largest open-pit and underground operation in the world, operating at this level for over 80 years (multi-generational). A straight DCF, at anything higher than a 5.0% discount rate (which Cantor uses to value producing mining assets), effectively values the "fat tail" of Pebble, the back-end 60 years of production, at zero. When operating at fully ramped up throughput rates, Pebble has the potential to produce ~900 MMlb Cu and ~1.0 MMoz Au, generating ~\$1.5 BB in after-tax free cash flow, per year, over these final 60 years. In our view, this "fat tail" is worth more than zero, and while institutional investors may discount the long mine life to zero, potential acquirers and JVpartners will not. To ascribe some option value to the "fat tail" of Pebble, our target price is based on a 1.0x P/NAVPS_{7.5%} multiple, plus 2.5x Year 1 operating cash flow, on a fully diluted, fully financed, 50/50 JV partner scenario. This additive approach (intrinsic value + option on LT annual CFPS) results in our target price of \$3.75/share or C\$5.00/share. Should investors wish to discount the long mine life of Pebble to zero, intrinsic value or NAVPS (as measured via discount cash flows) for the Company is \$2.69/share or C\$3.57/share. Based on NAK/NDM's most recent closing price, this still represents +75% upside.



Exhibit 22. Large Cap Gold and Base Metals Producers

	2016A CFO	2016A	2016A YE
	(MM\$)	%ge base metals	P/CFPS
Newcrest	\$1,241	12.2%	8.54x
First Quantum	\$949	88.6%	7.21x
Goldcorp	\$799	7.5%	14.31x
Agnico Eagle	\$714	0.2%	13.13x
Yamana	\$627	10.6%	4.23x
Hudbay	\$388	84.8%	3.46x
Lundin Mining	\$363	92.0%	9.43x
Turquoise Hill	\$231	63.3%	37.60x
	Average, Median:	44.9%	8.99x
Source: Company Reports, E	Bloomberg, Cantor Fitzgerald		

LONG-TERM DIRECTION

As noted previously, Northern Dynasty has a copper or gold-equivalent resource base on par with some of the largest base metal and gold producers, and over the longer term, has the potential to generate similar cash flows as well. If/when Pebble fully ramps up, and should Northern Dynasty retain a 50% interest in the project (as per our base-case JV scenario), the Company would generate approximately \$900 MM in yearly operating cash flow, with revenues weighted ~70% to Cu/Mo and ~30% to Au/Ag. This is approximately equivalent to First Quantum on a company-wide basis, though Northern Dynasty would have slightly higher precious metals exposure. Over the longer term, if/when Pebble can re-partner and Northern Dynasty can retain a sizeable equity stake in the project all the way through to production, the company would likely become a core holding for generalist and mining focused institutional investors. Similar sized copper and base metals producers are shown in Exhibit 22, and traded at an average P/CFPS multiple of ~9.0x based on YE 2016 numbers. Based on the future shares outstanding in our fully financed, fully diluted, 50/50 JV partner scenario (716.0 MM), a similar multiple could drive a valuation for NAK/NDM of ~\$11.00/share (~C\$15.00/share). Admittedly, this is over the very long-term and subject to our debt/equity assumptions and the resultant impact to the future capital structure of the Company.

INVESTMENT THESIS, TARGET, RATING

We believe Northern Dynasty is a compelling investment over both the short-term and long-term:

- Excellent Asymmetric Trade Short-Term: At current share price levels, Northern Dynasty is not "pricing in" any potential for a JV partner, and in the event that a deal is struck similar to the original Anglo earn-in, the upside potential in Northern Dynasty is massive. We believe potential JV partners are lined up, and a deal will be completed in the short-term. As a result, we view NAK/NDM as an excellent asymmetric risk-reward trade.
- Economic Benefit to the Municipalities and State of Alaska: With the Alaska state economy so heavily dependent on the production of oil, it is imperative over the longer term that the people of Alaska seek to develop other industries. Most of Alaska's Native Corporations, as an example, rely almost *entirely* on revenues generated from the petroleum industry. Development of the Pebble project, in our view, is the single



best solution to plugging the budget deficit in Alaska, and that this is largely lost on the states' population, given that the NGO's opposed to Pebble currently control he narrative. We believe this will ultimately have to shift given the importance of Pebble, and the fact that the mine has the potential to generate +\$700 MM in tax revenue, +\$250 MM will be payable to the State, and +\$30 MM will be payable to the municipality (Lake and Peninsula Borough), *per year*, for +70 years.

- ➤ Long-Term Potential Upside: Over the longer term, if/when Pebble can re-partner and Northern Dynasty can retain a sizeable equity stake in the project all the way through to production, the company would trade at a significantly higher multiple, more in-line with its future large-tier gold and copper producing peers.
- ➤ **Resource Size:** In terms of in-situ mineral resource inventory, Pebble is the world's largest undeveloped copper and gold project. To put the project size in in context, Northern Dynasty has a copper resource base 5x that of Ivanhoe Mines, 2/3 the size of First Quantum and a gold resource base on par with Goldcorp, just shy of Newmont.
- ➤ Project Scarcity: There are only a handful of projects globally that can meaningfully boost the production profile of even the top-tier mining companies. Pebble is the largest one, and is therefore a highly strategic and much sought after asset. Not only is it large enough to "move the needle" for the large-cap miners, but Pebble also represents a cornerstone asset, given its multi-decade mine life.
- The "Fat Tail" Effect: In our view, the most likely potential JV partners for Pebble are the mega-cap diversified miners and/or base metal producers (BHP, Glencore, Freeport, Southern Copper, etc.) These are companies that tend to favour, and will pay large premiums for, long-life "fat tail" assets. We point to recent M&A in the base metal space, most notably Goldcorp's acquisition of Exeter Resources and consolidation of Cerro Casale, Zijin Mining's purchase of 50% of Kamoa-Kakula, and Freeport's acquisition of Reservoir Minerals. Northern Dynasty's Pebble project eclipses all of these in terms of size and scale.
- ➤ Leverage to Metal Prices: The Pebble project has massive leverage to metal prices given its size and scale. A 10% move (long-term) in Cu and Au price alters the project NPV_{7.5%} by 30.7% and 15.6%, respectively.
- ➤ Current Valuation: On strictly a project NPV_{7.5%} basis (no JV structure, unfunded), Northern Dynasty currently trades at 0.30x NAVPS of \$5.03/share. Based on our JV-model NPV_{7.5%} estimate (50% of project economics, fully financed, fully diluted), the company trades at 0.57x NAVPS, well below intrinsic value of \$2.69. The stock is also inexpensive relative to its copper-gold porphyry single asset peer group on all metrics. On a much longer term basis, on a P/CFPS producing multiple, the stock would be fairly valued at ~\$11.00/share and on a takeover basis, given recent precedent transactions, the stock could be valued as high as ~\$18.50/share.

Based on a target multiple of 1.0x NAVPS_{7.5%} (rounded) fully financed, fully diluted, 50/50 JV scenario, and a 2.5x CFPS year 1 "option" to factor in the multi-decade mine life, we are initiating coverage of Northern Dynasty with a Buy rating and a 52-week target price of \$3.75/share (C\$5.00/share). This target incorporates many layers of conservatism, mainly with respect to the terms of the



potential JV agreement, and financing requirements. It is also a short-term 12-month target. Over the much longer term, if Northern Dynasty is not outright consolidated by a "mega-cap" producer, and still manages to retain an equity stake in the operating Pebble Mine, the stock is likely to trade more in-line with large-tier gold and base metal producers. As such, our initial target of \$3.75/share (C\$5.00/share) has a material bias to the upside.



INVESTMENT RISKS

Investing in mining and exploration companies is inherently risky. Commodity, geological, operational, regulatory, or financing risks on projects could result in delays in development or production, impact economics or disrupt shipment schedules.

Commodity Risk

The Company is in advanced stage development. There is a risk that copper and gold prices could decline in the interim as a result of rising interest rates, the global geopolitical outlook, strength in the financial sector, election outcomes, etc. Should the price of copper or gold decline significantly, the Company could choose to delay or cancel further exploration and be required to write down any assets in order to reflect the weaker price environment. Any delay or termination of project exploration could have an adverse impact on the future financial position and profitability of the Company.

Geologic Risk

Results of drilling at Pebble could prove to be disappointing and thus negatively affect the viability the project. The lack of future exploration success may impact upside potential of the company.

Regulatory Risk

In accordance with applicable Federal and Provincial laws and regulations, Northern Dynasty Minerals Ltd. is required to obtain the proper permits and licenses in order to conduct exploration activities, develop its projects, and ultimately mine and process ore. We believe that Northern Dynasty Minerals Ltd. has been and will continue to be diligent in its preparation of the applications for the required permits and licenses for its projects; however, the regulatory review period could take longer than expected. With considerable mineral development taking place, the regulatory agencies may be stretched to the limit, prompting delays.

Political Risk

We believe that the Federal and State levels of government will continue its favourable view towards mining. However, any local opposition could impede exploration/development efforts as a result of additional public review/comment periods or debate and possibly even potential litigation.



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The analysts responsible for this research report *do have*, either directly or indirectly, a long or short position in the shares or options of Northern Dynasty Minerals Ltd.

The analyst responsible for this report *has not* visited the material operations (Pebble) of Northern Dynasty Minerals Ltd. No payment or reimbursement was received for the related travel costs.

Analyst certification

The research analyst whose name appears on this report hereby certifies that the opinions and recommendations expressed herein accurately reflect his personal views about the securities, issuers or industries discussed herein.

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BUY: The stock is attractively priced relative to the company's fundamentals and we expect it to appreciate significantly from the current price over the next 6 to 12 months.

BUY (Speculative): The stock is attractively priced relative to the company's fundamentals, however investment in the security carries a higher degree of risk.

HOLD: The stock is fairly valued, lacks a near term catalyst, or its execution risk is such that we expect it to trade within a narrow range of the current price in the next 6 to 12 months. The longer term fundamental value of the company may be materially higher, but certain milestones/catalysts have yet to be fully realized.

SELL: The stock is overpriced relative to the company's fundamentals, and we expect it to decline from the current price over the next 6 to 12 months.

TENDER: We believe the offer price by the acquirer is fair and thus recommend investors tender their shares to the offer.

UNDER REVIEW: We are temporarily placing our recommendation under review until further information is disclosed.

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