

# CRACIUN RESEARCH

A M A R K E T R E S E A R C H S T U D Y



**Alaska  
Conservation  
Foundation**

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## I N T R O D U C T I O N & B A C K G R O U N D

Craciun Research was contacted by Bob Waldrop on behalf of the Alaska Conservation Foundation (ACF) to conduct a telephone survey with Bristol Bay Commercial Fishers (setnetters and driftnetters). The study was designed to better understand timely issues from the perspective of permit holders.

Craciun Research is well qualified to design and conduct credible and unbiased research. We have more than twenty years of experience conducting research in Alaska (April 2003, Craciun Research opened a Washington DC office and in September 2005 we opened our Seattle office).

Company President/CEO Jean Craciun is a sociologist with extensive experience in both quantitative and qualitative research. She is supported by a team of professionals with over 30 years experience in market research, marketing and advertising in Alaska.

We are proud to house the only Computer Assisted Telephone Interviewing (CATI) Center and full service Focus Group facilities in Alaska. The firm's sociological focus has led to research contracts to study some of the most important issues facing our state including: resource development, economic and business development, telecommunication, financial, environment, healthcare, and shareholder relations for Alaska Native corporations.

## M E T H O D S

### SURVEY INSTRUMENT

The survey instrument was finalized after several drafts, which included reviews and suggested changes by Bob Waldrop and final approval by Jean Craciun, Research Director.

The interviews were conducted during the period May 21<sup>st</sup> through May 31<sup>st</sup>, 2011, by Craciun Research's well-trained, professional interviewers. The telephone survey averaged seven minutes in length.

The survey instrument was carefully designed to obtain thoughtful answers from respondents while avoiding instrument bias.

### THE SAMPLE

A sample of three hundred and fifty (n = 350) was chosen at random from lists of commercial fishers who fish in Bristol Bay. Screening questions assured that the household contained a commercial fisher and all but two of those in the survey were actual commercial fishers in Bristol Bay. Half of them (51%) live outside of Alaska, 27% live in Bristol Bay and the other 22% live in other parts of Alaska.

**TABLE A: FISHER RESIDENCES SURVEYED**

Fisher Residence		
Outside of Alaska.....	180	51.4%
Bristol Bay Area.....	94	26.9%
Elsewhere in Alaska....	76	21.7%
Total.....	350	100%

The probability is 19 out of 20, for the overall sample size, that if researchers had sought to interview every household from the sample frame above by using the same questionnaire, the findings would differ from these overall survey results by no more than 5.6 percentage points in either direction. Thus, the margin of error is +/- 5.2%. For subgroups, the margin of error is higher. For example, for Bristol Bay fishers it is +/- 9.8%.

The sampling error is not the only way in which survey findings may vary from the findings that would result from talking to every selected fisher in the population studied. Survey research is susceptible to human and mechanical errors such as interviewer recording and data handling errors.

However, the standardized procedures used by Craciun Research eliminate such errors associated with paper and pencil methods; thus keeping the human error potential to a minimum.

## **DATA ANALYSIS & REPORTING**

Members of the Craciun Research team, employing SPSS<sup>1</sup>, analyzed the sample. The primary procedures reported are frequencies and cross tabulations.

### **Notes to Readers**

Included in the presentation of each response is a summary or example of any significant findings, followed by relevant tables. All percentages in the narrative are rounded to the nearest whole percentage point.

Often times, a few respondents fail to answer a question. Unless the percentage that failed to answer is significant, these people are not included in the totals upon which the percentages are based. Percentages in the tables occasionally do not add to exactly 100% because of rounding.

Cross tabulations describe data that may be related in some way. In many cross tabulations, categories are combined or omitted because the numbers are too small to be statistically significant. This manipulation may change the totals on which percentages are based, but does not affect the relationships between percentages.

Cross tabulations may be used to indicate differences (or lack of differences) between subgroups of people. When a lack of difference is being shown, a footnote is appended to the table indicating that the differences are not “statistically significant”.<sup>2</sup>

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<sup>1</sup> Trademark registered.

<sup>2</sup> Statistical significance is determined by using a chi-square test with a significance factor of less than .05. The chi square test is used by researchers to determine whether a result may be due to random variation, and is sensitive to sample size, since large random variation may occur in small samples.

**A. RESEARCH FINDINGS**

**Question:** There has been much discussion lately about a proposed copper and gold mine in the Bristol Bay area called Pebble Mine. How familiar are you with that issue, very familiar, somewhat familiar, just heard of it, or never heard of it?

**Question:** *[Explanation to those who were less than somewhat familiar with Pebble]* Pebble Mine is a very large mine being proposed for the Iliamna area near the headwaters of the main fishing rivers that feed Bristol Bay.

Six in ten of the commercial fishing permit holders interviewed (59%) were very familiar, another 37% were somewhat familiar with the Pebble Mine Project at the beginning of the survey. Those who declared that they were less familiar with it were given the explanation shown above.

**TABLE A1.1: INITIAL FAMILIARITY WITH MINE**

Respondent is:		
Very familiar with Pebble Mine.	208	59.4%
Somewhat familiar.....	128	36.6%
Just heard of it.....	12	3.4%
Never heard of it.....	2	.6%
Total.....	350	100%

Three-quarters (76%) of the fishers in Alaska who lived outside the Bristol Bay region were very familiar with the Pebble Mine Project before the survey began.

**TABLE A1.2: FAMILIARITY WITH MINE BY FISHER RESIDENCE**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
Respondent is:				
Very familiar with Pebble.	53.3%	57.4%	76.3%	59.4%
Somewhat familiar.....	42.8%	37.2%	21.1%	36.6%
Just heard of it.....	3.3%	4.3%	2.6%	3.4%
Never heard of it.....	.6%	1.1%		.6%
Number.....	180	94	76	350

Column percentages

**Question:** Based on what you know or have heard, are you in favor of or opposed to the Pebble Mine?

**Question:** [Asked of those who favor or oppose] Do you feel strongly about that?

Eighty-five percent of the Commercial Fishermen in our survey oppose Pebble Mine, including 80% who oppose it strongly. Only 5% favor it even somewhat.

**TABLE A2.1: INITIAL ATTITUDE TOWARD MINE**

On Pebble Mine		
Strongly favor.....	12	3.4%
Somewhat favor.....	4	1.1%
Neutral.....	37	10.6%
Somewhat oppose.....	16	4.6%
Strongly oppose.....	281	80.3%
Total.....	350	100%

Statistically, the opposition to the mine is equally as strong, regardless of where the person lives.<sup>3</sup>

**TABLE A2.2: ATTITUDE TOWARD PEBBLE BY FISHER LOCATION**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
On Pebble Mine *				
Strongly favor.....	2.8%	3.2%	5.3%	3.4%
Somewhat favor.....	.6%	1.1%	2.6%	1.1%
Neutral.....	12.2%	9.6%	7.9%	10.6%
Somewhat oppose.....	5.6%	4.3%	2.6%	4.6%
Strongly oppose.....	78.9%	81.9%	81.6%	80.3%
Number.....	180	94	76	350

Column percentages

\* Difference is not statistically significant

<sup>3</sup> At a 95% confidence level for analyses.

**Question:** Now I am going to read some arguments that are being used for and against the Pebble Project. Please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree, or have no opinion.  
(Asked at random)

Pebble Mine would drastically hurt Bristol Bay fishing.

The headwaters of Bristol Bay's most productive salmon rivers must be protected for future generations.

I have faith in Alaska's regulatory and permitting process for the Pebble Project.

Some environmental damage of Bristol Bay is worth it for the jobs that mining offers.

The mining industry is capable of protecting salmon in Bristol Bay.

Commercial fishing is a more dangerous job than mining.

The existing commercial and sport fishing industries in Bristol Bay will be jeopardized if the Pebble Mine is built.

Regardless of the economic value, mining in Alaska must be limited because it causes too much environmental damage.

Mining and fishing in Bristol Bay are compatible.

Most fishers (two-thirds or more) strongly agree with all of the anti-Pebble Mine statements and strongly disagree with all of the pro-Pebble Mine statements.

One exception is *I have faith in Alaska's regulatory and permitting process for the Pebble Project*. Forty-six percent (46%) strongly disagree with that statement, 17% somewhat disagree and 18% have no opinion.

The only question on which they are completely neutral is that *commercial fishing is a more dangerous job than mining*.

**TABLE A3.1: ATTITUDES TOWARD MINING**<sup>4</sup>

	Strongly agree	Somewhat agree	No opinion	Somewhat disagree	Strongly disagree
Statement strongly agreed to:					
BB headwaters must be protected for future generations.....	96.0%	2.6%	.6%		.9%
Pebble would jeopardize existing BB fishing industries.....	76.6%	9.4%	6.9%	3.1%	4.0%
Pebble Mine would drastically hurt Bristol Bay fishing.....	70.3%	13.1%	8.6%	3.4%	4.6%
Regardless of economic value, BB mining must be limited.....	70.3%	11.7%	8.0%	3.1%	6.9%
Statement strongly disagreed to:					
Some damage of BB is worth it for the jobs.....	2.0%	2.9%	5.7%	8.9%	80.6%
The mining industry is capable of protecting Salmon in BB.....	4.9%	6.9%	8.3%	9.4%	70.6%
Mining and fishing in Bristol Bay are compatible.....	4.9%	9.1%	9.1%	11.1%	65.7%
I have faith in AK's regulatory and permitting process.....	5.4%	13.4%	18.0%	17.4%	45.7%
Neutral statement:					
Commercial fishing is a more dangerous job than mining.....	12.3%	12.6%	43.4%	17.7%	14.0%

Percentages are of each row and based on all respondents.  
 Statements have been somewhat abbreviated. See question for exact wording.

<sup>4</sup> A table with numbers, cross tabulated by fishers location may be found in the Appendix.

**Question:** Here are some environmental and social concerns often expressed about mining in Alaska. Please tell me whether you are very concerned about them, somewhat concerned, somewhat unconcerned or not at all concerned.

- Air quality
- Water Quality
- Other problems for human health
- Destruction of fish habitat
- Destruction of other wildlife habitat
- Mining taking jobs from the fishermen

*Destruction of fish habitat* is the issue that concerns practically all of these fishers (97% are very or somewhat concerned).

On the other hand, not all of them worry too much about losing their jobs; 27% are not at all concerned about the potential for *Mining taking jobs from fishermen*. Perhaps they know that they would just go somewhere else and fish.

**TABLE A4.1: ENVIRONMENTAL AND SOCIAL ISSUES<sup>5</sup>**

	Very concerned	Somewhat concerned	Neutral, no Opinion	Somewhat unconcerned	Not at all concerned
Destruction of Fish habitat...	92.3%	4.9%	.6%	.9%	1.4%
Water Quality.....	88.9%	8.0%	1.1%	.3%	1.7%
Destruction of other wildlife habitat.....	76.6%	16.9%	1.4%	2.0%	3.1%
Other problems for human health.....	54.0%	28.9%	6.3%	5.1%	5.7%
Taking jobs from fishermen	39.4%	16.0%	8.9%	8.6%	27.1%
Air Quality.....	38.0%	36.0%	7.7%	7.4%	10.9%

Percentages are of each row and based on all respondents  
 Statements have been somewhat abbreviated. See question for exact wording.

<sup>5</sup> A table with numbers, cross tabulated by fishers location may be found in the Appendix.

**Question:** Has your attitude toward the Pebble Mine project changed in the last year?

**Question:** [Ask if yes] Do you feel more favorable toward the project or less favorable?

In the last year, only 15% of these people changed their attitude toward Pebble; 14% became more opposed and 1% more in favor.

**TABLE A5.1: CHANGE IN ATTITUDE TOWARD PEBBLE IN PAST YEAR**

In last year, attitude toward Pebble:		
Became more opposed.....	49	14.0%
Stayed opposed.....	247	70.6%
Stayed neutral.....	36	10.3%
Stayed favorable.....	13	3.7%
Became more favorable.....	5	1.4%
Total.....	350	100%

There is no statistically significant difference in the way the respondents answered these questions.

**TABLE A5.2: CHANGE IN ATTITUDE TOWARD PEBBLE IN PAST YEAR BY FISHER RESIDENCE**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
In last year, attitude toward Pebble: *				
Became more opposed.....	15.0%	11.7%	14.5%	14.0%
Stayed opposed.....	68.9%	74.5%	69.7%	70.6%
Stayed neutral.....	11.7%	9.6%	7.9%	10.3%
Stayed favorable.....	2.2%	3.2%	7.9%	3.7%
Became more favorable.....	2.2%	1.1%		1.4%
Number.....	180	94	76	350

Column percentages

\* Difference is not statistically significant

**Question:** Under the Clean Water Act, the Environmental Protection Agency can protect certain waters in Alaska. Would you support the EPA issuing a strict but limited ruling that would prohibit the Pebble Mine from moving forward but allow for all other non-mining development?

Half (52%) of the respondents would *support the EPA issuing a strict but limited ruling that would prohibit the Pebble Mine from moving forward but allow for all other non-mining development*, while 27% would oppose such a ruling.<sup>6</sup>

**TABLE A6.1: SUPPORT FOR AN EPA RULING**

Respondent would:		
Support an EPA ruling.....	182	52.0%
Not support one.....	93	26.6%
Unsure.....	75	21.4%
Total.....	350	100%

Alaskans, especially those in Bristol Bay, were more likely than those from “Outside” to have an opinion on an EPA injunction.

**TABLE A6.2: SUPPORT FOR AN EPA RULING**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
Respondent would:				
Support an EPA ruling.....	51.1%	54.3%	51.3%	52.0%
Not support one.....	20.6%	35.1%	30.3%	26.6%
Unsure.....	28.3%	10.6%	18.4%	21.4%
Number.....	180	94	76	350

Column percentages

<sup>6</sup> NOTE: There was most likely an automatic anti-government, anti-EPA reaction at work here.

**Question:** Thinking now about the involvement of commercial fishermen in the Pebble Mine discussion, do you think it is too much, just about right, or not enough?

Sixty-one percent of the respondents think there is not enough involvement by Commercial Fishermen like themselves in the Pebble Mine discussion. Only 5% think there is too much.

**TABLE A7.1: COMMERCIAL FISHERS' INVOLVEMENT WITH PEBBLE DISCUSSION**

Involvement of commercial fishermen:		
Is too much.....	17	4.9%
Just about right.....	81	23.1%
Not enough.....	213	60.9%
Don't Know.....	39	11.1%
Total.....	350	100%

The slight differences in the way Alaskans answered this question and the way “Outsiders” answered it is not statistically significant.

**TABLE A7.2: COMMERCIAL FISHERS' INVOLVEMENT WITH PEBBLE DISCUSSION BY AREA**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
Involvement of commercial fishermen: *				
Is too much.....	3.9%	7.4%	3.9%	4.9%
Just about right.....	24.4%	18.1%	26.3%	23.1%
Not enough.....	56.7%	64.9%	65.8%	60.9%
Don't Know.....	15.0%	9.6%	3.9%	11.1%
Number.....	180	94	76	350

Column percentages

\* Difference is not statistically significant

## B. DEMOGRAPHICS

**Question:** Do you or someone in your household fish commercially or serve as a fishing guide?

**Question:** Do you have a permit to salmon fish in Bristol Bay?

**Question:** How long have you had a permit to salmon fish in Bristol Bay?

**Question:** Are you a setnetter or a driftnetter?

Ninety-nine percent of the respondents fish themselves. Half of them have had a fishing permit for twelve years (the median). More than a third (41%) have had a permit for twenty or more years.

Seventy-one percent are driftnetters, 29% are setnetters.

**TABLE B1.1: SAMPLE INTERVIEWED**

+-----+		
+-----+		
Household member:		
Respondent.....	345	98.6%
Both.....	3	.9%
Someone else in the household...	2	.6%
Total.....	350	100%
+-----+		
Respondent:		
Respondent.....	348	99.4%
Both.....	2	.6%
Total.....	350	100%
+-----+		
Length of permit:		
0 - 5 years.....	101	28.9%
6 - 10 years.....	58	16.6%
11 - 15 years.....	35	10.0%
16 - 19 years.....	13	3.7%
20 or more.....	143	40.9%
Total.....	350	100%
+-----+		
Respondent is:		
Driftnetter.....	250	71.4%
Setnetter.....	100	28.6%
Total.....	350	100%
+-----+		

Both the length of having a permit and the driftnetters to setnetters ratio are statistically evenly distributed across the area.

**TABLE B1.2: SAMPLE INTERVIEWED BY AREA**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
<b>Length of permit: *</b>				
0 - 5 years.....	32.8%	24.5%	25.0%	28.9%
6 - 10 years.....	17.2%	17.0%	14.5%	16.6%
11 - 19 years.....	14.4%	11.7%	14.5%	13.7%
20 or more.....	35.6%	46.8%	46.1%	40.9%
<b>Number.....</b>	<b>180</b>	<b>94</b>	<b>76</b>	<b>350</b>
<b>Respondent is: *</b>				
Driftnetter.....	73.9%	72.3%	64.5%	71.4%
Setnetter.....	26.1%	27.7%	35.5%	28.6%
<b>Number.....</b>	<b>180</b>	<b>94</b>	<b>76</b>	<b>350</b>

Column percentages

\* Difference is not statistically significant

**Question:** Other than commercial fishing or fish guiding, do you have another full-time, year-around job, a part-time year-around job, or a seasonal job?

**Question:** Are you a full-time Alaska resident, a part-time or seasonal Alaska resident, or not a resident of Alaska?

Thirty-one percent of these respondents are not employed except for commercial fishing.

Thirty-five percent of them do not live in Alaska at all and 66% were not born in the state.

**TABLE B2.1: EMPLOYMENT AND ALASKA RESIDENCE**

+-----+-----+		
+-----+-----+		
Respondent has another:		
Full-time, year-around.....	106 30.5%	
Part-time, year-around.....	87 25.1%	
Seasonal job.....	45 13.0%	
Not employed.....	109 31.4%	
Total.....	347 100%	
+-----+-----+		
Respondent is:		
Full time Alaska resident....	180 51.4%	
Part-time or seasonal.....	49 14.0%	
Not a resident of Alaska....	121 34.6%	
Total.....	350 100%	
+-----+-----+		
Respondent was:		
Born in Alaska.....	120 34.3%	
Not born in Alaska.....	230 65.7%	
Total.....	350 100%	
+-----+-----+		

\* Some respondents did not answer.

Eleven percent of those whose fishing permits indicate they live Outside, say they live in Alaska year-round.

**TABLE B2.2: EMPLOYMENT AND ALASKA RESIDENCE BY AREA**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
<b>Respondent has another: *</b>				
Full-time, year-around....	33.3%	25.0%	30.7%	30.5%
Part-time, year-around....	21.7%	28.3%	29.3%	25.1%
Seasonal job.....	13.9%	18.5%	4.0%	13.0%
Not employed.....	31.1%	28.3%	36.0%	31.4%
Number.....	180	92	75	347
<b>Respondent is:</b>				
Full time Alaska resident..	10.6%	93.6%	96.1%	51.4%
Part-time or seasonal.....	25.0%	2.1%	2.6%	14.0%
Not a resident of Alaska..	64.4%	4.3%	1.3%	34.6%
Number.....	180	94	76	350
<b>Respondents was:</b>				
Born in Alaska.....	11.1%	76.6%	36.8%	34.3%
Was not.....	88.9%	23.4%	63.2%	65.7%
Number.....	180	94	76	350

Column percentages

\* Difference is not statistically significant

Thirteen percent of these commercial fishers are women. The median age of the group is forty years.

**TABLE B3.1: DEMOGRAPHIC OF THE RESPONDENTS**

Gender:		
Male.....	306	87.4%
Female.....	44	12.6%
Total.....	350	100%
Age group:		
18-29.....	55	15.9%
30-39.....	44	12.8%
40-49.....	69	20.0%
50-59.....	107	31.0%
60 or older.....	70	20.3%
Total *.....	345	100%

\* Some respondents did not answer.

Women fishers are more likely to live in Alaska than Outside.

**TABLE B3.2: DEMOGRAPHICS BY AREA**

	Area			Total
	Outside of Alaska	Bristol Bay Area	Elsewhere in AK	
Gender:				
Male.....	93.3%	83.0%	78.9%	87.4%
Female.....	6.7%	17.0%	21.1%	12.6%
Number.....	180	94	76	350
Age group: *				
18-29.....	14.1%	19.4%	16.0%	15.9%
30-39.....	14.1%	10.8%	12.0%	12.8%
40-49.....	21.5%	24.7%	10.7%	20.0%
50-59.....	29.4%	28.0%	38.7%	31.0%
60 or older.....	20.9%	17.2%	22.7%	20.3%
Number.....	177	93	75	345

Column percentages

\* Difference is not statistically significant

## APPENDIX A: SURVEY INSTRUMENT

Q.1 [ENTER LOCATION CALLED]

Outside of Alaska  
Bristol Bay Area  
Outside Bristol Bay, but within Alaska

Q.2 Hello, my name is \_\_\_\_\_ and I'm with Craciun [CRAY-shun] Research, an Alaskan company. We're conducting a study on subjects of interest to fishermen, specifically setnetters and driftnetters in Bristol Bay, and we would like to include your opinions. Your phone number was randomly selected from a list of permit holders and this interview should take about 5 minutes of your time. All of your answers will be kept strictly confidential and I can answer any questions you may have at the end of the survey. [IF THEY HAVE QUESTIONS ABOUT WHO THE SPONSOR IS, SAY "I will be happy to tell you who the sponsor is at the end of the survey."]

Male  
Female

Q.3 Do you or someone in your household fish commercially or serve as a fishing guide?

Yes, Me  
Someone else in the household  
Yes, Myself and someone else in the household  
No, Neither  
Don't Know/No Answer  
Refused

[IF THE ANSWER IS 4 OR 5 OR 6, THEN SKIP TO QUESTION 36]

Q.4 Do you have a permit to salmon fish in Bristol Bay?

[IF SOMEONE ELSE, ASK TO SPEAK WITH THE PERMIT HOLDER. IF NO PERMIT HOLDER, THANK AND TERMINATE.]

Yes, Me  
Someone else in the household  
Yes, both myself and someone else in the household  
Neither  
Don't Know/No Answer

[IF THE ANSWER IS 4 OR 5, THEN SKIP TO QUESTION 36]

Q.5 How long have you had a permit to salmon fish in Bristol Bay?

0 - 5 years  
6 - 10 years  
11 - 15 years  
16 - 19 years  
20 or more  
Don't Know/No Answer [THANK AND TERMINATE]

[IF THE ANSWER IS 6, THEN SKIP TO QUESTION 36]

Q.6 Are you a setnetter or a driftnetter?

- Driftnetter
- Setnetter
- Don't Know/No Answer

[IF THE ANSWER IS 3, THEN SKIP TO QUESTION 36]

Q.7 There has been much discussion lately about a proposed copper and gold mine in the Bristol Bay area called Pebble Mine. How familiar are you with that issue, Very familiar, somewhat familiar, just heard of it, or never heard of it?

- Very Familiar
- Somewhat Familiar
- Just heard of it
- Never heard of it, Don't know

[IF THE ANSWER TO QUESTION 7 IS 1 OR 2, THEN SKIP TO QUESTION 9]

Q.8 [IF LESS THAN SOMEWHAT FAMILIAR] Pebble Mine is a very large mine being proposed for the Iliamna Area near the headwaters of the main fishing rivers that feed Bristol Bay.

Q.9 Based on what you know or have heard, are you in favor of or opposed to the Pebble Mine?

- Favor
- Neutral, No opinion
- Oppose

[IF THE ANSWER IS 1 OR 3, THEN SKIP TO QUESTION 10]

[IF THE ANSWER TO QUESTION 9 IS 2, THEN SKIP TO QUESTION 11]

Q.10 [IF FAVOR OR OPPOSED] Do you feel strongly about that?

- Yes
- No
- Don't Know

Q.11 Now I am going to read some arguments that are being used for and against the Pebble project. Please tell me whether you strongly agree with the statement, somewhat agree, somewhat disagree, strongly disagree, or have no opinion.

[ASK QUESTIONS 12 TO 20 IN RANDOM ORDER]

Q.12 Pebble Mine would drastically hurt Bristol Bay fishing.

- Strongly Agree
- Somewhat Agree
- No opinion or answer
- Somewhat disagree
- Strongly disagree

Q.13 The headwaters of Bristol Bay's most productive salmon rivers must be protected for future generations.

Q.14 I have faith in Alaska's regulatory and permitting process for the Pebble Project.

Q.15 Some environmental damage of Bristol Bay is worth it for the jobs that mining offers.

Q.16 The mining industry is capable of protecting Salmon in Bristol Bay.

Q.17 Commercial fishing is a more dangerous job than mining.

Q.18 The existing commercial and sport fishing industries in Bristol Bay will be jeopardized if the Pebble mine is built.

Q.19 Mining and fishing in Bristol Bay are compatible.

Q.20 Regardless of the economic value, mining in Bristol Bay must be limited because it causes.

Q.21 Here are some environmental and social concerns often expressed about mining in Alaska. Please tell me whether you are very concerned about them, somewhat concerned, somewhat unconcerned or not at all concerned.

Q.22 Air Quality

Very concerned

Somewhat concerned

Neutral, No Opinion, DK

Somewhat unconcerned

Not at all concerned

Q.23 Water Quality

Q.24 Other problems for human health

Q.25 Destruction of Fish habitat

Q.26 Destruction of other wildlife habitat

Q.27 Mining taking jobs from the fishermen

Q.28 Under the Clean Water act, the Environmental Protection Agency can protect certain waters in Alaska. Would you support the EPA issuing a strict but limited ruling that would prohibit the Pebble Mine from moving forward but allow for all other non-mining development?

Yes

No

Don't Know

Q.29 Has your attitude toward the Pebble Mine project changed in the last year?

Yes

No

Don't Know

[IF THE ANSWER TO QUESTION 29 IS 2 OR 3, THEN SKIP TO QUESTION 31]

Q.30 [IF YES, ASK] Do you feel more favorable toward the project or less favorable?

More favorable

About the same

Less favorable

No answer

Q.31 Thinking now about the involvement of commercial fishermen in the Pebble Mine discussion, do you think it is:

[READ LIST]

Too much  
Just about right  
Not enough  
Don't Know / No Answer

Q.32 The following questions are for statistical purposes only. Other than commercial fishing or fish guiding, do you have another--  
[READ LIST]

Full-time, year-around  
Part-time, year-around  
Seasonal job - just part of the year  
Not employed  
Don't Know / No Answer

Q.33 In what age group do you belong?

18-29  
30-39  
40-49  
50-59  
60+  
Don't Know / No Answer  
Refused

Q.34 Are you a

Full time Alaska resident  
Part-time or seasonal Alaska resident  
Not a resident of Alaska  
Don't Know / No Answer

Q.35 Were you born in Alaska?

Yes  
No  
Don't Know

Q.36 That's all of my questions. Thank you for your time. **[IF REQUESTED, This survey is supported by commercial fishermen and others concerned about maintaining a viable fishing industry that currently provides more than 10,000 jobs in Bristol Bay.]**

## APPENDIX B: CROSS TABULATIONS

### TABLE B1: ATTITUDE TOWARD MINING BY FISHER RESIDENCE – PART 1 OF 2

	Area						Total	
	Outside of Alaska		Bristol Bay Area		Elsewhere in AK			
BB headwaters must be protected for future generations *								
Strongly agree.....	175	97.2%	90	95.7%	71	93.4%	336	96.0%
Somewhat agree.....	2	1.1%	3	3.2%	4	5.3%	9	2.6%
No opinion.....	1	.6%	1	1.1%			2	.6%
Strongly disagree.....	2	1.1%			1	1.3%	3	.9%
Pebble would jeopardize existing BB fishing industries *								
Strongly agree.....	138	76.7%	72	76.6%	58	76.3%	268	76.6%
Somewhat agree.....	19	10.6%	9	9.6%	5	6.6%	33	9.4%
No opinion.....	14	7.8%	6	6.4%	4	5.3%	24	6.9%
Somewhat disagree.....	3	1.7%	3	3.2%	5	6.6%	11	3.1%
Strongly disagree.....	6	3.3%	4	4.3%	4	5.3%	14	4.0%
Pebble Mine would drastically hurt Bristol Bay fishing *								
Strongly agree.....	124	68.9%	72	76.6%	50	65.8%	246	70.3%
Somewhat agree.....	25	13.9%	10	10.6%	11	14.5%	46	13.1%
No opinion.....	20	11.1%	6	6.4%	4	5.3%	30	8.6%
Somewhat disagree.....	6	3.3%	1	1.1%	5	6.6%	12	3.4%
Strongly disagree.....	5	2.8%	5	5.3%	6	7.9%	16	4.6%
Regardless of economic value, BB mining must be limited *								
Strongly agree.....	127	70.6%	67	71.3%	52	68.4%	246	70.3%
Somewhat agree.....	21	11.7%	13	13.8%	7	9.2%	41	11.7%
No opinion.....	16	8.9%	6	6.4%	6	7.9%	28	8.0%
Somewhat disagree.....	6	3.3%	1	1.1%	4	5.3%	11	3.1%
Strongly disagree.....	10	5.6%	7	7.4%	7	9.2%	24	6.9%
Some damage of BB is worth it * for the jobs								
Strongly agree.....	6	3.3%			1	1.3%	7	2.0%
Somewhat agree.....	5	2.8%	3	3.2%	2	2.6%	10	2.9%
No opinion.....	10	5.6%	6	6.4%	4	5.3%	20	5.7%
Somewhat disagree.....	16	8.9%	8	8.5%	7	9.2%	31	8.9%
Strongly disagree.....	143	79.4%	77	81.9%	62	81.6%	282	80.6%
The mining industry is capable of protecting * Salmon in BB								
Strongly agree.....	12	6.7%	4	4.3%	1	1.3%	17	4.9%
Somewhat agree.....	11	6.1%	4	4.3%	9	11.8%	24	6.9%
No opinion.....	20	11.1%	4	4.3%	5	6.6%	29	8.3%
Somewhat disagree.....	20	11.1%	9	9.6%	4	5.3%	33	9.4%
Strongly disagree.....	117	65.0%	73	77.7%	57	75.0%	247	70.6%
Total.....	180	100%	94	100%	76	100%	350	100%

Column percentages

\* Difference is not statistically significant

(continued)

**TABLE B1: ATTITUDE TOWARD MINING BY FISHER RESIDENCE – PART 2 OF 2**

	Area						Total	
	Outside of Alaska		Bristol Bay Area		Elsewhere in AK			
Mining and fishing in Bristol Bay are compatible *								
Strongly agree.....	6	3.3%	4	4.3%	7	9.2%	17	4.9%
Somewhat agree.....	18	10.0%	7	7.4%	7	9.2%	32	9.1%
No opinion.....	18	10.0%	8	8.5%	6	7.9%	32	9.1%
Somewhat disagree.....	22	12.2%	10	10.6%	7	9.2%	39	11.1%
Strongly disagree.....	116	64.4%	65	69.1%	49	64.5%	230	65.7%
I have faith in AK's regulatory and permitting * process								
Strongly agree.....	11	6.1%	4	4.3%	4	5.3%	19	5.4%
Somewhat agree.....	33	18.3%	6	6.4%	8	10.5%	47	13.4%
No opinion.....	32	17.8%	19	20.2%	12	15.8%	63	18.0%
Somewhat disagree.....	29	16.1%	20	21.3%	12	15.8%	61	17.4%
Strongly disagree.....	75	41.7%	45	47.9%	40	52.6%	160	45.7%
Commercial fishing is a more dangerous job than mining *								
Strongly agree.....	24	13.3%	11	11.7%	8	10.5%	43	12.3%
Somewhat agree.....	24	13.3%	7	7.4%	13	17.1%	44	12.6%
No opinion.....	83	46.1%	38	40.4%	31	40.8%	152	43.4%
Somewhat disagree.....	26	14.4%	22	23.4%	14	18.4%	62	17.7%
Strongly disagree.....	23	12.8%	16	17.0%	10	13.2%	49	14.0%
Total.....	180	100%	94	100%	76	100%	350	100%

Column percentages  
 \* Difference is not statistically significant

**TABLE B2: CONCERNS BY FISHER RESIDENCE**

	Area						Total	
	Outside of Alaska		Bristol Bay Area		Elsewhere in AK			
Destruction of Fish habitat *								
Very concerned.....	166	92.2%	87	92.6%	70	92.1%	323	92.3%
Somewhat concerned.....	10	5.6%	4	4.3%	3	3.9%	17	4.9%
Neutral, no Opinion.....	1	.6%	1	1.1%			2	.6%
Somewhat unconcerned.....	1	.6%			2	2.6%	3	.9%
Not at all concerned.....	2	1.1%	2	2.1%	1	1.3%	5	1.4%
Water Quality *								
Very concerned.....	161	89.4%	82	87.2%	68	89.5%	311	88.9%
Somewhat concerned.....	16	8.9%	8	8.5%	4	5.3%	28	8.0%
Neutral, no Opinion.....	1	.6%	2	2.1%	1	1.3%	4	1.1%
Somewhat unconcerned.....					1	1.3%	1	.3%
Not at all concerned.....	2	1.1%	2	2.1%	2	2.6%	6	1.7%
Destruction of other wildlife habitat *								
Very concerned.....	131	72.8%	79	84.0%	58	76.3%	268	76.6%
Somewhat concerned.....	38	21.1%	9	9.6%	12	15.8%	59	16.9%
Neutral, no Opinion.....	2	1.1%	2	2.1%	1	1.3%	5	1.4%
Somewhat unconcerned.....	2	1.1%	2	2.1%	3	3.9%	7	2.0%
Not at all concerned.....	7	3.9%	2	2.1%	2	2.6%	11	3.1%
Other problems for human health *								
Very concerned.....	82	45.6%	60	63.8%	47	61.8%	189	54.0%
Somewhat concerned.....	59	32.8%	22	23.4%	20	26.3%	101	28.9%
Neutral, no Opinion.....	13	7.2%	5	5.3%	4	5.3%	22	6.3%
Somewhat unconcerned.....	13	7.2%	3	3.2%	2	2.6%	18	5.1%
Not at all concerned.....	13	7.2%	4	4.3%	3	3.9%	20	5.7%
Takes jobs from the fishermen *								
Very concerned.....	71	39.4%	35	37.2%	32	42.1%	138	39.4%
Somewhat concerned.....	30	16.7%	15	16.0%	11	14.5%	56	16.0%
Neutral, no Opinion.....	14	7.8%	10	10.6%	7	9.2%	31	8.9%
Somewhat unconcerned.....	14	7.8%	9	9.6%	7	9.2%	30	8.6%
Not at all concerned.....	51	28.3%	25	26.6%	19	25.0%	95	27.1%
Air Quality *								
Very concerned.....	53	29.4%	48	51.1%	32	42.1%	133	38.0%
Somewhat concerned.....	74	41.1%	26	27.7%	26	34.2%	126	36.0%
Neutral, no Opinion.....	14	7.8%	8	8.5%	5	6.6%	27	7.7%
Somewhat unconcerned.....	15	8.3%	6	6.4%	5	6.6%	26	7.4%
Not at all concerned.....	24	13.3%	6	6.4%	8	10.5%	38	10.9%
Total.....	180	100%	94	100%	76	100%	350	100%

Column percentages

\* Difference is not statistically significant

**TABLE B3: KEY QUESTIONS BY FISHING TYPE**

	Respondent is:		Total
	Driftnetter	Setnetter	
<b>On Pebble Mine *</b>			
Strongly favor.....	2.8%	5.0%	3.4%
Somewhat favor.....	.8%	2.0%	1.1%
Neutral.....	9.2%	14.0%	10.6%
Somewhat oppose.....	3.6%	7.0%	4.6%
Strongly oppose.....	83.6%	72.0%	80.3%
Number.....	250	100	350
<b>In last year, attitude toward Pebble: *</b>			
Became more opposed.....	16.0%	9.0%	14.0%
Stayed opposed.....	70.8%	70.0%	70.6%
Stayed neutral.....	8.8%	14.0%	10.3%
Stayed favorable.....	2.8%	6.0%	3.7%
Became more favorable.....	1.6%	1.0%	1.4%
Number.....	250	100	350
<b>Respondent would: *</b>			
Support an EPA ruling.....	54.4%	46.0%	52.0%
Not support one.....	26.8%	26.0%	26.6%
Unsure.....	18.8%	28.0%	21.4%
Number.....	250	100	350
<b>Involvement of commercial fishermen: *</b>			
Is too much.....	5.2%	4.0%	4.9%
Just about right.....	22.4%	25.0%	23.1%
Not enough.....	63.6%	54.0%	60.9%
Don't Know.....	8.8%	17.0%	11.1%
Number.....	250	100	350

Column percentages

\* Difference is not statistically significant

**TABLE B4: KEY QUESTIONS BY EMPLOYMENT**

	Respondent has another:				Total
	Full-time, year-around	Part-time, year-around	Seasonal job	Not employed	
<b>On Pebble Mine *</b>					
Strongly favor.....	5.7%	1.1%	2.2%	3.7%	3.5%
Somewhat favor.....	1.9%	2.3%			1.2%
Neutral.....	15.1%	6.9%	6.7%	11.0%	10.7%
Somewhat oppose.....	5.7%	1.1%	8.9%	4.6%	4.6%
Strongly oppose.....	71.7%	88.5%	82.2%	80.7%	80.1%
Number.....	106	87	45	109	347
<b>In last year, attitude toward Pebble: *</b>					
Became more opposed.....	10.4%	19.5%	15.6%	12.8%	14.1%
Stayed opposed.....	67.0%	70.1%	73.3%	72.5%	70.3%
Stayed neutral.....	14.2%	6.9%	6.7%	11.0%	10.4%
Stayed favorable.....	5.7%	3.4%	2.2%	2.8%	3.7%
Became more favorable.....	2.8%		2.2%	.9%	1.4%
Number.....	106	87	45	109	347
<b>Respondent would: *</b>					
Support an EPA ruling.....	49.1%	54.0%	51.1%	52.3%	51.6%
Not support one.....	33.0%	19.5%	33.3%	23.9%	26.8%
Unsure.....	17.9%	26.4%	15.6%	23.9%	21.6%
Number.....	106	87	45	109	347
<b>Involvement of commercial fishermen: *</b>					
Is too much.....	6.6%	2.3%	4.4%	4.6%	4.6%
Just about right.....	26.4%	25.3%	20.0%	20.2%	23.3%
Not enough.....	56.6%	63.2%	62.2%	63.3%	61.1%
Don't Know.....	10.4%	9.2%	13.3%	11.9%	11.0%
Number.....	106	87	45	109	347

Column percentages

\* Difference is not statistically significant

**TABLE B5: KEY QUESTIONS BY RESIDENCE**

	Respondent is:			Total
	Full time Alaska resident	Part-time or seasonal resident	Not a resident of Alaska	
<b>On Pebble Mine *</b>				
Strongly favor.....	4.4%	4.1%	1.7%	3.4%
Somewhat favor.....	1.7%		.8%	1.1%
Neutral.....	9.4%	8.2%	13.2%	10.6%
Somewhat oppose.....	4.4%		6.6%	4.6%
Strongly oppose.....	80.0%	87.8%	77.7%	80.3%
Number.....	180	49	121	350
<b>In last year, attitude toward Pebble: *</b>				
Became more opposed.....	13.3%	14.3%	14.9%	14.0%
Stayed opposed.....	71.1%	73.5%	68.6%	70.6%
Stayed neutral.....	9.4%	6.1%	13.2%	10.3%
Stayed favorable.....	5.0%	4.1%	1.7%	3.7%
Became more favorable.....	1.1%	2.0%	1.7%	1.4%
Number.....	180	49	121	350
<b>Respondent would:</b>				
Support an EPA ruling.....	53.3%	51.0%	50.4%	52.0%
Not support one.....	30.6%	30.6%	19.0%	26.6%
Unsure.....	16.1%	18.4%	30.6%	21.4%
Number.....	180	49	121	350
<b>Involvement of commercial fishermen: *</b>				
Is too much.....	7.2%	4.1%	1.7%	4.9%
Just about right.....	21.7%	16.3%	28.1%	23.1%
Not enough.....	63.3%	67.3%	54.5%	60.9%
Don't Know.....	7.8%	12.2%	15.7%	11.1%
Number.....	180	49	121	350

Column percentages

\* Difference is not statistically significant

**TABLE B6: KEY QUESTIONS BY ALASKA BORN**

	Respondent was:		Total
	Born in Alaska	Was not	
<b>On Pebble Mine *</b>			
Strongly favor.....	5.0%	2.6%	3.4%
Somewhat favor.....	.8%	1.3%	1.1%
Neutral.....	6.7%	12.6%	10.6%
Somewhat oppose.....	5.8%	3.9%	4.6%
Strongly oppose.....	81.7%	79.6%	80.3%
Number.....	120	230	350
<b>In last year, attitude toward Pebble: *</b>			
Became more opposed.....	12.5%	14.8%	14.0%
Stayed opposed.....	75.0%	68.3%	70.6%
Stayed neutral.....	6.7%	12.2%	10.3%
Stayed favorable.....	4.2%	3.5%	3.7%
Became more favorable.....	1.7%	1.3%	1.4%
Number.....	120	230	350
<b>Respondent would: *</b>			
Support an EPA ruling.....	55.0%	50.4%	52.0%
Not support one.....	29.2%	25.2%	26.6%
Unsure.....	15.8%	24.3%	21.4%
Number.....	120	230	350
<b>Involvement of commercial fishermen: *</b>			
Is too much.....	8.3%	3.0%	4.9%
Just about right.....	20.8%	24.3%	23.1%
Not enough.....	62.5%	60.0%	60.9%
Don't Know.....	8.3%	12.6%	11.1%
Number.....	120	230	350

Column percentages

\* Difference is not statistically significant

**TABLE B7: KEY QUESTIONS BY GENDER**

	Gender:		Total
	Male	Female	
<b>On Pebble Mine *</b>			
Strongly favor.....	2.9%	6.8%	3.4%
Somewhat favor.....	.7%	4.5%	1.1%
Neutral.....	10.1%	13.6%	10.6%
Somewhat oppose.....	4.6%	4.5%	4.6%
Strongly oppose.....	81.7%	70.5%	80.3%
Number.....	306	44	350
<b>In last year, attitude toward Pebble: *</b>			
Became more opposed.....	15.4%	4.5%	14.0%
Stayed opposed.....	70.6%	70.5%	70.6%
Stayed neutral.....	9.8%	13.6%	10.3%
Stayed favorable.....	2.9%	9.1%	3.7%
Became more favorable.....	1.3%	2.3%	1.4%
Number.....	306	44	350
<b>Respondent would: *</b>			
Support an EPA ruling.....	53.3%	43.2%	52.0%
Not support one.....	26.1%	29.5%	26.6%
Unsure.....	20.6%	27.3%	21.4%
Number.....	306	44	350
<b>Involvement of commercial fishermen: *</b>			
Is too much.....	4.9%	4.5%	4.9%
Just about right.....	23.2%	22.7%	23.1%
Not enough.....	60.1%	65.9%	60.9%
Don't Know.....	11.8%	6.8%	11.1%
Number.....	306	44	350

Column percentages

\* Difference is not statistically significant

**TABLE B8: KEY QUESTIONS BY AGE**

	Age group:					Total
	18-29	30-39	40-49	50-59	60 or older	
On Pebble Mine *						
Strongly favor.....	1.8%	2.3%	1.4%	4.7%	5.7%	3.5%
Somewhat favor.....		2.3%		.9%	2.9%	1.2%
Neutral.....	9.1%	9.1%	13.0%	7.5%	14.3%	10.4%
Somewhat oppose.....	10.9%	4.5%	5.8%	1.9%	2.9%	4.6%
Strongly oppose.....	78.2%	81.8%	79.7%	85.0%	74.3%	80.3%
Number.....	55	44	69	107	70	345
In last year, attitude toward Pebble: *						
Became more opposed.....	14.5%	13.6%	14.5%	14.0%	14.3%	14.2%
Stayed opposed.....	72.7%	72.7%	71.0%	72.9%	62.9%	70.4%
Stayed neutral.....	9.1%	9.1%	13.0%	7.5%	12.9%	10.1%
Stayed favorable.....	1.8%	4.5%	1.4%	3.7%	7.1%	3.8%
Became more favorable.....	1.8%			1.9%	2.9%	1.4%
Number.....	55	44	69	107	70	345
Respondent would: *						
Support an EPA ruling.....	56.4%	56.8%	58.0%	50.5%	41.4%	51.9%
Not support one.....	25.5%	27.3%	24.6%	27.1%	30.0%	27.0%
Unsure.....	18.2%	15.9%	17.4%	22.4%	28.6%	21.2%
Number.....	55	44	69	107	70	345
Involvement of commercial fishermen: *						
Is too much.....	3.6%		4.3%	7.5%	5.7%	4.9%
Just about right.....	20.0%	20.5%	27.5%	27.1%	18.6%	23.5%
Not enough.....	69.1%	65.9%	56.5%	57.0%	60.0%	60.6%
Don't Know.....	7.3%	13.6%	11.6%	8.4%	15.7%	11.0%
Number.....	55	44	69	107	70	345

Column percentages

\* Difference is not statistically significant