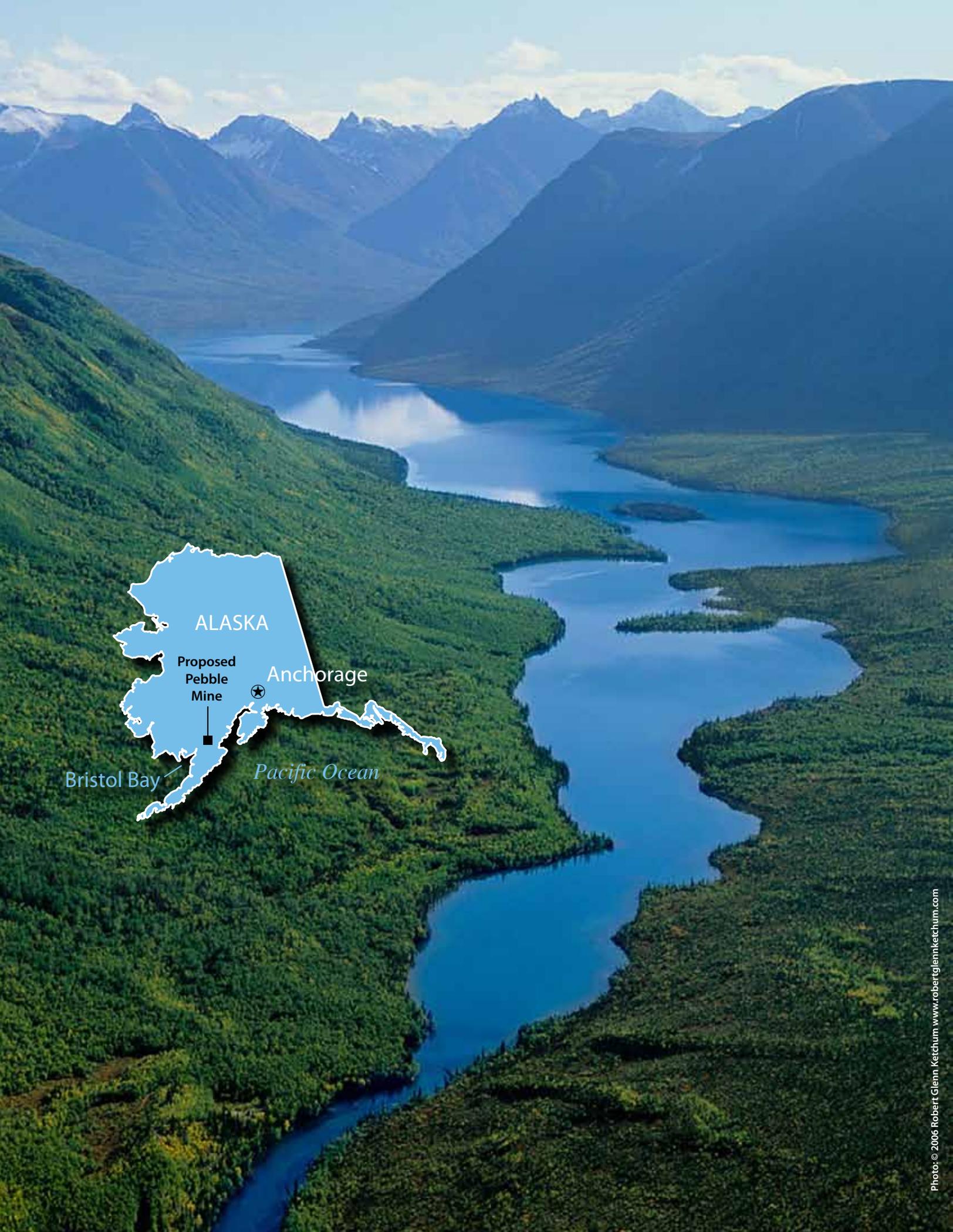


Anglo American's Pebble Mine

Investor Advisory

ISSUE NUMBER 2

REPUTATIONAL RISKS,
REGULATORY CHALLENGES
AND LEGAL UNCERTAINTIES
FEBRUARY 2012



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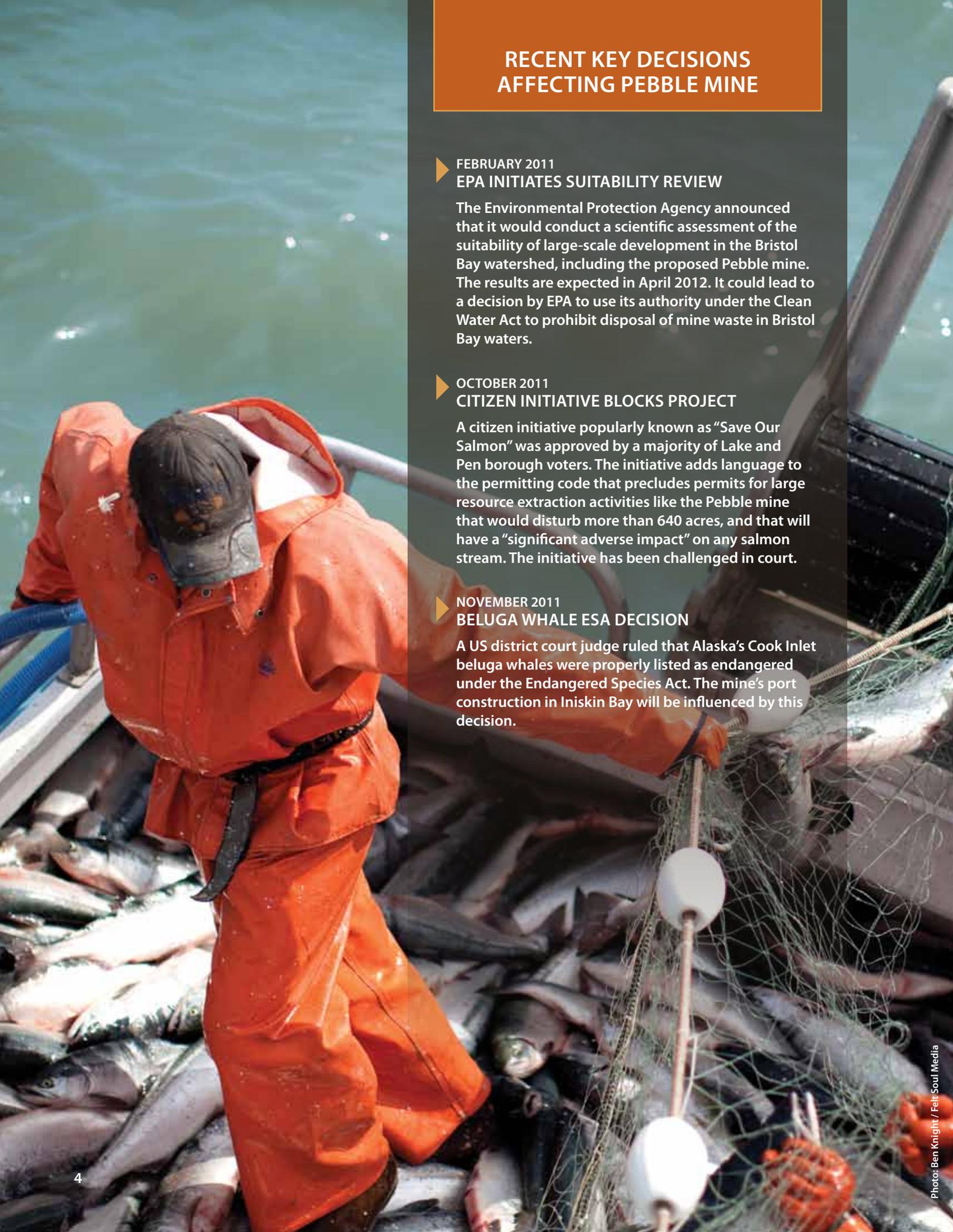
DISCLAIMER: While this report discusses financial issues, it does not provide specific recommendations for any particular situation or circumstances and it should not be used as a basis for investment decisions. Such recommendations can only be provided by a qualified professional advisor who is familiar 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.

This report was prepared by Bonnie Gestring, with technical review by Dr. David Chambers from the Center for Science and Public Participation (CSP2). The following organizations represent Alaska Native corporations, science and technical experts and conservation interests who are committed to the protection of the Bristol Bay watershed and the tremendous salmon fishery that it sustains. We would like to thank Jonas Kron, Esq. M.S.E.L. of Trillium Asset Management Corporation for his review and comments on the document.

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Nunamta Aulukestai
Caretakers of Our Land



RECENT KEY DECISIONS AFFECTING PEBBLE MINE

▶ FEBRUARY 2011
EPA INITIATES SUITABILITY REVIEW

The Environmental Protection Agency announced that it would conduct a scientific assessment of the suitability of large-scale development in the Bristol Bay watershed, including the proposed Pebble mine. The results are expected in April 2012. It could lead to a decision by EPA to use its authority under the Clean Water Act to prohibit disposal of mine waste in Bristol Bay waters.

▶ OCTOBER 2011
CITIZEN INITIATIVE BLOCKS PROJECT

A citizen initiative popularly known as “Save Our Salmon” was approved by a majority of Lake and Pen borough voters. The initiative adds language to the permitting code that precludes permits for large resource extraction activities like the Pebble mine that would disturb more than 640 acres, and that will have a “significant adverse impact” on any salmon stream. The initiative has been challenged in court.

▶ NOVEMBER 2011
BELUGA WHALE ESA DECISION

A US district court judge ruled that Alaska’s Cook Inlet beluga whales were properly listed as endangered under the Endangered Species Act. The mine’s port construction in Iniskin Bay will be influenced by this decision.

existing and emerging risks — INTRODUCTION

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

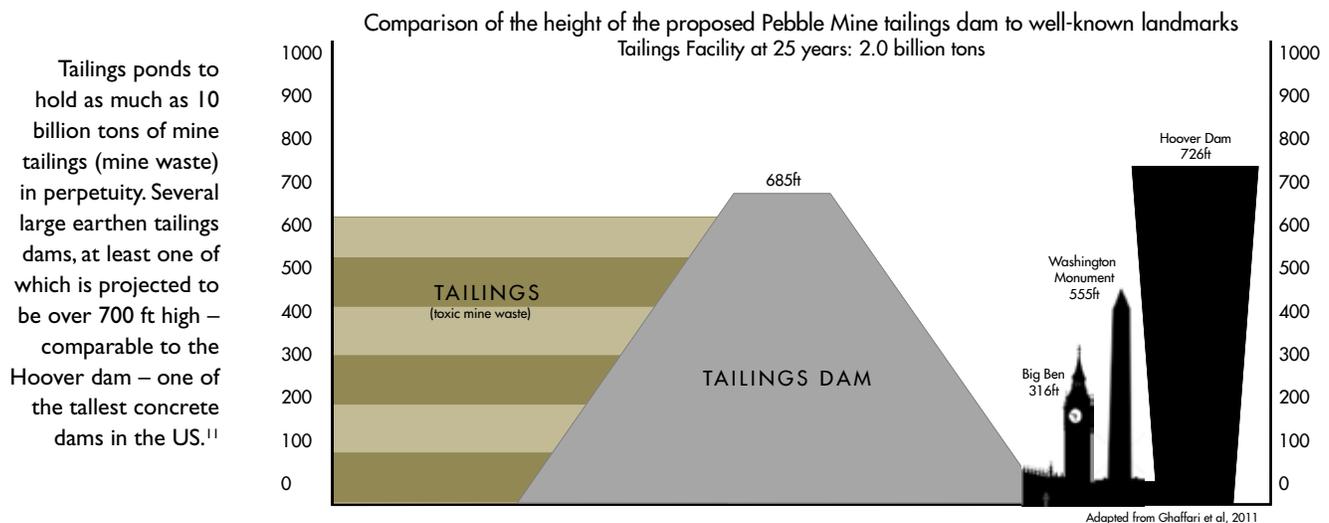
Anglo American purchased a 50% stake in the Pebble project in Bristol Bay, Alaska in July 2007, forming the Pebble Limited Partnership (PLP) with Canadian-based junior Northern Dynasty.¹ The project is currently in advanced exploration, and to retain its 50% interest, Anglo American must continue its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

In 2009, PLP stated that it could complete the feasibility study, permitting process and begin project construction by 2013, with production occurring in 2016.² But the political, legal and regulatory environment for the Pebble mine (and the associated 100-mile road, pipelines, deep water port, power source and transmission lines) has already caused significant delays. The Pebble Limited Partnership

now states that they don't expect to submit permit applications until late 2012 or 2013.³ A number of regulatory, reputational and legal risks for the company put even 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.⁴ 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.



THE PROJECT – AN UNPRECEDENTED UNDERTAKING

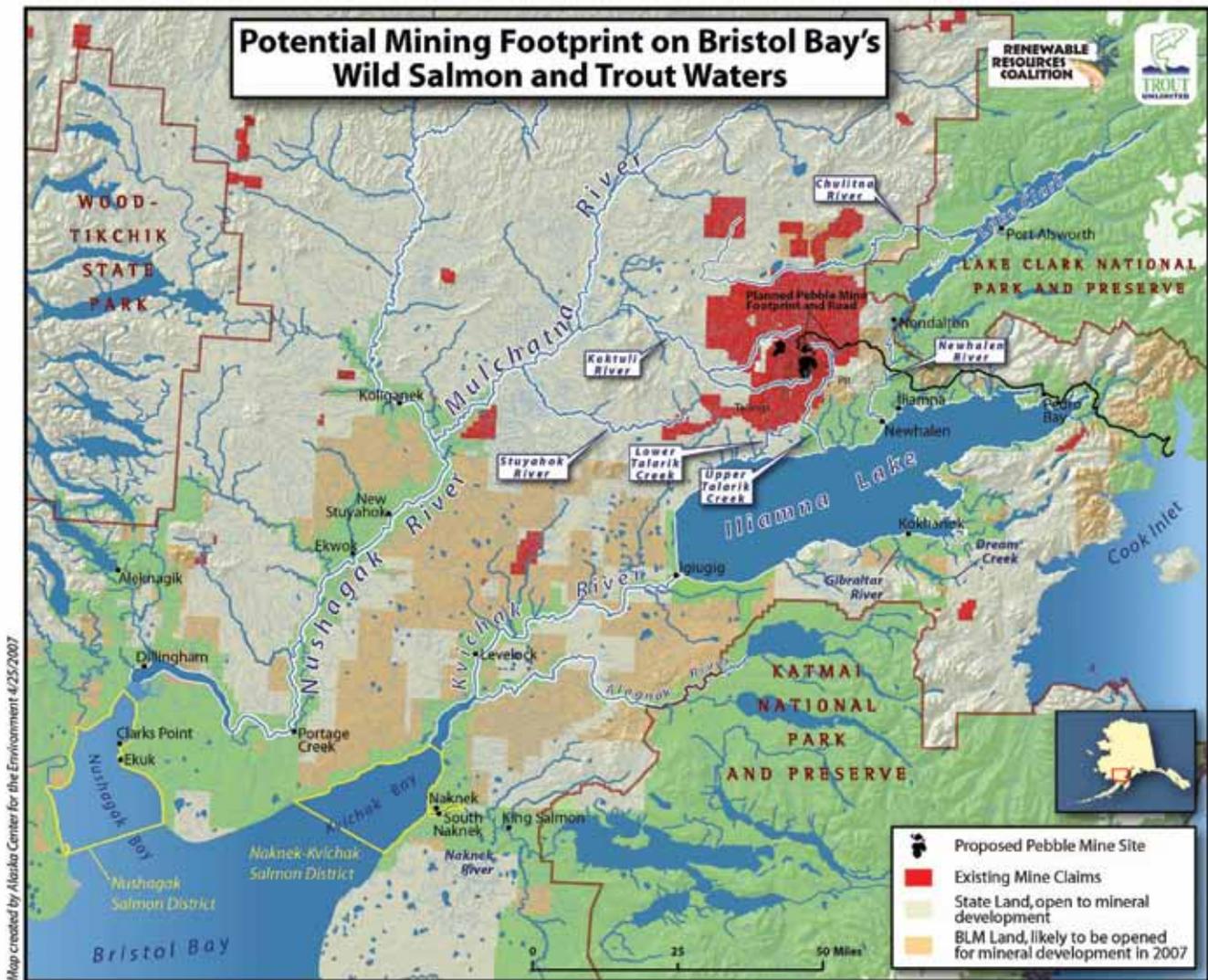
According to mining engineer Jim Kuipers, the Pebble project, if fully developed, "is likely to involve one of the largest infrastructure undertakings in the history of mining."⁵ Based on current ore projections,⁶ the Pebble project will be the largest copper and gold mine in North America, with an estimated footprint covering 54.4⁷ square miles of the Bristol Bay watershed.⁸ According to the 2011 preliminary assessment and company projections, the following mine facilities and associated infrastructure will need to be permitted and constructed:

- Tailings ponds to hold as much as 10 billion tons of mine tailings (mine waste) in perpetuity;⁹ 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.¹⁰
- Several large earthen tailings dams, at least one of which is projected to be approximately 700 ft high,

comparable to the Hoover dam – one of the tallest concrete dams in the US;¹¹

- A 378 MW power plant;¹²
- Infrastructure for delivering fuel to the power plant; A deep water port to bring the mine output to market;
- A 100-mile road and set of four pipelines, containing concentrate, wastewater, diesel fuel, and natural gas linking the mine to the port;
- Over 200 miles of power transmission lines; 50 miles of which would be submerged under Cook Inlet.¹³

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.¹⁴



regulatory challenges and legal uncertainty

RISK 1

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.¹⁵ Furthermore, local initiatives, federal regulatory decisions and numerous legal challenges may increase regulatory requirements for Pebble, or preclude development altogether.

ALASKA VOTERS PASS INITIATIVE TO PROHIBIT LARGE-SCALE DEVELOPMENTS – DIRECTED TOWARDS PEBBLE MINE

A citizen initiative popularly known as “Save Our Salmon” was approved by a majority of Lake and Peninsula Borough voters on October 18, 2011.¹⁶ The initiative adds language to the Lake and Peninsula Borough permitting code that would effectively block large developments, such as the proposed Pebble mine, by precluding permits for large resource extraction activities. These activities include mining operations disturbing more than 640 acres that will have a “significant adverse impact” on any salmon stream.

The Pebble Limited Partnership challenged the initiative language in Alaska Superior Court. In a July 26, 2011 decision, Alaska Superior Court Judge John Suddock found that the initiative would appear on the ballot and deferred a ruling on the legal merits of the initiative until after the October election in the Lake and Peninsula Borough.¹⁷ PLP filed an emergency petition to the Alaska Supreme Court in Anchorage on August 1, arguing that the lower court should have decided on the issue before the October election.¹⁸ The Supreme Court declined to accept the case for review, affirming that the initiative was on the October 2011 ballot, and that the case would proceed after the election.¹⁹ The State of Alaska has since filed a separate challenge post-election, claiming the initiative language conflicts with

state authority to govern minerals management. A court date to determine further proceedings in the cases, including whether to join the two cases, is scheduled for January 10, 2012.²⁰ If the initiative is held up in court, Lake and Peninsula Borough permits could not be granted for any large-scale resource extraction activity, such as the Pebble mine, that would impact salmon-producing streams.

REGULATORY ACTION BY THE EPA UNDER SECTION 404(C) OF THE CLEAN WATER ACT COULD PRECLUDE MINE DEVELOPMENT

In February 2011, a significant development occurred when the US Environmental Protection Agency (EPA) announced that it would conduct a scientific assessment of the suitability of large-scale development in the Bristol Bay watershed, including the proposed Pebble mine.²¹

The agency is acting in response to petitions in 2010 from Alaska Native Tribes, commercial fishermen and others requesting the EPA to use its authority under section 404(c) of the Clean Water Act to restrict or prohibit the disposal of mine waste in waterways (including wetlands) in the Bristol Bay watershed.²²

Section 404(c) authorizes EPA to prohibit, restrict, or deny the disposal of mine waste in waters of the United States (including wetlands) whenever it determines, after notice and opportunity for public hearing, that those activities would have an unacceptable adverse impact on fisheries, wildlife, municipal water supplies, or recreational areas. Since the proposed Pebble mine could dispose over 10 bil-

In April 2011, Investors representing \$170 billion in assets asked EPA for 404c Clean Water Act review, citing the risks of Pebble mine.

lion tons of waste at the headwaters of Bristol Bay, invoking Section 404(c) would have significant implications for the project.

Since the EPA announced its decision to conduct the Watershed Assessment, Northern Dynasty, whose only project is the Pebble mine, has seen its share price drop from over \$20 a share in February 2011 to less than \$10 a share in December 2011.²³ Furthermore, Mitsubishi sold its shares in Northern Dynasty in February 2011. The decision has given rise to speculation of “an institutional collapse” in confidence in Pebble.²⁴

The EPA Watershed Assessment, which is scheduled for completion in April 2012, is expected to provide a scientific basis from which the EPA can make a determination whether to initiate the 404(c) process.

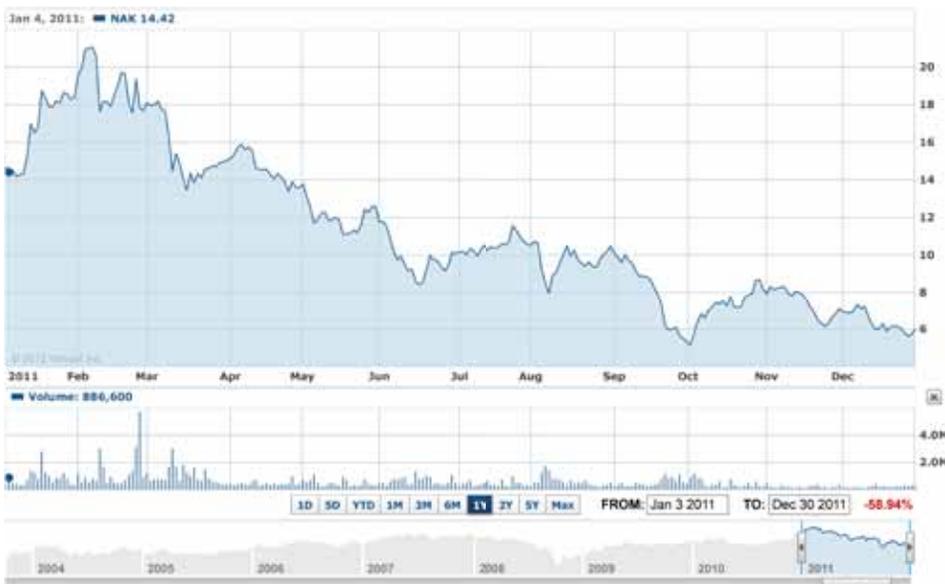
The EPA does not need to wait to see the details of a permit application to determine that unacceptable effects will result from mining operations in the Bristol Bay watershed. The conduct and outcome of this process could slow down, alter or completely stop the development of the mine.

In addition to Bristol Bay Tribes, Native corporations and commercial fishing interests, a broad spectrum of stakeholders and other interests have expressed support for the 404(c) process. In April 2011, a group of investors representing \$170 billion in assets, and holding over 13 million shares in Anglo American, sent a letter to the EPA in support of the process.²⁵ The National Council of Churches, with its 45 million members, has asked the EPA to move forward with the 404(c) process.²⁶ In September 2011, Senator Cantwell

(D-WA) issued a letter to the EPA saying that she would oppose development of the Pebble mine should science determine it could negatively impact the salmon populations on which thousands of Washington commercial fishery, seafood processing, culinary, recreational fishing, and ecotourism jobs depend.²⁷ In February 2011, *The New York Times* editorialized in favor of the EPA’s action, stating, “The E.P.A. is right to do this study. We are certain it will find that the mine presents unacceptable risks and should not be allowed to proceed.”²⁸

ENDANGERED BELUGA WHALE DECISION UPHELD IN COURT: HURDLE FOR PROPOSED PORT

In November 2011, a U.S. District Court judge in the District of Columbia ruled that Alaska’s Cook Inlet beluga whales were properly listed as endangered under the Endangered Species Act. The decision rejected the lawsuit brought by the State of Alaska claiming that the listing adversely impacts economic development.³⁰ The beluga’s endangered status is an issue for Pebble due to plans for development of a deep water port in Iniskin Bay to load concentrate from the mine onto ships for transport to market. Iniskin Bay is part of the area designated as critical habitat for the Cook Inlet beluga whale. The Pebble Limited Partnership submitted comments to the federal government in February 2010 opposing the designation of Iniskin Bay as critical habitat for the endangered belugas.³¹ Despite its efforts, the area was designated by federal wildlife scientists as part of habitat “critical” to the whale in April 2011.³² Port construction in Iniskin Bay will require a federal permit, and will be vulnerable to challenge under the Endangered Species Act.



Northern Dynasty Minerals Ltd. (NAK) Share Price (Jan. - Dec. 2011)

Northern Dynasty, whose only project is the Pebble mine project, has seen its share price drop by more than half from February 2011 to January 2012.

PEBBLE EXPLORATION ACTIVITIES FOUND IN VIOLATION OF STATE WATER LAW

In February 2010, the State of Alaska fined the Pebble Limited Partnership for 45 permit violations of unauthorized use of water at their drilling sites over the previous three years.³³ The exploration permits were temporarily suspended until new conditions were met.

The Opinion Pages
 Editorial
The Risk to Bristol Bay
 Published: February 13, 2011

Last year, the Obama administration permanently banned oil drilling in Alaska's Bristol Bay, America's richest salmon fishery and the heart of a \$2.2 billion regional fishing industry. One huge threat to this extraordinary ecosystem remains: a proposed gold and copper operation known as the Pebble Mine. If built, it would affect a huge area of clear-running headwater streams and wetlands that feed the bay.

Responding to urgent requests from nine native tribes that depend on the headwaters for subsistence, the federal Environmental Protection Agency has now announced that it will assess the risks to the bay from mining and commercial projects in general.

This is very good news. The agency obviously cannot prejudge the study's outcome, but its announcement pointedly called attention to Bristol Bay's "extraordinary importance" as a salmon fishery and source of food and income for local residents. It also called attention to its obligation under the National Environmental Policy Act to block any project that would have an "unacceptable risk" to the bay.

Anglo American, the London-based mining giant, has promised to mine the gold and copper safely. But historically the mining industry has been notorious for its environmental damage — it proposes to build a 740-foot-high dam, and jar them loose.

The people of Alaska came close to blocking the mine. In 2008, voters rejected the mine, and the state's two Republican governors, including two Republicans, and the state's attorney general, however, spent \$12 million on advertising aimed at convincing voters to support the mine. The state's attorney general, Sarah Palin and her administration, however, spent \$12 million on advertising aimed at convincing voters to support the mine.

The E.P.A. is right to do this study. We are certain it will find that the mine presents unacceptable risks and should not be allowed to proceed.

THE TIMES
Jewellers won't touch Alaskan gold
 David Robertson Business Correspondent
 The Times of London, November 03, 2010 10:28AM

FIFTY of the world's leading jewellers have pledged to blackball gold mined by Anglo American in Alaska.

The jewellers fear that they could be tarnished by any future environmental disaster.

Tiffany, Zales, Mappin & Webb, Watches of Switzerland and Fraser Hart are among those that have said they will not sell gold from the proposed Pebble Mine in western Alaska.

The gold and copper mine is on the slopes of Bristol Bay, home to the world's largest wild salmon fishery.

Bloomberg Businessweek
Alaska voters say no to gold, copper mine
 By Associated Press, Published: October 17 | Updated: Tuesday, October 18, 1:27 AM

JUNEAU, Alaska — Voters of a small southwest Alaska borough late Monday narrowly passed a measure blocking a proposed gold and copper mine that critics say would have threatened one of the world's premier wild salmon fisheries in a local election that gained national attention, pitting environmentalists against business interests in a bitter feud.

The vote bans large-scale resource extraction, including mining, that would destroy or degrade salmon habitat. The measure was aimed squarely at Pebble Mine, a massive gold and copper prospect near the headwaters of Bristol Bay.

The debate surrounding Pebble has attracted the attention of chefs, actor-director Robert Redford and big-name jewellers who have vowed not to sell any gold coming from the operation. Their concerns support local opponents who fear the mine would fundamentally change the area's landscape and disrupt, if not destroy, a way of life.

Supporters of the Pebble Project, which has been described as potentially the world's largest man-made excavation, have said that it could create up to 1,000 long-term jobs in economically-depressed rural Alaska and that the project can be "done safely to co-exist with clean water, healthy fisheries and traditional ways of life."

Unofficial results, released by the Lake and Peninsula Borough clerk late Monday, showed 280 in favor of the measure and 246 against.

The proposal was the subject of an intense public fight, and the vote is unlikely to be the last word on whether, or how, the mine is built — a court challenge has already been filed.

Pebble Limited Partnership has argued, in part, that the measure would improperly bypass the role of the local planning commission. The office of Alaska's attorney general has said the initiative would enact an ordinance that is "unenforceable as a matter of law."

“The E.P.A. is right to do this study. We are certain it will find that the mine presents unacceptable risks and should not be allowed to proceed.”

— Editorial, *The New York Times*

“Although voters and BBNC support responsible development, our poll clearly shows that the proposed Pebble mine project is unacceptable for a clear majority of Alaskans in virtually every demographic, across all regions of the state.”³⁹

— Jason Metrokin, CEO, Bristol Bay Native Corporation – a \$1.7 billion company representing 9,000 Bristol Bay Native Shareholders

reputational risk through political opposition

RISK 2

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 AS GLOBALLY SIGNIFICANT AND A TOP PRIORITY FOR CONSERVATION.³⁴



Photo: © Bob Waldrop

The Bristol Bay fishery supports the world's largest and most productive wild salmon fishery. It supplies roughly 50% of the world's commercial supply of wild salmon, and it is MSC certified as a sustainable fishery. It is also the economic backbone of the region, supporting over 10,000 jobs and roughly \$450 million in revenue a year.³⁵ And, it is the primary source of food for the Alaska Native communities of the region.³⁶

The Pebble project is opposed by a politically powerful coalition of diverse interests due to the regional and global significance of the resource, and the risks from mine development. The majority of Bristol Bay area residents view large-scale mineral development as an unacceptable risk to a renewable resource. A 2011 survey by the Bristol Bay Native Corporation found that 81% of its share-

OPPOSITION TO PEBBLE MINE:

- 81% of Bristol Bay Native Corporation shareholders
- 68% of Alaskans
- 77% of respondents in the lower 48 states

holders strongly oppose Pebble mine.³⁷ A separate 2011 survey found that 77% of respondents in the lower 48 and 68% of Alaskans oppose Pebble mine.³⁸

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.³⁹ The influential commercial fishing and tourism industries also oppose the mine.⁴⁰ Over 300 businesses in the sports fishing and hunting industry have voiced opposition.⁴¹ 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.⁴²

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.⁴³



“...I’m not against mining. I am against putting megamines where they don’t belong.”

— Robert Redford

operational uncertainty due to lack of infrastructure

RISK 3

PEBBLE'S REMOTE LOCATION AND LACK OF INFRASTRUCTURE, PARTICULARLY FOR POWER, MAKE THE ECONOMICS OF THE PROJECT PROBLEMATIC.⁴⁴ 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 378 MW of power will be needed to operate the mine.⁴⁵ The closest available power source, Homer Electric Association, is located roughly 200 miles away and has a generating capacity of just 55 MW – approximately 1/6th of Pebble's requirements.⁴⁶

Consequently, a significant new energy source must be identified and permitted for the Pebble mine to operate. The 2011 preliminary assessment calls for the development of a combined-cycle natural gas-fired turbine plant (CCGT) located at the mine site.⁴⁷ A fuel gas supply line to fuel the power plant is expected to originate from the Kenai Peninsula.⁴⁸

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 60 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.⁴⁹ It 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. 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 100 miles of road and the four pipelines necessary to transport the ore, fuel and wastewater 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.⁵⁰ 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



Photo: Bruce Gordon / Ecoflight

mine development plan and determined whether development of the mine meets their approval.⁵¹ In 2010, the Bristol Bay Native Corporation passed a resolution opposing the mine altogether.⁵² The Pebble Partnership will need to convince BBNC to revoke its resolution against the mine, in order to proceed with development of the road, and the four buried pipelines, across BBNC lands. BBNC is the largest private land-owner in the region, with over 3 million subsurface acres.

technological challenges and environmental risks

RISK 4

ECOLOGICAL RISK ASSESSMENT FINDS SIGNIFICANT RISK FOR BRISTOL BAY SALMON AND GENERATES REGULATORY UNCERTAINTY

A peer-reviewed 2010 ecological risk assessment studied the impacts of large-scale mining in the Bristol Bay region using the plans outlined in Pebble's 2006 water rights application as the basis for its analysis. These are not the final plans for the Pebble project, since the deposit has doubled in size since 2006, but it offers a reasonable scenario for evaluating the risks associated with large-scale mine operations in the region. The report concludes that the risks of such large-scale mining to wild salmon populations are "very high," and that it is cause for significant concern regarding the long-term abundance and sustainability of salmon in the region.

1. Loss of salmon habitat

The proposed mine straddles the headwaters of the Kvichak and Nushagak Rivers – the world's two most productive wild sockeye salmon rivers. In 2009, a group of independent fisheries biologists conducted salmon surveys in 37 streams within and adjacent to the mine permit boundary.⁵⁸ Over a period of just one week, the team documented salmon in 20 streams.⁵⁹ Some of these streams are directly over the Pebble ore deposit,

and would certainly be affected by mine development. According to the researchers, "Our findings remove any doubt that the construction of a mine will destroy salmon and salmon rearing habitat."⁶⁰ 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.

“Our findings remove any doubt that the construction of a mine will destroy salmon and salmon rearing habitat.”

— Dr. Carol Ann Woody

2. Dewatering and Loss of Instream Flows

Northern Dynasty has applied for water rights to take approximately 35 billion gallons of surface and groundwater annually from the three watersheds that drain the site.⁵⁶ According to the 2006 water rights applications, the net reductions in stream flow are projected to be: 8% on the North Fork Kaktuli, 18 miles downstream; 16% on the South Fork Kaktuli, 12 miles downstream; and 9% on Upper Talarik Creek, 18 miles downstream.⁵⁷ Predicting the effects of these projected streamflow reductions on salmon production is complex and imprecise. The 2010 Ecological Risk Assessment summarized the impacts of surface and groundwater withdrawals, shown in the table below:

Dewatering and Loss of Instream Flow:

Including Groundwater Discharge, and Loss or Alteration of Supporting Habitat

- 33 square miles of drainage area lost.
- Approximately 68 stream miles lost.
- 14 miles designated salmon streams lost.
- Reduced flow can result in higher temperatures; lower dissolved oxygen; restricted upstream migration.
- Potential effects to spawning and embryonic development.
- Up to 78 stream miles would exhibit some form of flow reduction in the three watersheds evaluated.

3. High potential for acid mine drainage creates technological challenges and regulatory uncertainty

Acid mine drainage (AMD) is considered one of the greatest environmental liabilities associated with mining.⁵³ 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).⁵⁴ Acid mine drainage could generate from the mine tailings, open pit, and waste rock. A 2006 scientific study of modern hardrock mines across the western United States 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.⁵⁵ The 2010 ecological risk assessment predicted the risks shown below:

Acid Mine Drainage Risks

The 2010 Ecological Risk Assessment

- Acid mine drainage (AMD) is expected during the proposed mine's life, and after.
- Instream pH levels from AMD below 5 could occur up to 30 miles from the mine.
- Low pH would result in fish kills and benthic community impacts.
- AMD into streams would result in increased bioavailability of copper and other metals from various mine sources (dust, waste piles, accidental ore releases).

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 (~ 700 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.⁶¹ Worldwide, approximately 2-5 major tailings impoundment failure incidents occur each year.⁶² Independent scientists are concerned that Pebble has failed to identify and account for faults in close proximity to the tailings impoundments.⁶³ Failure to provide accurate geophysical data and design 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.

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.⁶⁴ 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."⁶⁵ Anglo American, however, does not have broad community support for exploration and development of the proposed Pebble mine, as demonstrated by the opposition of the Bristol Bay Native Corporation.

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 nine 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.⁶⁶

To date, Keystone has not been able to gain participation of key stakeholder groups, such as United Fishermen of Alaska and native villages.

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.

1. Opposition to this project from Alaska Native Tribes and the commercial fishing industry has already generated a number of legal challenges and regulatory 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 infrastructure necessary to develop the Pebble project is unprecedented. The political, regulatory and technological challenges associated with permitting the mine, a 378 MW power source, 200 miles of transmission lines, 100 miles of road and slurry pipelines, a deep water port are substantial, and appear to belie Anglo American's forecast for completing the permitting process has already been delayed three years, and a permit application has yet

to be submitted. 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. 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?



Photo: Ben Knight / Felt Soul Media

ENDNOTES

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