Anglo American's Pebble Mine

REPUTATIONAL RISKS, REGULATORY CHALLENGES AND LEGAL UNCERTAINTIES OCTOBER 2009

There are no other mining projects in North America that come close to the scale, the complexity, the public opposition and the technological challenges that face the Pebble Mine." — Mining Engineer Jim Kuipers P.E., Kuipers & Associates

Bristol Bay watershed. Photo: Robert Glenn I

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Nunamta Aulukestai Caretakers of Our Land



existing and emerging risks — INTRODUCTION

THIS REPORT HIGHLIGHTS THE RANGE OF EXISTING AND EMERGING RISKS ASSOCIATED WITH THE DEVELOPMENT OF THE PROPOSED PEBBLE COPPER AND GOLD MINE IN SOUTHWEST ALASKA.

Anglo American purchased a 50% stake in the Pebble Project in Bristol Bay, Alaska in July 2007, forming the Pebble Limited Partnership (PLP) with Canadian-based junior Northern Dynasty.¹ The project is currently in advanced exploration, and to retain its 50% interest, Anglo American must continue its staged investment of \$1.43 billion to advance the Pebble Project toward permitting and operations.

Anglo American states that it can complete the permitting process by 2012, and begin generating revenue by 2016.² But the political and regulatory environment for the Pebble Mine (and the associated 100-mile road, pipelines, deep water port, power plant and transmission lines) raise a number of reputational and legal risks for the company and puts this time frame in doubt.

The Pebble Project is located at the headwaters of the Bristol Bay watershed, which produces 50% of the world's commercial supply of wild sockeye salmon.³ Given the harsh, undeveloped environment of the region and the sensitivity of the Bristol Bay fishery, each of the mine components, standing alone, would pose enormous technical, logistical and political challenges. Taken together, the scale and ambition of the Pebble Project are unprecedented.

Pebble is already vigorously opposed by a diverse and politically sophisticated coalition of local communities, tribal governments, commercial and sport fishing businesses, and other economic interests. As a result, it is expected that Pebble will face political and regulatory challenges in the short and long term, and there is real risk that it may never receive approval to proceed. Anglo American recently cut its capital expenditures for 2009 by over 50% to reduce pressure on its balance sheet. It has explained that its remaining capital expenditures will be narrowly focused in two areas: (1) "businesses and development projects that are expected to perform most strongly in the near term," and (2) "projects that are already at an advanced stage of development."⁴ Given its status as an exploration project with significant regulatory and legal hurdles, Pebble meets neither of these criteria. Further expenditures on this project are therefore a distraction from management's plan for weathering the global downturn in commodity demand.

THE PROJECT - AN UNPRECEDENTED UNDERTAKING

According to mining engineer Jim Kuipers, the Pebble Project, if fully developed, "is likely to involve one of the largest infrastructure undertakings in the history of mining."⁵ Based on current ore projections⁶, the Pebble Project will be the largest copper and gold mine in North America, with an estimated footprint covering 30 square miles of the Bristol Bay watershed.⁷ According to the 2006 water rights applications and company projections, the



following mine facilities and associated infrastructure will need to be permitted and constructed.

- Tailings ponds to hold as much as 9 billion tons of mine tailings (mine waste) in perpetuity;⁸ By comparison the Grasberg mine, one of the world's largest single producers of copper and gold, is projected to generate 6 billion tons of mine waste over mine-life.⁹
- Several large earthen tailings dams, at least three of which are projected to be over 700 ft high, and larger than the world's largest concrete dam the Three Gorges dam in China;¹⁰
- A 600-700 MW power plant¹¹ almost twice as big as Alaska's largest existing plant;

- Infrastructure for delivering fuel to the power plant possibly a deep-water liquefied natural gas terminal; A deep water port to bring the mine output to market;
- A hundred-mile road and set of pipelines linking the mine to the port;
- Over 200 miles of power transmission lines; 50 miles of which would be submerged under Cook Inlet.¹²

Individually, each of these facilities is a significant undertaking, but collectively, the permitting, logistical and political challenges of the mine and related infrastructure are unparalleled. In 2008, the company projected development costs at US \$6 billion, an increase of \$1 billion from the previous year's estimates.¹³



reputational risk through political opposition **RISK 1**

THROUGHOUT THE WORLD, MANY WILD SALMON STOCKS ARE IN SERIOUS DECLINE, YET THE BRISTOL BAY WATERSHED WITH ITS INTACT LANDSCAPE AND HIGH QUALITY WATERS CONTINUE TO SUPPORT THE WORLD'S MOST PRODUCTIVE WILD SALMON RIVERS. SCIENTISTS WORLDWIDE CONSIDER SALMON STOCKS IN BRISTOL BAY, ALASKA AS GLOBALLY SIGNIFICANT AND A TOP PRIORITY FOR CONSERVATION.¹⁴

The Pebble project is opposed by a politically powerful coalition of diverse interests who have the support of a large segment of the Alaskan electorate. The majority of Bristol Bay area residents view large-scale mineral development as an unacceptable risk to the fishery and subsistence. A 2009 survey found that 71% of Bristol Bay residents oppose the Pebble Mine.¹⁵ The Alaska Inter-Tribal Council, a consortium of 231 federally-recognized tribes in Alaska, and many tribal governments of the region, have passed resolutions against the project.¹⁶ The influential commercial fishing and tourism industries also oppose the mine.¹⁷ The commercial and sportfishing industries in the Bristol Bay watershed generate roughly \$320 million and \$60 million a year, respectively.¹⁸ And, 140 businesses in the sports fishing industry have voiced opposition.¹⁹ Prominent jewelry retailers have vowed not to source gold from the Pebble mine, including U.S.-based Tiffany & Co., Helzberg Diamonds and Ben Bridge Jewelers and U.K.-based Goldsmiths, Beaverbrooks, and Mappin & Webb.20

Opponents of the Pebble mine introduced a state-wide ballot initiative (the Clean Water Initiative) in 2007 that would have hindered development of the project.²¹ Mining interests spent approximately \$10 million – reportedly the largest expenditure on a ballot initiative in Alaska history.²² Although proponents of the initiative were outspent three to one, the initiative still secured 43% of the statewide vote, and over 82% of the Bristol Bay vote.²³

In February 2008, the Pebble Limited Partnership hired an independent contractor, the Keystone Center, to develop and coordinate a stakeholder dialogue process to develop an environmentally preferred mine plan. Key stakeholder groups, such as the United Fishermen of Alaska and Nunamta Aulukestai (an association of eight Native Village Corporations in Bristol Bay), have rejected the proposed process on the grounds that it does not include a valid "no mine alternative." To date, Keystone has not been able to gain the participation of sufficient credible stakeholders to move this process forward.²⁴

Alaska business leaders have described the battle over mining in Bristol Bay as the next Arctic National Wildlife Refuge, referring to the decades-long stalemate over oil and gas development in the Arctic Refuge.²⁵



operational uncertaintity due to lack of infrastructure **RISK 2**

PEBBLE'S REMOTE LOCATION AND LACK OF INFRASTRUCTURE, PARTICULARLY FOR POWER, MAKE THE ECONOMICS OF THE PROJECT PROBLEMATIC.²⁶ THERE ARE NO EXISTING POWER SOURCES, TRANSMISSION LINES OR ROADS IN THE BRISTOL BAY WATERSHED, AND FORMAL PLANS FOR THE REQUIRED INFRASTRUCTURE HAVE YET TO BE SUBMITTED.

NO MAJOR POWER SOURCE

The company forecasts that at least 600 - 700 MW of power will be needed to operate the mine – an amount almost twice as large as the amount produced by Alaska's largest existing power plant.²⁷ The closest available power source, Homer Electric Association, is located roughly 200 miles away and has a generating capacity of just 55 MW less than a tenth of Pebble's requirements.²⁸ Consequently, a significant new energy source must be identified and permitted for the Pebble Mine to operate. The company hopes to generate the power via a natural gas-fired power plant near Nikiski on the Kenai Peninsula.²⁹ This would require a new plant or a substantial expansion of the existing plant, and the construction of long distance transmission lines extending 200 miles, including 50 miles of submarine transmission lines under Cook Inlet. Pebble Limited Partnership has determined that there is not enough natural gas in the region to reliably meet the energy demands of the mine and is exploring the feasibility of importing liquefied natural gas (LNG) to fuel the plant. This would also require the construction of a new liquefied natural gas terminal, or major modification of an existing terminal.³⁰ To date, no plans have been submitted to the state for this infrastructure, and permitting and construction of each of these facilities will take considerable time and funding.

LACK OF INFRASTRUCTURE AND ACCESS RIGHTS

The Pebble Limited Partnership must also obtain access rights from a complicated patchwork of state, Alaska Native, and private landowners to build the estimated 100 miles of road and slurry pipeline necessary to transport the ore from the mine to port. Two regional native corporations and five village corporations own a split estate of surface and subsurface lands along the proposed road corridor.³¹ Approximately 50 miles of this route are within Bristol Bay Native Corporation's (BBNC) boundaries. In June 2009, BBNC passed a resolution denying development of the road across BBNC lands until the native corporation has received the Pebble Mine development plan and determined whether development of the mine meets their approval.³² A 2007 survey of BBNC shareholders found that roughly 70% oppose development of the mine, raising uncertainty about whether the mine will meet with the regional corporation's approval.³³

"There are places where mining does not represent the best use of resources. In Bristol Bay, we support the salmon fishery as the best bet for sustainable, long-term benefit. For Tiffany & Co., and we believe for many of our fellow retail jewelers, this means we will look to other places to source gold."

> Michael Kowalski, Tiffany & Co. chairman and CEO.
> Numerous other prominent U.S. and U.K. jewelers have also taken a position on the project.

A 2006 scientific study found that mines like Pebble, with high acid generating potential and close proximity to surface and groundwater, represent a high risk to water quality. Fully 93% of the mines studied with these two key characteristics resulted in water pollution.

> Kuipers, Jim and Ann Maest, "Comparison of Predicted and Actual Water Quality at Hardrock Mines", 2006.

regulatory challenges and legal uncertainty **RISK 3**

BECAUSE OF ITS MASSIVE SCALE, SENSITIVE LOCATION, AND THE EXTENT OF LOCAL OPPOSITION, PEBBLE IS HIGHLY VULNERABLE TO REGULATORY CHALLENGES.

Pebble Limited Partnership will need to secure regulatory approval for an estimated 60 permits from a variety of federal, state, and local permitting authorities.³⁴ Furthermore, pending state legislation and numerous legal challenges may increase regulatory requirements for Pebble, or preclude development altogether.

LACK OF SECURE WATER RIGHTS

Pebble Limited Partnership has applied for the rights to almost 35 billion gallons of water per year from salmon streams in the Bristol Bay watershed³⁵ – about the same amount of water used by the City of Anchorage.³⁶ To obtain this water, an estimated 60 miles of salmon spawning streams and adjacent tributaries and wetlands, will be partially or fully dewatered, directly affecting the Bristol Bay fishery and internationally-renowned fishing streams.³⁷ The Pebble Limited Partnership will have to overcome competing claims to this water, including reservations for in-stream flows to preserve fish habitat. Given the importance of the fishery to the local economy and Alaska Native subsistence users, adjudication of these rights will be vigorously contested and will likely take years to resolve. Challenges have already been filed by tribal governments, commercial fishing interests, and conservation groups.³⁸

EXPLORATION PERMIT UNDER ADMINISTRATIVE APPEAL

The State of Alaska issued a permit in February 2009 to Pebble Limited Partnership for an additional two years of exploration activity. An administrative appeal was filed by Nunamta Aulukestai, an association of eight native village corporations in Bristol Bay and two residents of Nondalton, Alaska, asking the commissioner to reevaluate the issuance of the permit based on various environmental and state law considerations related to waste disposal and water quality. $^{\rm 39}$ A final decision from the State is expected this summer.

EXPLORATION PERMIT CHALLENGED IN ALASKA SUPERIOR COURT

In July, 2009, Nunamta Aulukestai and others filed a lawsuit challenging exploration permits issued to the Pebble Partnership by the State of Alaska.⁴⁰ The lawsuit contends that the State of Alaska has violated multiple sections of the Alaska Constitution in repeatedly issuing exploration permits without public notice and without analyzing whether exploration or the mine itself are in the public interest.⁴¹ Plaintiffs have asked the court for a preliminary injunction prohibiting the State from granting or extending permits for exploration and water use on mining claims held by the Pebble Limited Partnership. If approved, this will effectively stop further exploration until the court makes a final decision – or until the State Legislature enacts a new regulatory framework for onshore mining exploration.⁴²

CHALLENGE TO THE LAND USE PLAN

Development of the proposed Pebble mine relies on land uses authorized under the 2005 Bristol Bay Area Plan. In May 2009, a lawsuit challenging the land use plan was filed against the State of Alaska by a number of federallyrecognized Alaska tribes, including the largest tribe in the Bristol Bay watershed.⁴³ If it prevails, it is expected to trigger a new Bristol Bay Area land use plan, which plaintiffs contend is likely to make it more difficult to develop the Pebble mining claims. Furthermore, if the court finds the 2005 land use plan invalid, the development of a new land use plan could significantly extend the Pebble permitting process.

LEGISLATIVE CHANGES

In April 2009, the House Special Committee on Fisheries introduced HB 242 in the Alaska State Legislature. The bill proposes to expand protections for wild salmon, wildlife, water, and other resources in Bristol Bay from large-scale mining.⁴⁴ If passed, this legislation will have significant implications for Pebble. It would raise regulatory standards, and possibly preclude development of the project altogether. Alaska lawmakers designated much of the Bristol Bay Watershed a Fisheries Reserve in 1972, determining that the area needed heightened protections from oil and gas development. HB 242 seeks additional protections – specific to hardrock mining – for what the bill calls the reserve's "extraordinary and unique resources." The bill will be heard and debated in the 2nd Session beginning in January 2010.

Los Angeles Times

Alaska Natives try to halt proposed Pebble Mine

A coalition of village corporations and others files suit to put an end to drilling and exploration for a copper and gold mine above Bristol Bay -- a sanctuary for wild salmon.



The Pile River flows into Lake Iliamna at the base of the Alaskan Peninsula, headwaters of the Bristol Bay region. (Luis Sinco / Los Angeles Times)

By Kim Murphy

July 31, 2009

Reporting from Seattle - It has always been a match made in peril: One of the biggest copper and gold mines in the world perched in the watershed above Bristol Bay, Alaska the last, best refuge for millions of Pacific wild salmon.

The proposed Pebble Mine would dwarf all the others operating in the Alaskan wilderness and generate up to 9 billion tons of ore, most of which would have to be sifted and disposed of near the ponds and streams that feed into Bristol Bay.

It also would generate hundreds of jobs in troubled southwestern Alaska, and as much as

"...it is critically important for the commercial fishing industry to assure that other industrial development does not disrupt or degrade the area's fishing economy."

— Excerpted from statement of opposition to the development of the Pebble Mine, United Fishermen of Alaska (UFA). UFA is a trade association that collectively represents the interests of commercial fishermen through the state. technological challenges and environmental risks **RISK4**

FAILURE TO IDENTIFY AND ACCOUNT FOR FAULTS IN **CLOSE PROXIMITY TO PROJECT**

There are significant technological and regulatory challenges associated with permitting the mine waste storage facilities (tailings impoundments) given the massive size of the proposed dams (740 feet in height) and their location in a seismically-active area at the headwaters of the world's most productive salmon streams. Alaska experiences magnitude 6-7 earthquakes at least 6 times a year and one "great" earthquake (magnitude 8 or larger) about every 13 years.⁴⁵ Worldwide, approximately 2-5 major tailings impoundment failure incidents occur each year.46 Independent scientists are concerned that Pebble has failed to identify and account for faults in close proximity to the tailings impoundments.⁴⁷ Failure to provide accurate geophysical data and engineer dams for the maximum credible earthquake increases the long term risk of dam failure with associated major cleanup, repair and natural resource damage costs, along with the regulatory uncertainty of dam certification.

HIGH POTENTIAL FOR ACID MINE DRAINAGE **CREATES TECHNOLOGICAL CHALLENGES AND REGULATORY UNCERTAINTY**

Acid mine drainage is considered one of the greatest environmental liabilities associated with mining.48 Preliminary geochemical data indicates that the proposed Pebble mine has significant acid generating potential (i.e., likelihood that the mine will generate acidic waste water).⁴⁹ Current plans do not incorporate a liner for the tailings impoundment to protect groundwater from acidgenerating mine waste. A 2006 scientific study found that mines like Pebble, with high acid generating potential and close proximity to surface and groundwater, represent a high risk to water quality. Fully 93% of the mines studied with these two key characteristics resulted in water guality violations.⁵⁰ Pebble Limited Partnership can expect regulatory challenges under the Clean Water Act, which could result in significant permitting delays and the potential for increased costs for water treatment, tailings impoundment liners, or other mitigation measures.

LOSS OF SALMON HABITAT CREATES POLITICAL **OPPOSITION AND REGULATORY UNCERTAINTY**

The proposed mine straddles the headwaters of the Kvichak and Nushagak Rivers - the world's two most productive wild sockeye salmon rivers. A 2007 report by an independent fisheries biologist has indicated that substantial salmon habitat loss would occur from mine activities outlined in the existing permit applications, including: 1) the 30 square-mile footprint of the mine; 2) the total or partial dewatering of 60 lineal miles of mainstem streams of the North and South Koktuli Rivers and the Upper Talarik Creek that will be totally or partially dewatered along with associated sloughs and wetlands, including Frying Pan Lake; and 3) the 12.5 square miles of disturbance from the access road; port facilities; and, power production and power supply lines.⁵¹ The commercial and sport fishing industries are the leading economic interests in the Bristol Bay region. The mine can expect significant regulatory challenges related to the destruction of salmon habitat.52

"I want Anglo American's shareholders to know that salmon are easily harmed by changes in their environment."

— Thomas Tilden, Chief of the Curyung Tribe, the largest tribe in Bristol Bay. Excerpted from www.ourbristolbay.org. The Curyung Tribal Council has passed a resolution in opposition to the Pebble Mine. development process is inconsistent with Anglo American's policy commitments **RISK 5**

ANGLO AMERICAN FAILS TO FOLLOW ICMM POLICY COMMITMENT

Anglo American is a member of the International Council on Mining and Metals (ICMM), and has committed to measure performance against its Sustainable Development Framework and supporting position statements.⁵³ ICMM members have agreed that "successful mining and metal projects require the broad support of the communities in which they operate, including indigenous peoples, from exploration through to closure."⁵⁴ Anglo American, however, does not have broad community support for exploration and development of the proposed Pebble Mine. Over 80% of Bristol Bay residents recently voted in favor of the Clean Water Initiative, which was expected to hinder project development.

BASELINE DATA COLLECTION PROCESS FAILS TO MEET ENVIRONMENTAL PERFORMANCE STANDARDS

A key element of the mine permitting process involves collecting accurate information about the existing environment (baseline data) to ensure that the impacts of mineral development can be accurately determined. Given the significance of the Bristol Bay salmon fishery, baseline data must include comprehensive information about the distribution of salmon in the streams in the mine permit boundary.

In Alaska, streams with a documented population of salmon receive greater regulatory protection than those without salmon. This additional protection is only triggered when the documented evidence is provided to the state, and then added to the Anadramous Fish Catalog. A recent report found that exploration and related activity at the Pebble prospect over the last several years produced no new nominations to the catalog and very little information was available to the public regarding the extent of salmon distribution, if any, in the vicinity of the prospect.⁵⁵

Last year, a group of independent fisheries biologists conducted salmon surveys in 37 streams within and adjacent to the mine permit boundary.⁵⁶ Over a period of just one week, the team documented salmon in 20 streams, and nominated 28 miles of additional salmon-bearing streams to the State.⁵⁷ Some of these streams are directly over the Pebble ore deposit, and would certainly be affected by mine development.⁵⁸ According to the researchers, "Our findings remove any doubt that the construction of a mine will destroy salmon and salmon rearing habitat."59 The failure of the company to identify and nominate key salmon habitat within the mine permit boundary, has raised questions about the completeness of its baseline data, and runs counter to Anglo American's stated environmental performance standards. These standards commit the company to, "Use sufficiently accurate, detailed and current data to describe and characterize the pre-mining baseline social and environmental conditions within the project's zone(s) of influence."60 It also runs contrary to their stated commitment towards fishery protection, and more importantly, it undermines its credibility with key stakeholders, including the commercial and sport fishing industries, and Alaska Native subsistence communities.61

the risks are considerable **CONCLUSION**

THE RISKS ASSOCIATED WITH THE PROPOSED PEBBLE PROJECT ARE CONSIDERABLE.

Its vast size, environmental risks and technological challenges have generated significant political opposition. Legal challenges and legislative proposals have the capacity to create considerable delays in mine permitting or preclude project development altogether.

Investors are increasingly taking into account environmental and reputational risks, particularly associated with mining. The Norwegian Pension Fund, one of the world's largest sovereign wealth groups, recently divested from Rio Tinto and Barrick Gold due to environmental risks associated with specific mine projects.

INVESTORS SHOULD ASK ANGLO AMERICAN THE FOLLOWING QUESTIONS ABOUT ITS CONTINUED INVOLVEMENT IN THE CONTROVERSIAL PEBBLE PROJECT, AND WHETHER THIS PROJECT MEETS ITS INVESTMENT OBJECTIVES, PARTICULARLY IN THE PRESENT ECONOMIC CLIMATE.

- 1. Opposition to this project from Alaska Native Tribes and the commercial fishing industry has already generated a number of legal challenges and legislative activities that could hinder the Pebble Project or preclude development altogether. What are the risks associated with these proceedings, and Anglo American's plans for addressing these risks?
- 2. The infrastructural support necessary to develop the Pebble Project is unprecedented. The political, regulatory and technological challenges associated with permitting the mine, a 600 MW power source, 200 miles of transmission lines, 100 miles of road and slurry pipelines, a deep water port, and possible deep water liquefied gas terminal are substantial, and appear to belie Anglo American's forecast for completing the

permitting process by 2012 and generating revenue by 2016. What is Anglo American's rationale for this timeline? What are the risks associated with securing a financial return on the Pebble Project associated with permitting or construction delays or the failure to secure permits for any one of these facilities?

- 3. The Pebble Project includes the key characteristics (high acid generating potential and proximity to surface and groundwater) considered to represent a high risk to water quality. The mine footprint is projected to displace key salmon spawning habitat, and significant questions have been raised about the risks associated with the tailings impoundments. Given the international significance of the salmon fishery, please disclose the financial and reputational risk in the short term and long term associated with adverse impacts to this resource?
- 4. Over 80% of Bristol Bay voters have expressed opposition to the Pebble Project, and the Keystone Stakeholder Dialogue process that Anglo American initiated has failed to materialize. What are the risks of proceeding without securing social license from the Indigenous Peoples in the Bristol Bay region?
- 5. Given the unique and extraordinary risks inherent in this project please disclose and discuss the challenges the company faces in its efforts to secure financing for the project (particularly in light of tightening credit markets and greater awareness in the capital markets of environmental and social issues).
- 6. Alaska business leaders are describing Pebble as the next Arctic National Wildlife Refuge (ANWR), referring to the decades-long stalemate over oil and gas development in the Arctic National Refuge. What are the reputational and financial risks to Anglo American of becoming embroiled in what appears to be an increasingly controversial project?

"People see Pebble as the next ANWR."

— Jason Brune, executive director of the Resource Development Council, a pro-development business group in Anchorage, referring to the decades-long stalemate over oil and gas development in the Arctic National Wildlife Refuge. DISCLAIMER: While this report discusses financial issues, it does not provide specific recommendations for any particular situation or circumstances and it should not be used as a basis for investment decisions. Such recommendations can only be provided by a qualified professional advisor who is familiar with your particular circumstances and other relevant information. This report and its content are for informational and/or educational purposes only. This report seeks to provide information and questions about the Pebble mine and is not a solicitation to buy or sell anything.

RESOURCES: ADDITIONAL INFORMATION ABOUT THE PROPOSED PEBBLE PROJECT CAN BE OBTAINED FROM THE FOLLOWING SOURCES

http://www.pebblescience.org/

http://dnr.alaska.gov/mlw/mining/largemine/pebble/

http://ourbristolbay.org/

http://www.pebblepartnership.com/

ENDNOTES

¹ Anglo American PLC and Northern Dynasty formed the Pebble Limited Partnership, referred to in this document as PLP. To retain its 50% interest in PLP, Anglo American is required to continue the staged investment of \$1.425 billion to advance the Pebble Project toward permitting and operations. ² http://www.pebblepartnership.com/images/NDM_NewTimeLine_ June08.gif

³ Alaska Department of Fish and Game, Division of Sportfish, Research and Technical Services. "Fishery Management Report no. 06-37. Annual Management Report 2005 Bristol Bay Area." June 2006.

⁴ Anglo American, News Release: Anglo American reduces 2009 capital expenditure by more than 50% to \$4.5 billion (December 17, 2008).

⁵ Personal Communication, Jim Kuipers, Mining Engineer, July 8, 2009. ⁶ Current estimates indicate a total resource of 5.1 billion tonnes measured and indicated and 4.0 billion tonnes inferred. http://www. northerndynastyminerals.com/ndm/Home.asp.

⁷ William J. Hauser, Potential Impacts of the Proposed Pebble Mine on Fish Habitat and Fishery Resources of Bristol Bay (September, 2007).

 ⁸ http://www.northerndynastyminerals.com/i/pdf/ndm/NDM-Facts.pdf
 ⁹ Perlez, Jane. "Below a Mountain of Wealth, A River of Waste" New York Times, December 27, 2005.

¹⁰ Northern Dynasty Mines, Pebble Project Tailings Impoundment An Initial Application Report

(REF. NO. VA101-176/16-13); Northern Dynasty Mines, Pebble Project Tailings Impoundment An Initial Application Report (REF. NO. VA101-176/16-12), available at http://dnr.alaska.gov/mlw/mining/largemine/ pebble/waterapp.htm.

¹¹ Bradner, Tim. "Pebble Mine Construction Now Estimated at \$6 Billion," Alaska Journal of Commerce, Anchorage, Oct 19, 2008, available at http://alaskajournal.com/stories/101908/hom_20081019038.shtml.
¹² http://www.pebblepartnership.com/pages/project-information/ road-port-power.php A map of possible submarine transmission lines available at http://www.pebblepartnership.com/images/ ProposedPowerline-map.pdf

 $^{\rm 13}$ Alaska Journal of Commerce, Anchorage, Oct 19, 2008 www.

alaskajournal.com.

¹⁴ State of the Salmon, 2009 Conference http://www.stateofthesalmon. org/conference2009/proceedings.html

¹⁵ Craciun Research, A Market Research Report for Nunamta Aulukestai, July 6, 2009.

¹⁶ Alaska Inter-Tribal Council, Resolution #2005-05, December 7, 2007; Joint resolution 2-22-05 of Nondalton Tribal Council, City of Nondalton, February 22, 2005; Levelock Village Council Resolution, 01-24-07 A; Joint Resolution of City of New Stuyahok and Stuyahok Limited, 2064-01; Joint Resolution of City of Ekwok, Ekwok Village Council and Ekwok Native Limited #2064-03; Curyung TribalCouncil Resolution #2005-14; Joint Resolution of New Koliganek Village Council and Koliganek Natives Limited #2005-1;

 ¹⁷United Fishermen of Alaska Statement in Opposition to Development of Pebble Mine, September 18, 2007. http://www.ufa-fish.org/doc/ UFA%20Statement%20opposing%20Pebble%20Mine%20091807.pdf.
 ¹⁸Duffield, John and Patterson, David. "Economics of Wild Salmon

Watersheds, Bristol Bay Alaska." Trout

Unlimited. July 2006.

¹⁹ http://www.sportsmansalliance4ak.org/assets/latest_news/2008/ Bristol_Bay_fly_fishing_industry_ad_Dec08.pdf.

 $^{\rm 20}\,{\rm A}$ full list of jewelers can be found at www.nodirtygold.org.

²¹ http://www.elections.alaska.gov/petitions/07watr.pdf.

²² Bluemink, Elizabeth, "Filmmakers Focus on Bristol Bay Pebble Project, Anchorage Daily News, 8/20/07 http://community.adn.com/adn/ node/129505

 ²³ http://www.elections.alaska.gov/08prim/data/results.html.
 ²⁴ United Fishermen of Alaska, Letter to Keystone concerning the Draft Stakeholder Assessment and Dialogue Feasibility Report., September 16, 2008; Nunamta Aulukestai, Letter to Keystone, September 15, 2008.

²⁵ Bluemink, Elizabeth, "Filmmakers Focus on Bristol Bay, Pebble Project" Anchorage Daily News, April 15, 2008, Previously printed August 20, 2007 http://www.adn.com/178/story/198284.html

²⁶ Mining News: "Challenges and opportunities, Pebble CEO is optimistic that extensive environmental studies and planning are the keys to unlock the project's potential" Vol. 13, No. 48, November 30, 2008. ²⁷ Ibid.

²⁸ http://www.homerelectric.com/About/aboutcoop.htm
²⁹ Mining News: "Challenges and opportunities, Pebble CEO is optimistic that extensive environmental studies and planning are the keys to unlock the project's potential." Vol. 13, No. 48, November 30, 2008.
³⁰ http://www.eia.doe.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/impex_list.html.

³¹ Bristol Bay Native Corporation, Resolution 09-22, Pebble Road Corridor, May 29, 2009

³² "Native Corporation Stops Pebble Road, Wants Development Plan" Todd Walker, KTVA News, June 15, 2009.

³³ Bristol Bay Native Corporation, December 2007 Newsletter.

³⁴ http://www.pebblepartnership.com/pages/project-information/ FederalStateLocalPermits.html.

 ³⁵ http://dnr.alaska.gov/mlw/mining/largemine/pebble/waterapp.htm.
 ³⁶ U.S.G.S. 2006. Anchorage Water Use. Fact Sheet 2006-3148. USGS Anchorage, AK. ³⁷ William J. Hauser, Potential Impacts of the Proposed Pebble Mine on Fish Habitat and Fishery Resources of Bristol Bay (September, 2007) Coble Geophysical Services, Report on Northern Dynasty Water Rights Claims in the Pebble Mine Area: Preliminary Analysis of Application for Water Right, Upper Talarik Creek, Iliamna, Alaska (October, 2006).
³⁸ Anchorage Daily News, "Groups seek rejection of Pebble Permits" July

21, 2006.

³⁹ Letter from Trustees for Alaska to Tom Irwin, Commissioner, Alaska Department of Natural Resources, March 18, 2009.

⁴⁰ Nunamta Aulukestai et al. v. State of Alaska, Complaint for Declaratory and Injunctive Relief, July 29, 2009. http://www.trustees.org/ Supporting%20Documents/Complaint.pdf

⁴¹ Ibid.

⁴² Ibid.

⁴³ Nondalton Tribal Council et. al. vs. State of Alaska, et. al., Case No. 3DI-09-46 Cl, May 5, 2009.

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