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APPRAISAL REPORT
Chenega Lands
Prince William Sound, Alaska
Contract #53-0109-3-00377
Task Order No. 377-02-A

FOR
U. S. D. A. Forest Service
P. O. Box 21628
Juneau, Alaska 99802

Attn: Mr. Rich Goossens
Contracting Officer's Representative

Report Date
December 12, 1994

Date of Inspection
October 19, 1993

Date of Valuation
(effective date of timber appraisal)
August 1, 1994

FILE #12-94-0193

BY
Diane Black-Smith, MAI
Steven E. Carlson, Appraiser

BLACK-SMITH & RICHARDS, INC.
2602 Fairbanks Street
Anchorage, Alaska 99503

PART I - INTRODUCTION

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PART IV - ADDENDA

BLACK-SMITH & RICHARDS, INC.

Appraisers
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December 12, 1994

U. S. D. A. Forest Service
P. O. Box 21628
Juneau, Alaska 99802

Attn: Mr. Rich Goossens
Contracting Officer's Representative

Re: Chenega Lands
Prince William Sound, Alaska
Contract #53-0109-3-00377
Task Order No. 377-02-A

Dear Mr. Goossens,

In response to your authorization, we have conducted the required investigation, gathered the necessary data, and made certain analyses that has enabled us to form an opinion of the market value of the fee simple interest of Parcel Nos. CHE 01 and CHE 02 and merchantible timber on Parcels Nos. CHE 03 through CHE 11.

Due to the assignment instructions, the final harvest plan upon which the timber value estimate is based, includes all of the timbered lands. As a result, a reliable isolation or allocation of the fee simple value of Parcel Nos. CHE 01 and CHE 02 is not possible. The isolation of the present value of merchantible timber on Parcel Nos. CHE 01 and CHE 02 would require a re-analysis according to a set of assumptions by which a stand-alone harvest plan is developed. Therefore, the value estimate is expressed as a single total without allocation of the fee simple value to Parcel Nos. CHE 01 and CHE 02.

Based on the inspection of the property and the investigation and analyses undertaken, the estimated market value, subject to the assumptions and limiting conditions set forth in Addenda of this report, as of August 1, 1994, is:

THIRTY THREE MILLION ONE HUNDRED TWENTY FIVE THOUSAND DOLLARS
($33,125,000)

Note: The reliability of all of the information that has been provided regarding legal descriptions, area estimates, and parcel boundaries - is suspect. Several Special Assumptions and Limiting Conditions are necessary to complete the report (see Property Identification).

Note: According to the title report provided, Chenega transferred and assigned "its rights to manage, harvest, sell or otherwise use certain timber..." to CHN, Inc., a wholly-owned subsidiary, on August 26, 1981. On October 1, 1981, CHN subsequently transferred and assigned its rights and interests to Koncor Forest Resource Management Company "as a contribution to the capital of Koncor", a joint venture of which CHN was a member. The assignments include timber on lands contained within the boundaries of the subject parcels.

This narrative appraisal report conforms to the Uniform Standards of Professional Practice (USPAP), the Uniform Appraisal Standards for Federal Land Acquisitions, and the specifications of Contract #53-0109-3-00377 and the specific instructions of Task Order No. 377-02-A. The report sets forth the identification of the property, the assumptions and limiting conditions, pertinent facts about the area and the subject property, comparable data, the results of the investigations and analyses, and the reasoning leading to the conclusions set forth.

Sincerely,
BLACK-SMITH AND RICHARDS, INC.

Diane Black-Smith, MAI Steven E. Carlson, Appraiser

CERTIFICATION

We certify that, to the best of our knowledge and belief...

The statements of fact contained in this report are true and correct.

The reported analyses, opinions, and conclusions are limited only by the report assumptions and limiting conditions, and are our personal, unbiased professional analyses, opinions, and conclusions.

We have no present or prospective interest in the property that is the subject of this report, and we have no personal interest or bias with respect to the parties involved.

Our compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.

Our analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice.

This appraisal assignment was not based on a requested minimum valuation or specific valuation or approval of a loan. Our employment was not conditioned upon the appraisal producing a specific value or a value within a given range.

The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.

As of the date of this report I, Diane Black-Smith, MAI, have completed the requirements under the continuing education program of the Appraisal Institute.

Diane Black-Smith, MAI is currently certified by the State of Alaska as a General Real Estate Appraiser (Certificate No. AA 31).

Steve Carlson and Diane Black-Smith have made a personal inspection of the property that is the subject of this report.

No one provided significant professional assistance to the persons signing this report.

Diane Black-Smith and Steven E. Carlson have the appropriate knowledge and experience necessary to complete this appraisal assignment competently.

Dated this 12th day of December, 1994.

Diane Black-Smith, MAI

Steven E. Carlson, Appraiser

SUMMARY OF SALIENT FACTS AND CONCLUSIONS

Property Appraised

The subject of the appraisal is approximately 75,264 acres conveyed to, or selected by, the Chenega Corporation. The acreage is located in the southwest region of Prince William Sound in southcentral Alaska. The acreage has been allocated into 11 parcels for purposes of possible acquisition by the EVOS Trustee Council. Geographic boundaries and area estimates established by the "Working Document" prepared by the Exxon Valdez Oil Spill Restoration Team Habitat Protection Work Group[1] are summarized in the following table along with area estimates, geographic references and rights to be appraised.

Ref. #	Geographic Feature	General Location	Area Est.	Rights Appraised
CHE 01	Eshamy Lake & Lagoon	Mainland	7,900	fee simple
CHE 02	Jackpot Bay	Mainland	12,100	fee simple
CHE 03	Granite, Paddy, & Ewan Bays	Mainland	15,000	timber only
CHE 04	Masked Bay	NW Chenega Island	7,300	timber only
CHE 05	Chenega & Naked Coves	SE Chenega Island	8,300	timber only
CHE 06	Thumb, Hogan, & Little Bays	South Knight Island	5,400	timber only
CHE 07	Bainbridge Passage	NE Whale Bay	1,500	timber only
CHE 08	Prince of Wales Passage	Flemming Island	1,700	timber only
CHE 09	Iktua, Shelter, & Guguak Bays	NW Evans Island	6,200	timber only
CHE 10	Sleepy Bay	North Latouche Island	3,700	timber only
CHE 11	Knight Island Passage	Pleiades Islands	422	timber only
TOTAL	***(rough allocation)***		**69,522**	

The Work Group's allocation differs from the area estimate provided by the U. S. Forest Service. The basis for our analysis is developed in the "Property Identification" section of the report.

1. Comprehensive Habitat Protection Process: Large Parcel Evaluation & Ranking, Vo. 1 & 2 (November 30, 1993)

Ostensible Owner

The subject property includes patented parcels and "interim conveyances" in accordance with ANCSA. According to the preliminary title report provided, the owner of the subject property is:

THE CHENEGA CORPORATION

Appraisal Purpose

The purpose of this appraisal is to estimate the market value of the fee simple interest of Parcel Nos. CHE 01 and CHE 02 and merchantible timber on Parcels Nos. CHE 03 through CHE 11.

> ***Note:*** According to the title report provided, Chenega transferred and assigned "its rights to manage, harvest, sell or otherwise use certain timber..." to CHN, Inc., a wholly-owned subsidiary, on August 26, 1981. On October 1, 1981, CHN subsequently transferred and assigned its rights and interests to Koncor Forest Resource Management Company "as a contribution to the capital of Koncor", a joint venture of which CHN was a member. The assignments include timber on lands contained within the boundaries of the subject parcels.

Report Date

December 12, 1994

Date of Inspection and Valuation

October 19, 1993

Date of Valuation

August 1, 1994 (effective date of timber appraisal)

Highest and Best Use

Mixed use including: timber harvest where operations are feasible; private or commercial recreation uses on waterfront acreage featuring favorable topography but without merchantible timber; speculation for waterfront acreage with unfavorable topography and low-utility backlands without merchantible timber. Special purpose licensing/permitting is a practical interim use for timberlands scheduled for later harvest and speculative backlands.

Market Value Estimate **$33,125,000**

ASSUMPTIONS AND LIMITING CONDITIONS

Assumptions and limiting conditions are contained in the addenda of the report.

We have assumed title to be marketable. However, the reliability of all of the information that has been provided regarding legal descriptions, area estimates, and parcel boundaries - is suspect (see Property Identification). Special assumptions and limiting conditions regarding these concerns are stated as follows:

- Total acreage of the subject properties is 75,264 based on the inventory provided by the U. S. Forest Service. The area estimate excludes 1,474 acres outside the Chugach National Forest (Old Chenega Village & Latouche Townsite.

- The boundaries of the parcels to be acquired in fee (CHE01 & CHE02) are indicated on the maps included in the "Working Document" *Comprehensive Habitiat Protection Process: Large Parcel Evaluation & Ranking, Vol. 1 & 2,* (November 30, 1993). According to the "Document" the acreage of these parcels is 7,900 (CHE01) and 12,100 (CHE02) - a total of 20,000 acres.

- The acreage for which only the rights to timber are to be acquired is calculated as the difference between the total acreage (75,264) less the acreage to be acquired in fee (20,000) - 55,264 acres.

The subject properties are appraised as if "contaminant-free".

The timber appraisal prepared by Pacific Forest Consultants, Inc., has undergone an extensive review process prior to its inclusion in our report. We have assumed the appraisal fairly represents the market value of merchantible timber.

REFERENCES

SCOPE

As part of this appraisal, the appraisers made a number of independent investigations and analyses. The investigations undertaken and the major data sources used are summarized as follows:

Regional Data, Market Overview and Neighborhood Analysis.
Various publications, reports, and surveys were reviewed in order to identify significant trends and indicators that affect the area and the subject neighborhood. Those publications/reports include: *Alaska Economic Trends*; *Alaska Journal of Commerce*; U. S. Bureau of Labor Statistics, as well as regular newspaper articles and commentaries by local industry experts.

Description and Analysis
We were provided with a November 1993 Preliminary Commitment for Title Insurance prepared by TransAlaska Title Insurance Agency, Inc.

We conducted an aerial inspection of the properties on October 19, 1993. We were accompanied the following representatives of Chenega Corporation:

- Chuck Totemoff, Chenega Corporation President
- Sam Forteir, Chenega Corporation General Counsel
- Jack Moores Land Consultant

The representatives were able to point out several features, characteristics, and issues that deserved consideration. Aerial photos, topographical maps obtained by the U. S. Geological Service, and various maps provided by the land owner were reviewed. We also consulted a "Working Document" entitled *Comprehensive Habitat Protection Process: Large Parcel Evaluation & Ranking (Volumes 1. & 2.)* was prepared by the Exxon Valdez Oil Spill Restoration Team Habitat Protection Work Group (November 30, 1993).

Market Data Program - Land

In order to obtain the most recent sales data, we researched the files of the Kenai Peninsula and Kodiak Island Boroughs and reviewed sales reports of the local Multiple Listing Service. Sales data compiled by the U. S. Fish and Wildlife Service, the State Department of Natural Resources, and the Bureau of Land Management was also reviewed and analyzed. In addition, we spoke with several real estate professionals including real estate broker's/agents and other appraiser's. Each of the properties were visually inspected. Data sheets with photos are contained in the addenda. Transactions were confirmed primarily by telephone interviewers with knowledgeable parties - buyers, sellers, agents, assessors, appraisers, etc.

Mineral Resources

We have relied on a special report, prepared in conjunction with this assignment by Mr. Donald L. Stevens, Ph. D. of Stevens Exploration Management Corporation. The report is available under separate cover, conclusions are summarized on page 138.

Timber Resources

The timber appraisal prepared by Pacific Forest Consultants, Inc., estimated the present value of the subject's merchantible timber, as of August 1, 1994. The report is self-contained in a tabbed section of our report. The report has been subjected to an extensive review process prior to its inclusion in our report and we have relied on its conclusion.

Availability of Information

All information requested was provided.

PART II - FACTUAL DATA

PURPOSE OF THE APPRAISAL

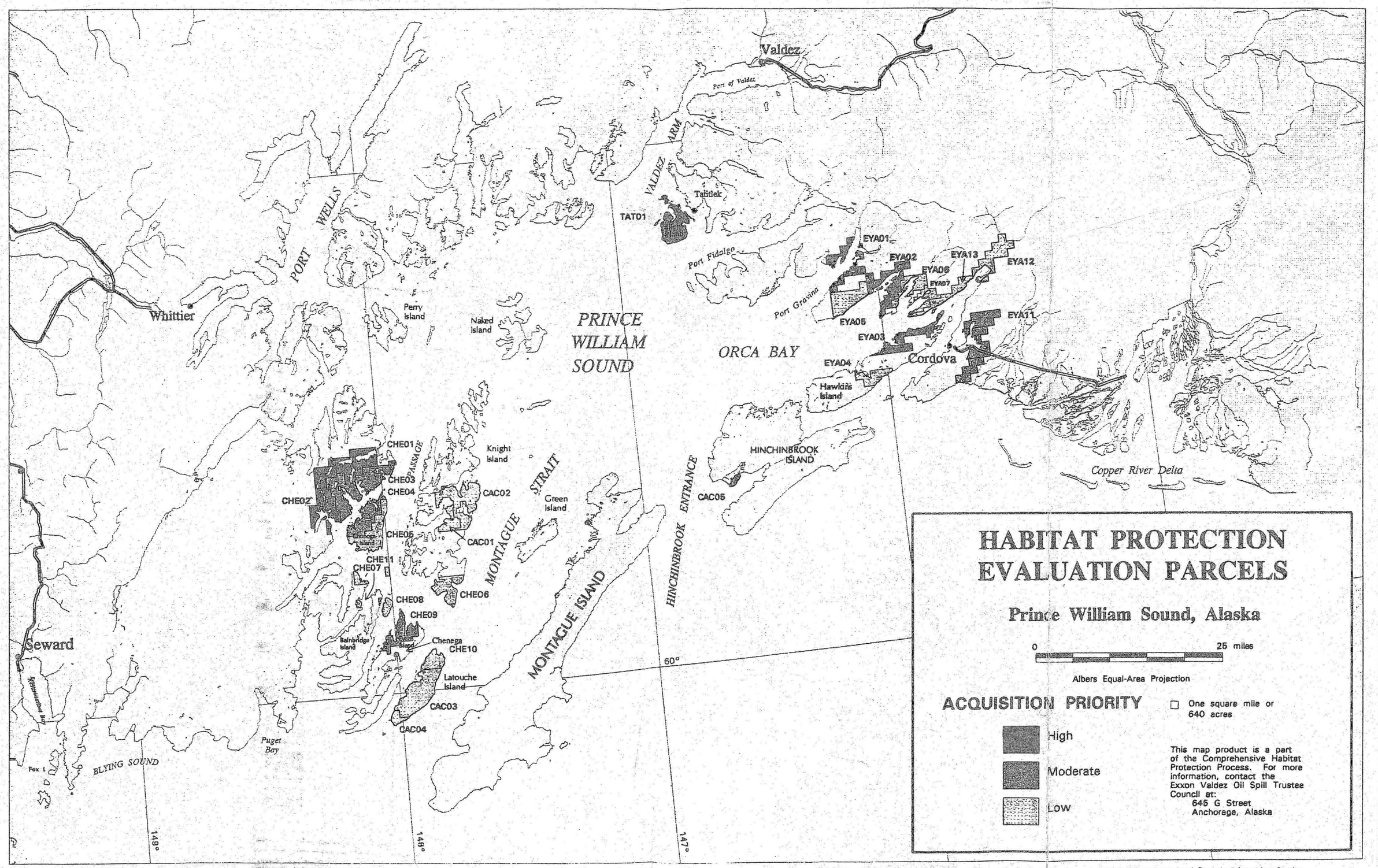
The purpose of this appraisal is to estimate the market value of the fee simple interest of Parcel Nos. CHE 01 and CHE 02 and merchantible timber on Parcels Nos. CHE 03 through CHE 11.

> ***Note:*** According to the title report provided, Chenega transferred and assigned "its rights to manage, harvest, sell or otherwise use certain timber..." to CHN, Inc., a wholly-owned subsidiary, on August 26, 1981. On October 1, 1981, CHN subsequently transferred and assigned its rights and interests to Koncor Forest Resource Management Company "as a contribution to the capital of Koncor", a joint venture of which CHN was a member. The assignments include timber on lands contained within the boundaries of the subject parcels (CHE01 & CHE02).

VALUE DEFINITION

The Uniform Appraisal Standards for Federal Land Acquisitions (1992) defines "fair market value" as;

> "The amount in cash, or on terms reasonably equivalent to cash, for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy."



HABITAT PROTECTION EVALUATION PARCELS

Prince William Sound, Alaska

0 25 miles

Albers Equal-Area Projection

ACQUISITION PRIORITY

- High
- Moderate
- Low

☐ One square mile or 640 acres

This map product is a part of the Comprehensive Habitat Protection Process. For more information, contact the Exxon Valdez Oil Spill Trustee Council at:
645 G Street
Anchorage, Alaska

Date Printed: November 22, 1993

Produced by: Alaska Department of Natural Resources, Land Records Information Section

IDENTIFICATION OF THE PROPERTY

Property Appraised

The subject of the appraisal is acreage conveyed to, or selected by, the Chenega Corporation. The parcels are located in the southwest region of Prince William Sound in southcentral Alaska. The acreage has been allocated into 11 parcels for purposes of possible acquisition by the EVOS Trustee Council. Geographic references and area estimates established by the "Working Document" prepared by the Exxon Valdez Oil Spill Restoration Team Habitat Protection Work Group[2] are summarized in the following table along with area estimates, geographic references and rights to be appraised.

Ref. #	Geographic Feature	General Location	Area Est.	Rights Appraised
CHE 01	Eshamy Lake & Lagoon	Mainland	7,900	fee simple
CHE 02	Jackpot Bay	Mainland	12,100	fee simple
CHE 03	Granite, Paddy, & Ewan Bays	Mainland	15,000	timber only
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CHE 10	Sleepy Bay	North Latouche Island	3,700	timber only
CHE 11	Knight Island Passage	Pleiades Islands	422	timber only
TOTAL	***(rough allocation)***		**69,522**	

The Work Group's allocations reflect approximations and in recent months, several area estimates have been reported (see following table).

Source	Date	Area Estimate
Appraisal by G. Hayden Green	December 1992	78,915 acres
Appraisal by Mundy Day Assoc.	February 1993	79,083 acres
Appraisal by Consilium	January 1992	76,094 acres
Appraisal by R. E. S. I. Inc.	May 1993	94,013 acres
EVOS	November 1993	69,522 acres
Terry Reid, U. S. Forest Service	February 1994	75,264 acres

2. Comprehensive Habitat Protection Process: Large Parcel Evaluation & Ranking, Vo. 1 & 2 (November 30, 1993)

According to November 3, 1993 Preliminary Commitment for Title Insurance prepared by TransAlaska Title Insurance Agency, Inc., the subject property is identified as 13 parcels. The legal descriptions are lengthy and presented in the Addenda of the report. Ms. Cheryl L. Vargas, the title officer who prepared the report, was not able to recall the significance of the allocations of the acreage into the 13 parcels. However, she suggested that the groupings were by township and range. The grouping of the subject acreage into 13 parcels is not consistent with the Work Group's identifications nor significant to our analysis.

> ***Note:*** *The title report does not indicate the acreage contained in each of these parcels nor the aggregate amount.*

We were provided with an inventory of the Chenega Lands that was prepared by Mr. Terry Reid of the U. S. Forest Service. The acreage was allocated into eight categories (see following table). Six reflect physical contiguity within the boundaries of the Chugach National Forest (CNF). Two others are located outside the CNF boundaries.

Reference	**Acreage**	**Totals**
Chenega Island	13,996	
Evans Island	13,014	
Jackpot/Eshamy (mainland)	36,900	
Knight Island	4,962	
Latouche	3,185	
Whale Bay/Flemming Island	3,207	
Total within Chugach National Forest		**75,264**
Old Chenega Village	1,296	
Latouche Townsite	178	
Total outside Chugach National Forest		1,474
Total Acreage of Chenega Lands		76,738

Per Mr. Reid, the area estimates are based on Interim Conveyances, Patents, and BLM master title plats. Mr. Reid estimated that 85% to 90% of the subject lands have been surveyed. The area estimates are reported to reflect BLM determination standards - net of navigable rivers/streams over "3 chains" in width and submerged lands in excess of 50 acres. Ownership extends to the mean high-water line. The acreage outside the Chugach National Forest has not been included in the timber appraisal. Therefore, for the purposes of our analysis, we have relied on the area estimate of **75,264 acres**.

Per Section 14 (c) (1) of ANCSA, the corporation is required to reconvey to an individual, regardless of whether the individual is Native or non-Native, without consideration, the parcel used and occupied as of December 18, 1971 as a primary place of business, residence, subsistence camp site or for reindeer herding. According to Mr. Reid, the estimate of acreage is net of seven patented parcels, all of which are reported to have been surveyed. The seven parcels are inventoried in the following table.

Claim #	Owner	Location	Use Classification	Area
1	Jerry Allison	Sawmill Bay, Evans Island	primary place of residence	0.91 ac.
2	G. L. Kritchen	Point Howell, Knight Island	primary place of residence	1.25 ac.
3	E. Mathews	Sawmill Bay, Evans Island	primary place of residence	0.50 ac.
4	G. L. Hayes	Sawmill Bay, Evans Island	primary place of residence	1.86 ac.
5	I. C. Wedmore	Sawmill Bay, Evans Island	primary place of residence	1.36 ac.
6	Penny LaCombe	Crab Bay, Evans Island	primary place of residence	0.86 ac.
7	E. Mathews	Eshamy Bay, mainland	primary place of business	0.78 ac.
Total				7.52 ac.

The area estimate is assumed to also be net of Section 14 (c) (3) lands. Various "Municipal Trust Lands" have been conveyed by Chenega Corporation to "the State of Alaska, Department of Community and Regional Affairs, as Trustee for any future municipal corporation that may be established in the village of Chenega Bay, Alaska". These lands include the airport site and its access road to/from the Chenega townsite. In summary, for the purposes of our analysis, we have relied on the area estimates provided by the U. S. Forest Service - 76,738 acres - to be net of 14 (c) (1) and (3) lands.

However, as per the assignment instructions, only a portion of the acreage is to be valued in fee. Those are identified as Parcel Nos. CHE 01 (Eshamy Lagoon/Lake) and CHE 02 (Jackpot Bay). The Work Group's area estimates of the two parcels are 7,900 acres (CHE01) and 12,100 acres (CHE02). These appear to be rough allocations given the irregularity of the shoreline. The inventory of Chenega lands provided by Mr. Reid does not correlate with the Work Group allocations. In other words, the inventory does not allocate the acreage in a manner that corresponds with the Work Group parcel numbers.

We have noticed that boundaries indicated on the Work Group maps divide some sections so that portions of a section may be included in two adjacent Work Group parcels. For example, the boundary separating parcel CHE01 from CHE03 divides several sections but the divisions are not recognized by allocation in the inventory provided. Also at the entrance to Eshamy Bay, inventoried acreage appears to be outside the boundaries of both CHE01 and CHE03.

These circumstances create a problem for our analysis. Area estimates for CHE01 and CHE02 have not been formalized. And, based on our observations, either the inventory provided is incorrect or the boundaries of the targeted parcels have been redrawn without our knowledge. To summarize, the reliability of all of the information that has been provided regarding legal descriptions, area estimates, and parcel boundaries - is suspect.

In order to complete the assignment, special assumptions and limiting conditions are necessary. They are stated as follows:

- Total acreage of the subject properties is 75,264 based on the inventory provided by the U. S. Forest Service. The area estimate excludes 1,474 acres outside the Chugach National Forest (Old Chenega Village & Latouche Townsite.

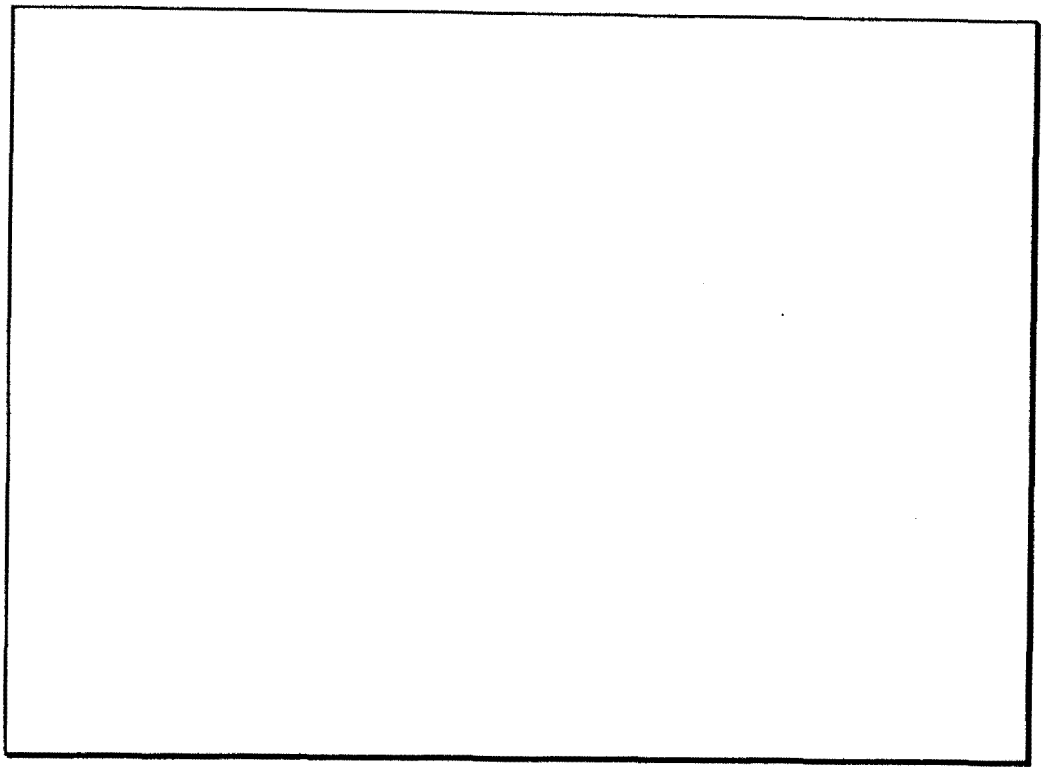
- The boundaries of the parcels to be acquired in fee (CHE01 & CHE02) are indicated on the maps included in the "Working Document" *Comprehensive Habitiat Protection Process: Large Parcel Evaluation & Ranking, Vol. 1 & 2,* (November 30, 1993). According to the "Document" the acreage of these parcels is 7,900 (CHE01) and 12,100 (CHE02) - a total of 20,000 acres.

- The acreage for which only the rights to timber are to be acquired is calculated as the difference between the total acreage (75,264) less the acreage to be acquired in fee (20,000) - 55,264 acres.

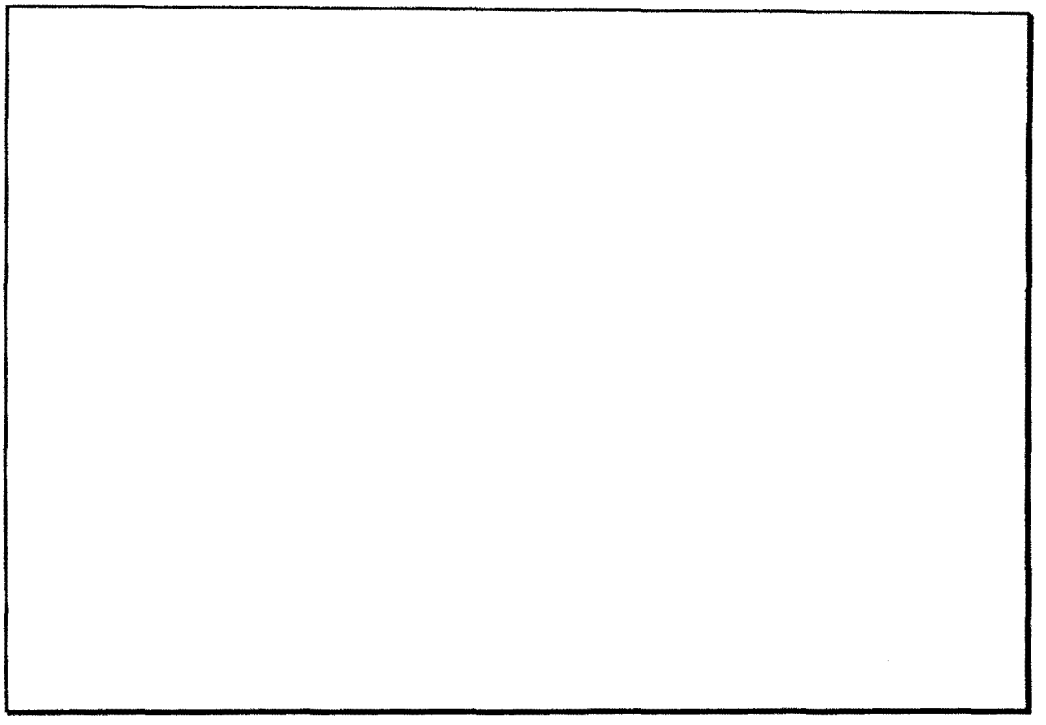
Property History - Ostensible Owner

The subject property includes lands conveyed to, and selected by, the Chenega Corporation pursuant to the 1971 ANCSA and "Irrevocable Elections" according to the Oil Pollutions Act of 1990. The subject property has not been sold during the past ten years.

SUBJECT PHOTOGRAPHS

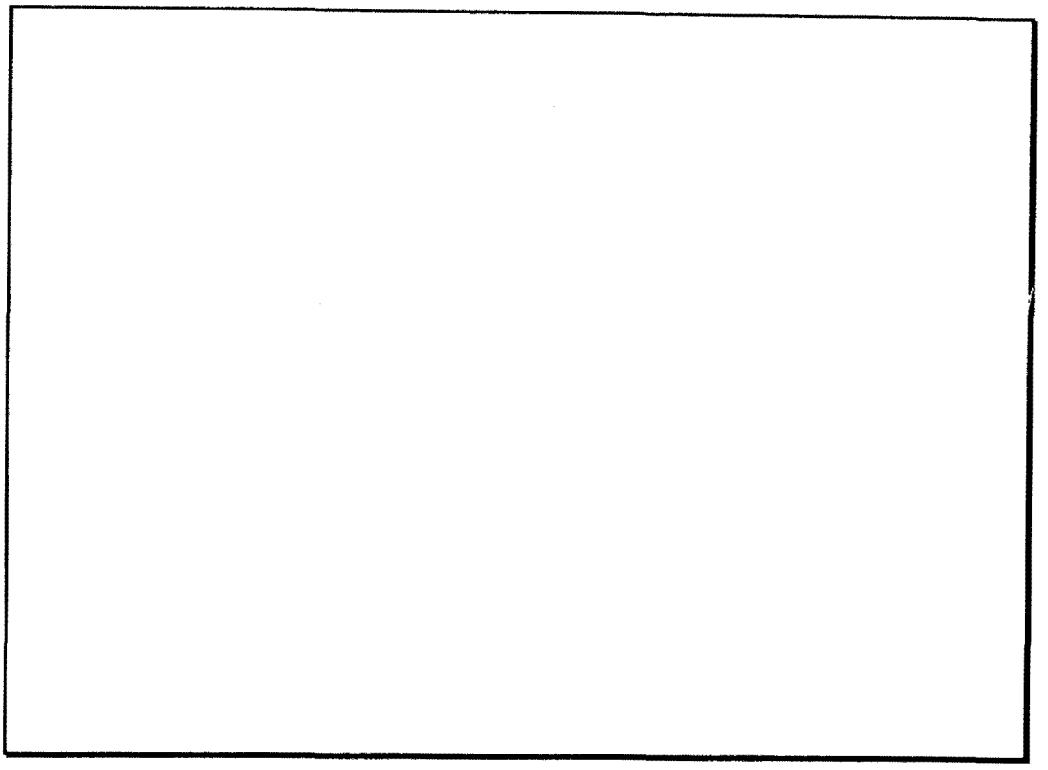


CHE01 - Eshamy Lake in foreground, Eshamy Lagoon in background

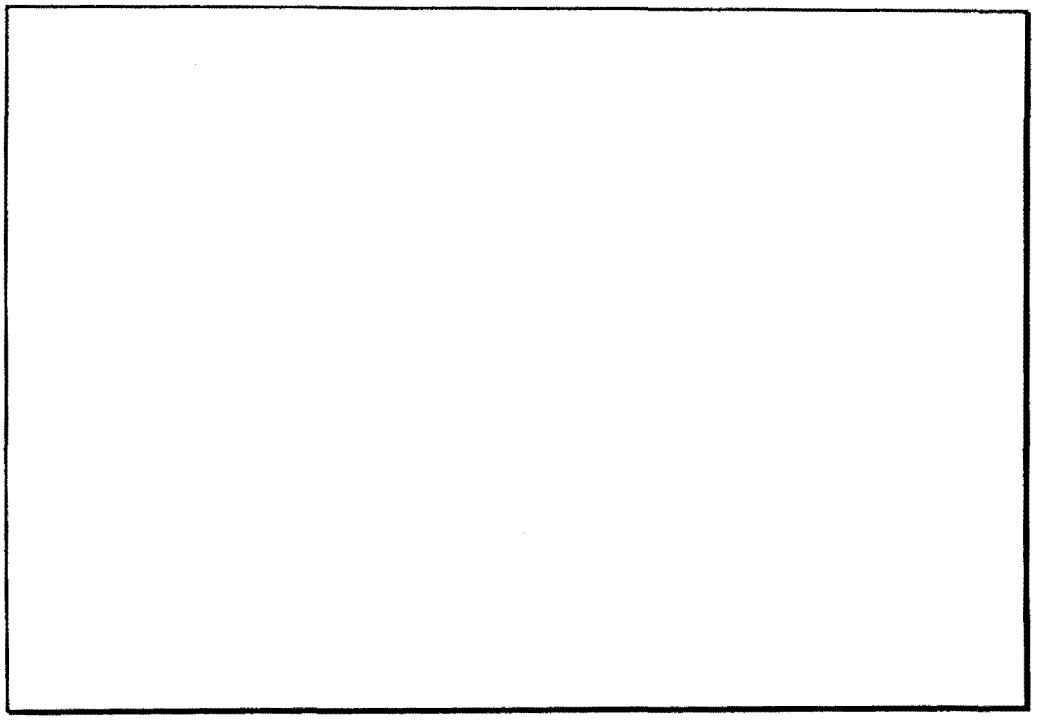


CHE02 - Looking into Jackpot Bay from Dangerous Passage

SUBJECT PHOTOGRAPHS



North end of Jackpot Bay showing Jackpot Lakes in background



North end of Jackpot Bay looking northeast

AREA AND LOCAL DATA

Alaska

State spending of the oil revenues has been the driving force behind economic growth in Alaska. It has been said that oil revenues fund 80% to 85% of the state's annual operating budget. Between 1980 and 1986, the state distributed $26 billion for operations, capital projects, and permanent fund appropriations.

A subsequent dramatic decline in oil prices brought about a severe economic recession that impacted nearly every community in Alaska. The recession was characterized by substantial losses of population and construction activity virtually came to a halt. Personal and business bankruptcies were commonplace and several banks failed. Real estate markets for nearly every type of property were depressed.

The overall economy is generally considered to have stabilized by 1990 but remains dependent on the petroleum industry and vulnerable to unexpected changes in wellhead prices and the projected decline in Prudhoe Bay production.

SouthCentral Alaska

Anchorage, with a population of approximately 240,000, is Alaska's largest city. With more than half the State's population, Anchorage is the undisputed leader in Alaska's affairs. It is the hub of the state's economic activity and the business, government, transportation, education and cultural core of Alaska. The greater Anchorage area includes Elmendorf Air Force Base, Fort Richardson (Army), and the bedroom communities of Eagle River and Girdwood.

Anchorage is central to the state highway system connecting southcentral communities with the interior and the lower 48. As the location of the headquarters of the Alaska Railroad, the state's largest international airport, and an ice free port, Anchorage is firmly established as the transportation center for the state. Other communities in Southcentral Alaska that can be accessed by the State highway system include, Palmer, Wasilla, Soldotna, Kenai, Homer, Seward and Valdez. Valdez is located in the Prince William Sound region.

Neighborhood - Prince William Sound

The subject property is located in Prince William Sound - southeast of Anchorage. Prince William Sound is a limited access coastal region rimmed by ranges of mountains. Prince William Sound offers spectacular scenery and represents prime habitat for many species of land and sea mammals, birds, and both fresh and saltwater fishes. Historically, the area has been primarily used for subsistence related activities. Other uses include both private and commercial recreation, and commercial-industrial uses such as fishing, timber harvesting and mineral extraction.

Most of the region is remote and undeveloped. Major land owners include the Federal and State governments and four native corporations; Chugach Alaska Corporation a regional corporation and three village corporations; Chenega, Tatitlek, and Eyak. Except for land in and nearby established communities, the availability of private lands has been limited to a handful of patented mining claims and patented parcels with an established history of use by lessees, permit holders, and in some cases even squatters. Some patented mining claims have been of sufficient size to subdivide into recreational lots. Although supply has been limited, demand is also limited so that no upward pressure on values is anticipated for an extended term.

The region's five communities are Valdez, Cordova, Whittier, Chenega and Tatitlek. The State highway system reaches only the area's largest community - Valdez. The widening of a railroad tunnel to accommodate automobiles, from the Seward Highway at Portage to Whittier, is reported to be close to reality after years of planning. The tunnel expansion would increase recreational and commercial opportunities in the Sound. Cordova, the second largest community in Prince William Sound is accessible only by air and water. The Alaska Railroad serves the small port community of Whittier. Results of the 1990 census are reported as follows:

Valdez	4,068
Cordova	2,110
Whittier	243
Tatitlek	119
Chenega	94

"Of all the communities on the Sound, Valdez is the most economically diverse. Its role as the terminus of the trans-Alaska Pipeline dominates its economy. Alyeska Pipeline Service Company, the pipeline operator, is the single largest employer in Valdez, and accounts for 90% of the city's local tax base. Other important economic contributors are thriving visitor and fishing industries, and a sizable public sector. The deep water port in Valdez also serves as a shipment point for goods into the Interior. Because of the variety of industries in Valdez, its economy is far less seasonal than other communities in the Sound."

"The economic destiny of Cordova is almost entirely tied to the vagaries of the commercial fisheries, specifically the salmon and herring fisheries which account for more than 90% of the total fishery value in Prince William Sound. Of the 435 permits fished in 1991 by residents of Prince William Sound, 389 were from Cordova. Tourism, logging, and public sector activity provided additional economic support."

"Whittier's economic existence is tied to its role as a gateway to the Sound".[3] It is the only community on Prince William Sound accessible by railroad. "It is more difficult to measure the economic well-being of Chenega and Tatitlek using traditional economic measures because subsistence harvesting is such an important ingredient in their economies. From traditional economic measures neither community is very prosperous. Little or no economic infrastructure exists in either community. Job opportunities are scarce. The opportunities that do exist are in the public sector or fishing-related. Even these jobs are usually seasonal. According to an Alaska Department of Fish and Game survey, only 18% of the adults in Chenega were employed year-round."[4]

The March 24, 1989 Exxon Valdez Oil Spill affected the economies of Prince William Sound in various ways. "The economies of Prince William Sound communities are more different than they are alike. This diversity meant the post-spill economic trends of these communities have also been distinct. The Valdez economy, for instance, is larger than it was in pre-spill years. Some of its growth has come from the build-up of an oil spill response system. Expansion of

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3. Neal Fried and Holly Stinson, "A Look At Today's Economies In Prince William Sound", *Alaska Economic Trends* (September 1992) 1-9.
4. Ibid.

the pipeline terminal has also contributed to its growth. Another strength is the diversity of its economy. Both the fishing and visitor industries leant a hand in its post-spill growth. Despite recent robustness, its economy is vulnerable for the same reason the state's economy is - declining oil production."

"On the other hand, the fate of the Cordova economy will have little to do with oil production. Instead, the health of the Sound's, fishery harvest will guide its future. The oil spill was a reminder of how singularly dependent Cordova is on this resource. Since the oil spill, the economic performance in Cordova has been mixed. The size of its economy has remained almost unchanged from pre-spill years. The transportation-based economy of Whittier appears to be benefiting from a growing visitor industry in the Sound."

"The subsistence economies of Chenega and Tatitlek have not fared as well as the rest of the Sound's communities. Since the oil spill, a substantial decline in their subsistence harvest has been recorded. Few sources of cash income exist for these two communities. There is hope that additional sources of economic support can be developed in these communities."[5]

Cordova has been hard hit by recent developments including a poor 1993 harvest of Pink Salmon. While many contend that dwindling runs are attributable to the oil spill, others argue that factors such as ocean warming and/or unregulated fishing on the high seas may be the cause. The herring fishery was closed in 1994, but the salmon harvest was the second highest on record.

In late September 1993, the Eyak Corporation shut down its Cordova-area logging operation. The shut down resulted in the loss of 80 jobs and is expected to immediately impact the economy of Cordova. The inventory of timber in the area consists primarily of hemlock and old growth Sitka spruce. Market conditions were not favorable and operations were generally not feasible.

With numerous protected bays, Prince William Sound is well-suited for mariculture. However, salmon farming, the most probable venture, was prohibited by legislation. Entrepreneurs are left to develop a shellfish farming

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5. Ibid.

industry. Oyster farming is the most notable fledging mariculture industry in Prince William Sound. Initial results of small operations are encouraging but the long-term potential is speculative at this time.

In summary, the region is remote with only single points of vehicle and rail access to/from the northern reaches. If undertaken as proposed, the widening of a railroad tunnel to Whittier will improve access and should have a positive impact on values. Mr. Michael D. Travis, P. E., has been involved with the planning of the proposed tunnel to Whittier including the process that measured the potential environmental impact of the project. For the purposes of project planning, environmental considerations include socio-economic and cultural considerations. Per Mr. Travis, all four of the area's Native corporations (Chugach Alaska, Chenega, Eyak, Tatitlek) welcome the potential for economic opportunities that may result from improved access into the region.[6]

The economies of the region's five communities are diverse and the Exxon Valdez Oil Spill has had various affects. "The subsistence economy of Chenega and Tatitlek declined quite dramatically since 1989, according to surveys conducted by the Alaska Department of Fish and Game. The subsistence harvest in Chenega in 1990 and 1991 was less than half that of pre-spill years."[7] However, it should be noted that; " Fewer residents made efforts to harvest wild game and fewer species of game were harvested than in the pre-spill years."[8]

This may be attributable to opportunities stemming from Exxon's clean-up effort. The spill created a short-term source of seasonal employment. In addition, owners of various types of marine craft were able to lease/rent their equipment at spectacular rates.

Now, five years after the spill, at least one Valdez-based tour boat operator lists "Bligh Reef - site of Exxon Valdez oil spill" as one of the "area highlights" in its promotional brochure.[9] In 1994, Pink Salmon runs in the Sound were reported to have rebounded dramatically.

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6. "Environmental Awareness", Course 600 International Right of Way Association, Anchorage, Alaska (April 22, 1994).
7. Ibid.
8. Ibid.

PROPERTY DATA - General

Given the size of the subject, variations in physical features and characteristics can be expected. A general description of the subject property is summarized in the following paragraphs.

Location

The subject property is located on the mainland and on various islands in the southwestern portion of Prince William Sound. Prince William Sound is a coastal region in southcentral Alaska that opens into the Gulf of Alaska. Geographic references include Latouche Island, Knight Island, Chenega Island, Evans Island, Fleming Island, Bainbridge Island, Jackpot Bay, and Eshamy Bay.

Area

As previously noted, the reliability of all of the information that has been provided regarding legal descriptions, area estimates, and parcel boundaries - is suspect (see Property Identification). In order to complete the assignment, special assumptions and limiting conditions are necessary. They are stated as follows:

- Total acreage of the subject properties is 75,264 based on the inventory provided by the U. S. Forest Service. The area estimate excludes 1,474 acres outside the Chugach National Forest (Old Chenega Village & Latouche Townsite.

- The boundaries of the parcels to be acquired in fee (CHE01 & CHE02) are indicated on the maps included in the "Working Document" *Comprehensive Habitiat Protection Process: Large Parcel Evaluation & Ranking, Vol. 1 & 2,* (November 30, 1993). According to the "Document" the acreage of these parcels is 7,900 (CHE01) and 12,100 (CHE02) - a total of 20,000 acres.

- The acreage for which only the rights to timber are to be acquired is calculated as the difference between the total acreage (75,264) less the acreage to be acquired in fee (20,000) - 55,264 acres.

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9. Stan Stephens Charters & Cruises - P. O. Box 1297, Valdez, Alaska 99686 (907) 835-4731.

Geography/Topography

Southwestern Prince William Sound represents a rugged coastal environment. The subject properties include extensive shoreline and uplands. The topography of the shoreline varies dramatically from sand/gravel beaches to abrupt rock-walls. Uplands range from gradual slopes to steep mountainous terrain. Soils generally consist of a thin layer of organics over a base of bedrock.

Sheltered bays include Eshamy, Granite, Paddy, Ewan, and Jackpot (mainland); Masked Bay (Chenega Island); Shelter, Iktua, and Sawmill Bays (Evans Island); Sleepy Bay (Latouche Bay); Thumb, Little, and Hogan Bays (Knight Island).

Of these, Eshamy Bay is the most notable as it supports a significant sport fishery. Major attractions include Eshamy Lake (freshwater) and Eshamy Lagoon (saltwater). Jackpot Bay also supports a sportfishery. Jackpot Creek, where it forms a lagoon, is a concentration point for salmon. Ewan Bay features a geographic attraction known as the "Reversable Falls" caused by the changing tides.

Natural Resources

Maps provided by representatives of Chenega Corporation report several locations as copper "prospects" - only one of which is noted as significant. Two nearby locations (Latouche Island) are noted for recorded production. Two locations are noted as gold "prospects". One of those, at the head of Jack Pot Bay is also a prospect for copper, lead, silver, and zinc. The potential of these resources is the subject of a report prepared by Mr. Donald L. Stevens, Ph. D. of Stevens Exploration Management Corporation.

The subject features a substantial timber resource that is quantified and valued in a report prepared by Pacific Forest Consultants Inc. According to the title report provided, Chenega transferred and assigned "its rights to manage, harvest, sell or otherwise use certain timber..." to CHN, Inc., a wholly-owned subsidiary, on August 26, 1981. On October 1, 1981, CHN subsequently transferred and assigned its rights and interests to Koncor Forest Resource Management Company "as a contribution to the capital of Koncor", a joint venture of which CHN was a member. The assignments include timber on lands contained within the subject's boundaries.

Wildlife Resources

The subject property and the surrounding lands and waters are home to significant species of wildlife (see: *"Habitat Protection Parcel Analysis"* in the Addenda). Big game animals include goat, black bear and deer. Fur animals include coyote, wolves and wolverine. Marine mammals include seals, seal lions, sea otters, and killer and humpback whales. Bald eagles, waterfowl, and numerous species of seabirds inhabit the area. Several salmon spawning streams are located on the subject property. Dolly Varden and Cutthroat Trout are found in select areas. Saltwater species include shrimp, crab, herring, cod, halibut, and rockfish.

Cultural Resources

The "Habitat Protection Parcel Analysis" (see Addenda) reports there are several documented "cultural resource" sites in the area. The significance of these sites with regard to market value is discussed in the Highest and Best Use Analysis.

Access

There is no road access to the subject parcels. Primary access is by marine transport and floatplane. The proposed widening of a railroad tunnel to Whittier, to accommodate automobiles, will improve access to Prince William Sound if undertaken as proposed. Increased commercial and recreational opportunities should result - ultimately influencing property values. However, any near-term impact on specific areas of the Sound is likely to be progressively less significant as distance from Whittier increases. The subject parcels are located in an area of the sound more than 50 miles from Whittier (by water).

A new airstrip is currently under construction at the head of Crab Bay, approximately 3/4 of a mile northeast of the Chenega townsite on Evans Island. The airstrip is a project of the State Department of Transportation with the majority of funding provided by the Federal Government. According to Bob Hammond, the project engineer, the airstrip is expected to be completed during the summer of 1994. Improvements will consist of 3,000 feet of usable runway with a crushed rock surface and an access road to the Chenega townsite. The project does not include a crosswind runway nor runway lighting.

A $6 million dollar "spill emergency response vessel system dock" is proposed for Evans Island at the Chenega townsite. The dock will double as a ferry docking facility.

Both projects should contribute greatly to the infrastructure of the region. However, although technically public facilities, the maximization of potential benefits to the public and nearby properties is largely dependent on the land owner. All of the lands surrounding these project sites are privately owned by the Chenega Corporation. According to Mr. Hammond, there is no right-of-way or easement assuring access to the waterfront from the runway. Mr. Ricardo Quiroz, project manager for the State Department of Transportation, reported that only a one acre staging site for the dock will be acquired.

Utilities

There are no public utilities in the area. The community of Chenega is served by generator-powered electricity, a community water system and a community "outfall" waste water disposal system.

Zoning

None of the subject property lies within the boundaries of any organized municipality, county, or borough. The property is not subject to zoning.

Reservations and Covenants

We are not aware of any restrictions or limitations that would adversely impact the utilization of the subject parcels to their Highest and Best Use. Privately owned properties within the boundaries of the Chugach National Forest are not subject to restrictive land-use regulations.

Real Estate Taxes

None of the subject property lies within the boundaries of any organized municipality, county, or borough. As such, the property is not subject to taxation.

Easements

Several easements affect the subject properties. However, as only a portion of the subject acreage is to be acquired in fee, we have only identified those easements affecting parcels CHE01 & CHE02.

Environmental Issues

Much of the shoreline of Chenega's lands was oiled by the drifting slicks resulting from the March 24, 1989 event known as the Exxon Valdez Oil Spill. The impact of the spill on both-oiled and non-oiled areas, five years after the spill, is the subject of on-going debates. The appraisers are not qualified to evaluate the arguments and arrive at a conclusion. The subject properties are appraised as if "contaminant-free".

Suitability of the Subject

The subject consists of varied terrain, features and characteristics. Select areas within the boundaries of the subject may be well suited for private or commercial recreation. And, areas within the subject's boundaries feature a substantial timber resource. The subject is also well-suited for public use. The subject parcels are rated in a "Working Document" prepared by the Exxon Valdez Oil Spill Restoration Team Habitat Protection Work Group (November 30, 1993) *Comprehensive Habitat Protection Process: Large Parcel Evaluation & Ranking (Volumes 1. & 2.).*

The "document" evaluates parcels identified within the oil spill area in terms of "CRITERIA FOR RATING BENEFIT OF PARCEL TO INJURED RESOURCES/SERVICES". Ratings of "high", "moderate", or "low" are assigned to the following injured resource/service:

Pink Salmon	Bald Eagle	Harlequin Duck	Recreation/Tourism
Sockeye Salmon	Black Oystercatcher	Inter/subtidal Biota	Wilderness
Cutthroat Trout	Common Murre	Harbor Seal	Cultural Resources
Dolly Varden	Marbled Murrelet	River Otter	Subsistence
Pacific Herring	Pigeon Guillemot	Sea Otter	

The resource and service ratings were weighed with other evaluation criteria to derive a "score" (see: *"Habitat Protection Parcel Analysis"* in the Addenda). Observed breaks in the distribution of scores translated into three "ranks" - "high"; "moderate"; "low". "This ranking represents the degree to which protection of a parcel will benefit the recovery of linked resources and services that occur on that parcel."

It should be noted that these rankings reflect only the relationships of the identified parcels to each other - based on a specific evaluation process in which non-economic "criteria" is given most weight. The rankings are not meaningful to other parcels outside the oil spill area, some of which may deserve even higher rankings in relation to the parcels identified.

Only one of the 19 "resources and services" relates to an economic use - recreation/tourism. The recreation/tourism ratings of the Chenega lands do not directly correspond with their overall rankings (see following table). The first six columns of the table are reported in Volume I of the Working Document. The recreation/tourism ratings (7th column) were obtained from the detailed analyses presented in Volume II.

Parcel #	Parcel Name	Region	Rank	Owner	Acreage	Rec./Tour.
CHE 01	Eshamy Bay	PWS	High	Chenega	7,900	**High**
CHE 02	Jackpot Bay	PWS	High	Chenega	12,100	**High**
CHE 03	Granite/Ewan/Paddy Bays	PWS	Moderate	Chenega	15,000	**Moderate**
CHE 04	Northwest Chenega Island	PWS	Moderate	Chenega	7,300	**Low**
CHE 05	Southeast Chenega Island	PWS	Low	Chenega	8,300	**Low**
CHE 06	South Knight Island	PWS	Low	Chenega	5,400	**Low**
CHE 07	Northeast Whale Bay	PWS	Low	Chenega	1,500	**Low**
CHE 08	Flemming Island	PWS	Low	Chenega	1,700	**Low**
CHE 09	Northwest Evans Island	PWS	Moderate	Chenega	6,200	**Low**
CHE 10	Sleepy Bay	PWS	Low	Chenega	3,700	**Low**
CHE 11	Pleiades Islands	PWS	Low	Chenega	422	**Low**

Recreation/tourism ratings are not consistent with the overall rankings. And, the recreation/tourism ratings are more relevant to an estimate of market value than the overall rankings. Based on our inspection, the recreation/tourism ratings are consistent with our own perceptions of the relative quality of these locales (in relation to each other). Often, the sites most suitable for recreation/tourism uses are also the most advantageous for marine commercial uses (topography, proximity to wildlife resources, etc.).

PROPERTY DATA - CHE01 & CHE02

Location

Both parcels lie within the boundaries of the Chugach National Forest on the mainland of the eastern Kenai Peninsula just east of the Sargent Ice Field. Although Parcel CHE01 is named "Eshamy Bay", the parcel's primary geographical feature is the Eshamy Lagoon. Parcel CHE02 is referenced by Jackpot Bay. The parcels are contiguous.

Eshamy Lagoon/Creek and Jackpot Bay are the region's two primary attractions. These locales are considered strategic with regard to fish and wildlife habitat and both private and commercial recreation. Within these locales, is a substantial amount of acreage featuring protected beachfront and favorable topography - suitable for a variety of uses. Other notable waterbodies (secondary attractions) include Eshamy Lake and the Jackpot Lakes/Creek (see map).

Area

Area estimates reported in the "Working Document" are summarized as follows:

EVOS Parcel Identification	Estimate
CHE01 (Eshamy Bay)	7,900 acres
CHE02 (Jackpot Bay)	12,100 acres

Per Section 14 (c) (1) of ANCSA, the corporation is required to reconvey to an individual, regardless of whether the individual is Native or non-Native, without consideration, the parcel used and occupied as of December 18, 1971 as a primary place of business, residence, subsistence camp site or for reindeer herding. According to Mr. Reid, the legal descriptions and area estimates are net of a patented parcel within the boundary of Parcel CHE01 (Eshamy) which is reported to have been surveyed (see following table).

Owner	Location	Use Classification	Area
E. Mathews	Eshamy Bay, mainland	primary place of business	0.78 ac.

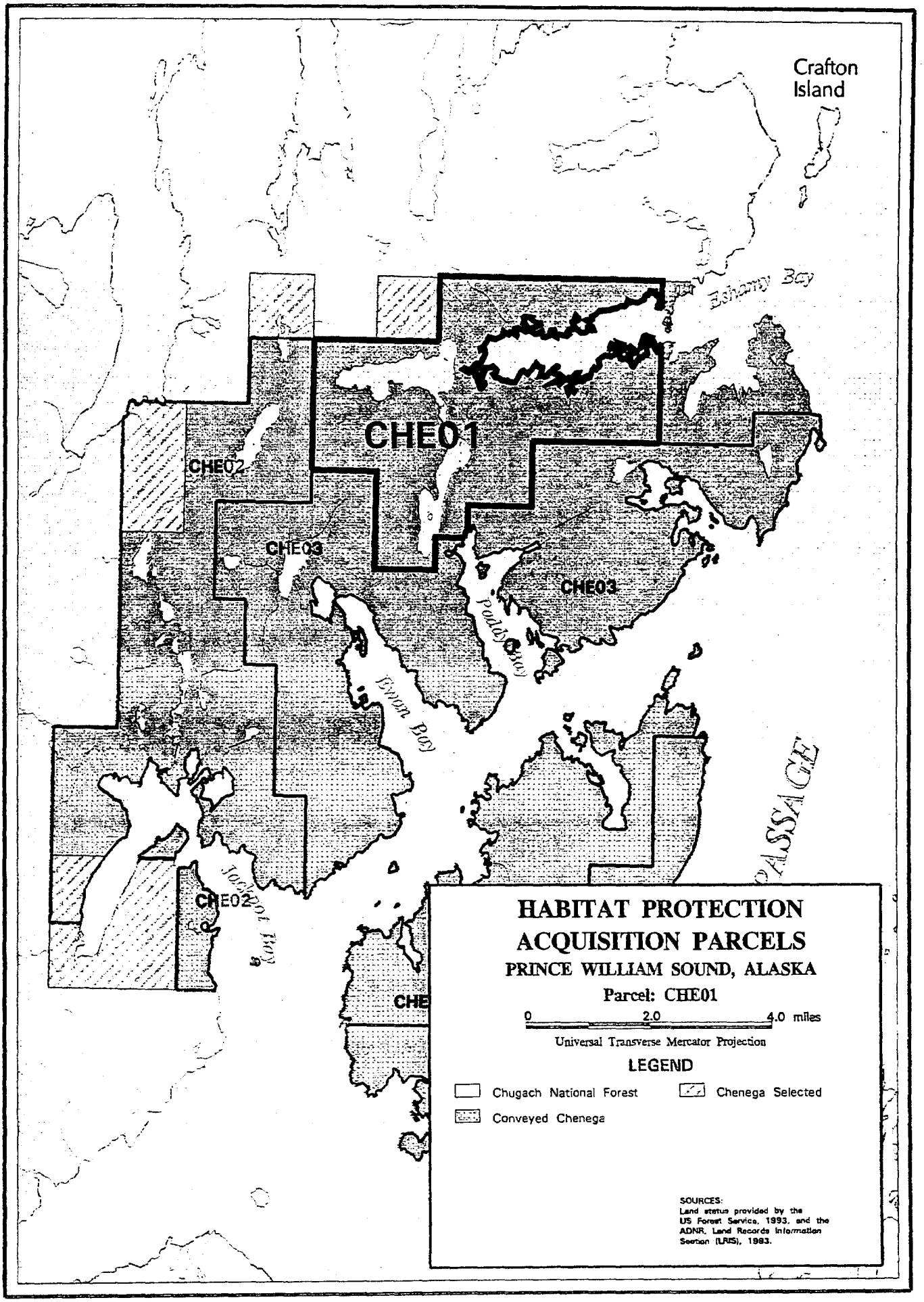
Given the size of the subject parcels, variations in physical features and characteristics can be expected. The two parcels are individually described in the following paragraphs.

CHE01

The boundaries of this parcel encompass all of Eshamy Lagoon and Eshamy Lake. Eshamy Lagoon is separated from Eshamy Bay and Knight Island Passage by protective narrows. The Lagoon is approximately three miles in length and generally ranges from 1/2 to 1 mile in width. According to the United States Geological Survey (U. S. G. S) quadrangle maps, the 100 foot contour (elevation) is set back from the waterfront a sufficient distance that moderately sloping topography from the waterfront is indicated. Backlands are steep, progressively rising in elevation to 2,000 feet within one mile of the waterfront. Uplands are heavily wooded with Western Hemlock and Sitka Spruce.

The west end of the Lagoon is the focal point of a significant sport fishery. Here, the one-quarter mile Eshamy Creek empties into the Lagoon. Its source is Eshamy Lake, a freshwater lake that supports an important salmon spawning and rearing system (see: *"Habitat Protection Parcel Analysis"* in the Addenda). The lake consists of two main bodies, each approximately two miles in length, connected by a half mile of narrows.

The lake's rim is more abrupt than that surrounding the Lagoon. Around the majority of the northern-most body's shoreline, the elevation rises to 100 feet almost immediately. The upward slope is slightly more moderate around the southern body. Again, backlands are steep and the slopes are heavily wooded.



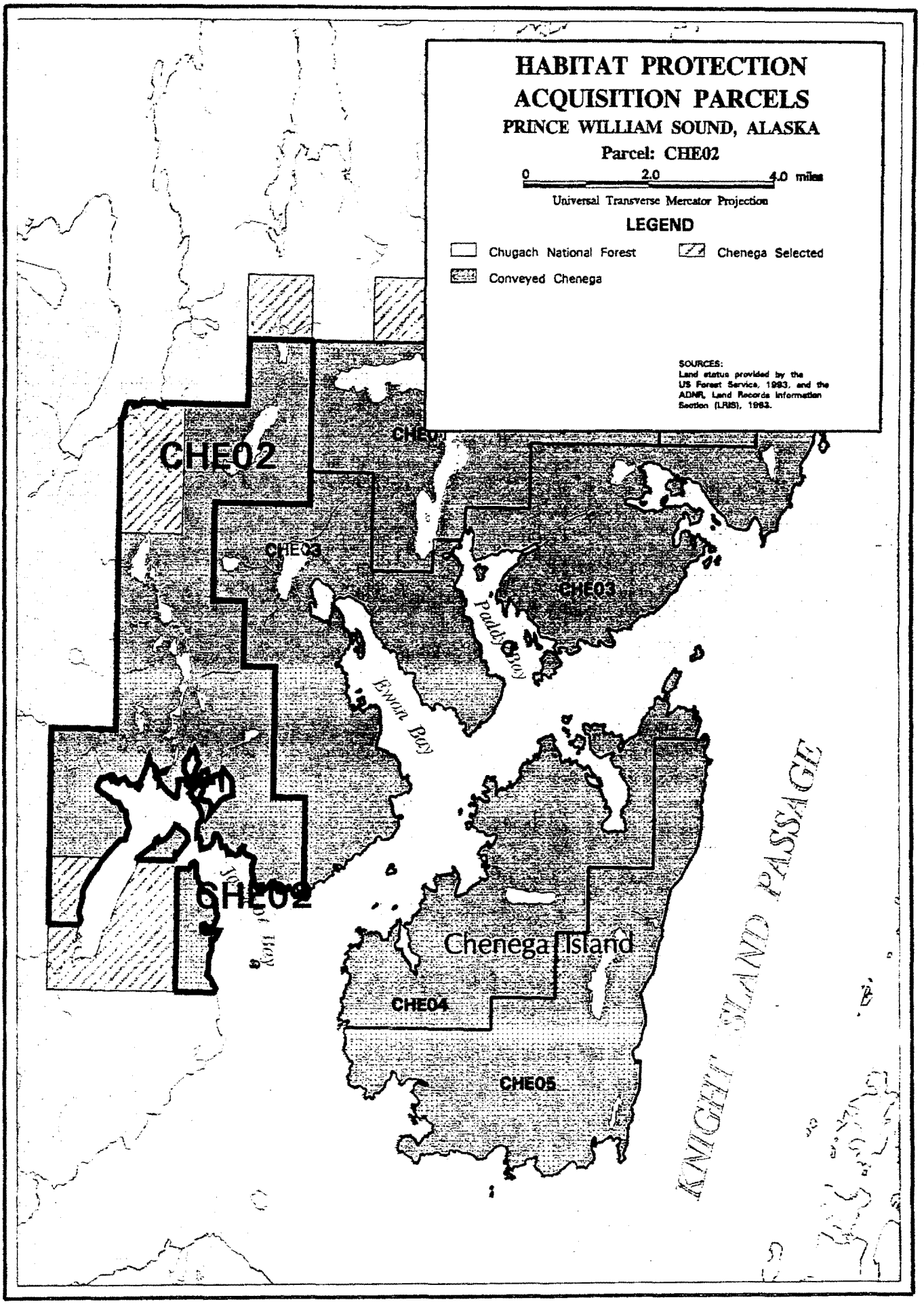
Date printed: November 16, 1993

CHE02

The boundaries of this parcel encompass most of Jackpot Bay and the Jackpot Lakes/Creek corridor. Jackpot Bay consists of two main components that can be generally described as "inner" and "outer". Like Eshamy Lagoon, the Jackpot's "inner" bay is separated from open waters by protective narrows. The inner bay is approximately three miles in length and up to one-and-a-half miles wide.

According to the U. S. G. S maps, the rim of the northern portion of the inner bay features moderately sloping topography from the beachfront. Backlands rise to 2,000 feet within one mile of the east and west shore lines. Along the southern arm of the inner bay, the topography is immediately steep from the shoreline, generally reaching elevations of 500 feet within one-eighth of a mile (660'). Uplands are heavily wooded with Western Hemlock and Sitka Spruce.

At the head of the bay, Jackpot Creek drains the Jackpot Lakes - another productive salmon spawning and rearing system (see: *"Habitat Protection Parcel Analysis"* in the Addenda). The lake/creek chain is a seven-mile long corridor featuring several small lakes - two of which can be accessed by float plane. The system originates in a narrow, steep valley only one mile west of Eshamy Lake. The valley progressively widens as it opens southward to the northern reaches of Jackpot's inner bay. Jackpot Bay also supports a significant sportfishery. Jackpot Creek, where it forms a lagoon, is a concentration point for salmon and a focal point for sportsmen.



Date printed: November 15, 1993

Easements - CHE01

"Section 17 (b)" easements reserved to the U. S. Government in the June 1979 Interim Conveyance #207 and not released in the April 1987 (unrecorded), November 1990 (recorded), and June 1991 (unrecorded) "Release of Interest", are inventoried in the following table.

Reference	Description	Remarks
d. (EIN 2 L)	A site easement upland of the ordinary high water mark in Sec. 8, T4N, R8E, Seward Meridian, on the east shore of Eshamy Lake. The site is 1 acre in size with an additional 25 foot wide easement on the bed of the lake along the entire waterfront of the site. The site is for camping, staging and vehicle use.	
g. (EIN 2c L)	An easement for a proposed access trail 25 feet in width along the south bank of Eshamy Creek from Eshamy Lake to Eshamy Lagoon and to site EIN 3 D9 L. The usage of roads and trails will be controlled by applicable State of Federal law or regulation.	Modified by a "Memorandum of Understanding" (MOU) (2-90) - for an existing access trail along the south bank of Eshamy Creek from site easement EIN 2L at Eshamy Lake to site easement EIN 3D 9L on the south shore of Eshamy Lagoon
h. (EIN 3 D9 L)	A 1 acre site easement upland of the mean high tide line in Sec. 8, T4N, R8E., Seward Meridian, on the south shore of Eshamy Lake. The site is for camping, staging and vehicle use.	Modified by a 2-90 "MOU" - now located upland of the mean high tide line on Section 8 and 9 T4N, R8E, SM. on the south shore of Eshamy Lagoon (moved approx. 1/4 mile east)
n. (EIN 11 L)	A 1 acre site easement upland of the mean high tide line in Sec. 2, T4N, R8E, Seward Meridian, at the narrows between Eshamy Bay and Eshamy Lagoon. The site, which encompasses the Fish and Game protection cabin, is for camping, staging and vehicle use.	

Easements - CHE02

"Section 17 (b)" easements reserved to the U. S. Government in the August 1986 Interim Conveyance #1215 are inventoried in the following table.

Reference	Description
c. (EIN 5 D1)	An easement 25 feet in width for a proposed access trail in Sec. 8, T3N, R7E, Seward Meridian, from EIN 5a D1 located on the north shore of Jackpot Bay, northwesterly generally paralleling the left bank of an unnamed creek, to public lands in Sec. 7, T3N, R7W, Seward Meridian.
d. (EIN 5a D1)	A 1 acre site easement upland of the mean high tide line in Sec. 8, T3N, R7E, Seward Meridian, on the left bank of an unnamed creek at the head of trail EIN 5 D1.

25 Foot Trail Easement - The uses allowed on a 25 foot wide trail easement are: travel by foot, dogsleds, animals, snowmobiles, two- and three-wheel vehicles, and small all-terrain vehicles (ATVs) (less than 3,000 lbs. Gross Vehicle Weight (GVW).

One Acre Site Easement - The uses allowed for a site easement are: vehicle parking (e.g., aircraft, boats, all terrain vehicles (ATVs), snowmobiles, cars, trucks), temporary camping, and loading or unloading. Temporary camping, loading, or unloading shall be limited to 24 hours.

Easements Donated by Chenega Corporation to the United States of America in September of 1990 are summarized as follows:

Reference	Description
EIN 101 D9	A 1 acre periodic site easement upland of the ordinary high water mark located in Sec. 29, T4N, R8E, S.M., on the southeast shore of Eshamy Lake (at the terminus of the Paddy Bay/Eshamy Lake portage).
EIN 104 D9 L	A 1 acre periodic site easement upland of the ordinary high water mark located in Sec. 28 and 33, T4N, R7E, S.M., on the east side of the inlet of Jackpot Creek into the Jackpot Lakes.
EIN 121 L	1 acre periodic site easement upland of the mean high tide line in Lot 4 Sec. 10, T3N, R7E, S.M., on the shore of a cove on the north side of Jackpot Bay.

One Acre Site Easement - The uses allowed for a site easement are: Vehicle parking (e.g., aircraft and boats), temporary camping and loading or unloading. Temporary camping, loading or unloading shall be limited to 24 hours.

Section Line Easements

Easements along section lines are often taken for granted. However, section line easements were not reserved in the conveyances of the subject.

Leases - CHE01

The preliminary title report we were provided with lists 5 leases to the State of Alaska Department of Fish and Game. According to Mr. Sam Sharr with the Cordova office, four have been terminated and only one is still active. Pertinent details of the current lease affecting parcel CHE01 is summarized as follows:

Lessee	Property	Term	Conditions	Remarks
State of AK Dept. of F & G	1 acre cabin on the southeast bank of Eshamy Creek west of Eshamy Bay within Sec. 8, T4N, R8E, SM. (related ROWs & easements incl.)	5 years commencing 5/1/1989. No options. Lessee has 1st right of refusal.	$3,000 per year	for fisheries research and management - lessee may terminate if funds are not appropriated

Permits - CHE01

A special use permit (previously identified) for a primary place of business has been patented as per Section 14 (c) (1) of ANCSA. Other permits acknowledged in the Interim Conveyances, for sites within the boundaries of parcel CHE01, are summarized as follows:

Document	Ref.	#	Permittee	Description
IC #207	4. a.	Sec. 14 (g) of ANCSA	Ak. Dept. of F & G	A special use permit issued on March 2, 1960, for the purpose of maintaining a cabin for watchmen and weir tender during the summer months which is located in SW1/4 SW1/4 NE1/4 Sec. 8, T4N, R8E, SM, at the head of Eshamy Lagoon
IC #207	4. b.	Sec. 14 (g) of ANCSA	Ak. Dept. of F & G	A special use permit issued to the Department of Public Safety, Division of Fish and Wildlife Protection, on March 24, 1975, for the purpose of maintaining a streamguard cabin which is located in SW1/4 NW1/4 SE1/4 Sec. 8, T4N, R8E, SM, at the entrance of Eshamy Lagoon

Three reported "licenses" are inventoried as follows:

Permittee	General Location	Purpose	Terms & Conditions
Ketchum's Air Service	narrows between Eshamy Lagoon & Eshamy Bay	cabin & site used for commercial recreation by a fly-in fishing guide	
Grant Baker	southwest shore of Eshamy Bay near the entrance to the Lagoon	commercial fishing set-net site improved with small cabin	

Environmental Issues

According to a map prepared by ICF Technology Incorporated, the shorelines of Eshamy Lagoon (CHE01) and Jackpot Bay (CHE02) were not "oiled". The subject properties are appraised as if "contaminant-free".

Suitability of the Subject

The subject parcels are large tracts consisting of varied terrain, features and characteristics. A merchantible timber resource has been identified. And, the subject parcels represent the only Chenega parcels receiving the Group's "high" rating for recreation/tourism. Select areas within their boundaries are well-suited for private, commercial, and public recreation uses, marine commercial uses and timber extraction.

PART III - ANALYSES AND CONCLUSIONS

DATA/TREND ANALYSIS - (MARKET OVERVIEW)

The purpose of the Market Overview is to identify the market(s) within which the subject would be traded and determine its/their adequacy. An "adequate" market for purposes of estimating market value is one characterized by numerous sellers exposing alternatives choices to the market and numerous buyers driving values. The findings of the Market Overview become the basis for the Highest and Best Use Analysis, the cornerstone of the economic concept of market value.

The ownership of Alaska lands has changed dramatically in recent years. Historically, Alaska has had the smallest percentage of privately owned land of any state. Land trickled into private ownership in the form of mining claims (brought to patent), federal homestead programs and early Native allotments. In addition, some random squatters, lessees, and permit holders were given the opportunity to acquire fee title. After statehood (1959), several land disposal programs accounted for the transfer of additional acreage from state to private ownership. The largest transition from public to private ownership was effected by the 1971 Alaska Native Claims Settlement Act (ANCSA). The Act established regional and village corporations as the basis for land selections totaling approximately 44 million acres.

Recently, the flow of land from public to private ownership from two major sources has stopped. The federal homestead act was repealed in 1976. Other federal land disposal programs were terminated by 1986 and are not expected to be resumed. State land disposal programs were interrupted in 1991 by a moratorium resulting from on-going litigation in the complex matter of the Mental Health Trust. Nevertheless, as a result of these programs, settlements, etc., the amount of remote and rural land in private ownership has increased dramatically so that the supply of land in most areas exceeds demand. Routine turnover of existing patented parcels sufficiently re-supplies the inventory so that there are numerous alternatives available at any given time for the majority of prospective purchasers. This contention is supported by the market exposure periods reported for confirmed sales and a survey of available listings and their reported market exposure periods to date.

The supply of competing inventory can be expected to further increase in the foreseeable future. According to Mr. Dick Larson, an appraiser with the Bureau of Indian Affairs, native allotment selections yet to be patented potentially amount to several thousand acres in various Alaskan locales. Also, while many Native corporations have preferred to retain ownership of their land assets, they are potential sources of large inventories of privately-owned land. Not all are on equal financial footing and some may realize the need to generate cash through land sales. Others may choose to distribute some of their land to shareholders. For example, in 1984, the Ninilchik Native Association conveyed approximately 8,000 acres in the form of 15 to 40 acre (approximately) parcels to 206 individual members. The lands are located approximately 13 miles east of Ninilchik in the uplands at the base of the Kenai Mountains. Oilwell Road accesses the general area. Kenai Peninsula Borough records indicate there have been a handful of resales in recent years.

On Kodiak Island the Larsen Bay Tribal Council distributed numerous small parcels (10 acres +/-) to shareholders. Sales prices have declined dramatically since the first resales. Local brokers report that market knowledge of an excess supply has contributed to the decline.

The land trust established for the University of Alaska in 1915 and 1929, was formerly managed by the State. The Trust is now managed by the University of Alaska State Office of Land Management with the intent of maximizing the economic benefits of its assets in order to contribute to the cost of the university system. According to administrator Mr. Martin Epstein, the Trust holds fee simple title to 136,659 acres in random locations across the state. The trust also owns the surface rights on an additional 17,655 acres. In the region generally described as the Gulf of Alaska, the Trust owns the timber rights on 37,777 acres. Legislation is currently pending that would allow the Trust to select an additional 500,000 acres. Timberlands are reportedly preferred.

The issue of land claims by the Mental Health Lands Trust is expected to be resolved in the foreseeable future. The settlement will result in additional competing inventory in excess of one million acres. The State is expected to reinstate their land disposal programs once the issue of the Mental Health Lands Trust is resolved. Although not marketed, lands conveyed to borough and

municipal governments represent yet another source. Borough governments have had several land auctions in recent years.

As a footnote, it is interesting to note that while the supply of land in private ownership increased, the amount of land designated for public use, preservation, and conservation has also increased. "Alaska has 55 million acres of national parks. That is 70 percent of the entire national park system. We have 75 million acres of national wildlife refuges. That is 85 percent of the national wildlife refuge system. We have 58 million acres of wilderness lands in Alaska. That is 91 percent of all the wilderness in parks and 97 percent of all the wilderness in refuges."[10]

In summary, based on this general overview, it is not unreasonable to conclude, that:

- the perception of Alaska as having an inadequate supply of land in private ownership is outdated
- Alaska has a disproportionate amount of land in protected/preserved status

The remainder of the Market Overview is devoted to identifying, defining, and qualifying appropriate submarkets.

Prince William Sound is a limited access region of south-central Alaska. Although much of the region's land is federally owned, tens of thousands of acres are owned by four native corporations: Chugach Alaska Corporation (regional corporation); Chenega; Tatitlek; Eyak (village corporations). Generally speaking, these corporations have retained ownership and land has not been for sale. To date, the availability of private lands has been limited to a handful of patented mining claims and patented parcels with an established history of use by lessees, permit holders, and in some cases even squatters. Some patented mining claims have been of sufficient size to subdivide into recreational lots.

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10. Senator Ted Stevens R-Alaska, speaking on the floor of the Senate on June 30, 1993 preceding the vote confirming George Frampton as assistant secretary of Interior for Fish, Wildlife and Parks. Excerpts from Stevens remarks were printed in an *Anchorage Daily News* article entitled "Frank words for newest Interior official" (7/6/93) B5.

Prince William Sound is prime habitat for many species of land and sea mammals, birds, and both fresh and saltwater fishes. Historically, the area has been primarily used for subsistence related activities. Other uses include both private and commercial recreation, and commercial-industrial uses such as fishing, cannery operation, timber harvesting and mineral extraction.

Given the diversification of these activities and the variety of topographical/physical features and characteristics typical of large scale tracts, it is likely that the different Highest and Best Uses will be appropriate for select areas within the boundaries of the subject tract(s). However, a single Highest and Best Use for the entire acreage may be a supportable conclusion. For the purposes of our analysis, the overview of Alaskan markets for remote land is divided into two discussions. In the first, the market(s) for small parcels is analyzed. The second evaluates the market for large parcels.

An "adequate" market for purposes of estimating market value is one characterized by numerous sellers exposing alternative choices to the market and numerous buyers driving values. "The premise that the parties have a choice of alternative sites underlies the principle of substitution - a cornerstone of appraisal methods."[11] As part of the process of qualifying the adequacy of these markets, we will survey the market exposure periods of reported sales and listings (to date) where data is available. The market exposure period is defined as: "The estimated length of time the property interest being appraised would have been offered on the market prior to the hypothetical consummation of a sale at market value on the effective date of the appraisal; a retrospective estimate based upon an analysis of past events assuming a competitive and open market."[12]

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11. Micheal Robbins, PhD, "The Valuation of Large Scale Natural Landscapes Using Contemporary Appraisal Theory," *The Appraisal Journal* (April 1987) 225-244.
12. Appraisal Standards Board Statement 6 and Advisory Opinion G-7.

The overall concept of reasonable exposure encompasses not only adequate, sufficient and reasonable time but also adequate, sufficient and reasonable effort. A marketing period of one year is not an unreasonable expectation for properties that are professionally marketed (reasonably consistent efforts) and priced to reflect current market conditions.

The marketing period that may be necessary to sell a property is an important consideration. For example, if a marketing period of more than one year is reasonably probable and no upward pressure on values is anticipated due to a large inventory of competing properties, the value conclusion would represent a future value that would have to be discounted to reflect a present value. Obviously, the reliability of the value estimates decreases with longer projections of marketing periods.

A characteristic of a free and open market (competing buyers and sellers), is that optimistic asking prices eventually must adjust to the market if a sale is to occur within a reasonable marketing period. The most common listing changes reported in the weekly bulletins of the Anchorage Multiple Listing Service are price reductions.

THE MARKET FOR SMALL PARCELS (≤640 acres - 1 section)

The market for small parcels includes several submarkets referenced by common land uses. Submarkets are identified and analyzed in the following subsections.

Private Recreation

General

The market is most active for sites featuring water frontage. The most common denominations of acreage range from one to ten acres. Per acre prices generally range from a few hundred to several thousand dollars. Subdividing is usually not a near-term disposition of small recreation sites and the sales are perhaps best evaluated by some other unit of comparison such as the price per site or the price-per-front foot (water frontage).

Not all properties are sold through real estate brokers and not all brokers in south-central Alaska belong to shared-listing services. However, the Anchorage Multiple Listing Service (MLS) is considered to provide a representative sample of the market exposure periods that precede the sale of remote waterfront properties. Anchorage residents represent one of the largest pools of prospective purchasers for remote recreational properties. The market exposure periods preceding several recent sales are indicated in the following table.

Waterfront	Acres	List $	Sales $	%	$/Acre	Date	Mkt Exp.
Chandalar Lake	5.02	$49,500	$45,000	91%	$8,964	4/10/91	148 days
Holitna River	40	$50,000	$50,000	100%	$1,250	8/5/93	12 days
Holitna River	60	$80,000	$57,938	72%	$966	9/7/93	131 days
Shungnak River	40	$80,000	$50,000	63%	$1,250	4/21/93	525 days
Lake Iliamna	1	$35,000	$24,000	69%	$24,000	8/26/91	71 days
Lake Iliamna	80	$75,000	$70,000	93%	$875	7/23/91	241 days
Lake Iliamna	12.22	$200,000	$192,000	96%	$15,712	7/24/91	8 days
Ugashik Lake,	40	$220,000	$60,000	27%	$1,500	9/19/91	354 days
Naknek River	5	$150,000	$105,000	70%	$21,000	2/6/92	647 days
Uyak Bay, Kodiak	8	$45,000	$41,000	91%	$5,125	7/9/91	121 days

The average indicated market period for these 10 sales is 226 days. However, it should be noted that the data reflects sales over a period of nearly three years. Based on this observation and the current inventory of properties in the same locales (approximately 40), there is an excess supply of available inventory.

This contention is supported by the high ratio of listings that did not sell during this same time period. MLS Statistics compiled for the remote district 106 for 1991, 1992 and 1993 are summarized in the following table (includes both waterfront and non-waterfront properties).

	1991		1992		1993	
Total Listings	203	100%	100	100%	87	100%
Sold	9	4%	3	3%	5	6%
Pending at Year's End	0	0%	2	2%	2	2%
Not Sold or Pending	194	96%	95	95%	80	92%
% of Listed Price	76%		71%		90%	

The data suggests that demand for remote recreational properties appears to be extremely limited and lengthy market times should be expected. Upward pressure on land values is unlikely in the foreseeable future. For the ten sales summarized, the selling prices averaged only 77% of the listed prices.

Specific "micro-markets" indicate that previously sold waterfront recreation sites routinely re-supply the inventory to the extent that supply continues to exceed demand. In late 1993, seven waterfront sites were available in the Keyes Point development on Lake Clark. Lake Clark is located on the west side of the Alaska Range and accessed only by airplane. Keyes Point was the most elaborate remote recreational subdivision ever undertaken in Alaska. The project is surrounded by the Lake Clark National Park and Preserve and features a good quality gravel airstrip and gravel roads. Approximately 260 2-to-2.5 acre lots were created in the mid 80's and initial sales activity was brisk. Approximately 72% of the lots were reportedly sold in less than four years. No re-sales of Keyes Point lots have been reported in the Anchorage MLS in 1991, 1992, or 1993. Individual listings of the seven lots all had expired by the end of March (1994) after market exposure periods ranging from approximately 200 to 1,300 days.

General characteristics of the private recreational site sub-market are summarized as follows:

- The most significant characteristic of remote recreational properties is "water frontage". Market prospects for lots removed from the waterfront are poor. The reasonableness of this observation is supported by historic/traditional land uses of Alaskan Natives. With rare exception, natives have selected their individual entitlements (allotments) on the ocean, a lake, or a river/stream.

- Market prospects become progressively more limited as distance from major population centers increases - particularly when formidable geographic obstacles and adverse weather conditions combine to complicate access by air and water.

- Typically, the best lots are the first to sell and when offered for resale, they tend to compete with the unsold inventory. The current supply/inventory of remote recreational sites throughout Alaska, generally exceeds demand to the point that little, if any, appreciation in values is anticipated. Such market conditions tend to negatively impact values of bulk acreage and deter developers.

- For many remote recreation subdivisions, little to no down payment installment sales are necessary to attract buyers and high default/foreclosure rates are the norm.

Prince William Sound

The subject property is located in Prince William Sound southeast of Anchorage. Prince William Sound is a limited access coastal region rimmed by mountain ranges. The State highway system reaches only the area's largest community - Valdez. Cordova, the second largest community in Prince William Sound is accessible only by air and water. The Alaska Railroad serves the small port community of Whittier.

Historically, there has been little land available for development in Prince William Sound and only a few parcels have been subdivided for sale as recreation lots. The available data is limited and it is difficult to evaluate demand and the potential for additional development. We are aware of only four remote subdivisions in Prince William Sound. They are briefly described in the following table.

PRINCE WILLIAM SOUND SUBDIVISIONS

	Latouche	**Fidalgo Bay**	**Ellamar**	**Canoe Pass**
Location	NW Latouche Island east of Chenega	Port Fidalgo south of Valdez	Virgin Bay Tatitlek Narrows SW of Valdez	Hawkins Island, Orca Bay SE of Cordova
Access	boat, floatplane	boat, float plane	boat, float plane	boat, float plane
Source	mineral claims	mineral claims	n/a	Eyak Corp.
Year Developed	1976 & 79	1980	1982	1984
Acreage (bulk)	n/a	140 acres	200 acres	95 acres
# of Lots	40 & 187 (Add. #1)	197 lots	153 lots	45 lots
Sales History	*Initial offering of Addition # 1 in April 1979, approx. 100 lots were sold in 72 hours	**35 lots in 2 yrs	**25 lots in 3.5 yrs	**23 lots in 2.5 yrs
Remarks	waterfront and non-waterfront lots	waterfront and non-waterfront lots	waterfront and non-waterfront lots	waterfront lots only

*Information reported by Ms. Laurie Shafer, one of the developers and current owner of 44 lots in the subdivision. **Reported in a February 26, 1993 appraisal of the subject property prepared by Mundy Day Associates.

The reported sales history indicates fairly rapid absorption initially. Typically, the best lots are the first to sell and when offered for resale, they tend to compete with the unsold inventory. It is difficult to reconstruct a complete sales history of these subdivisions without a painstaking search of nearly 700 legal

descriptions. However, a cursory review of the records of the district recorder indicates that unsold lots remain in inventory. Sales of remote recreational sites in most areas of Alaska were interrupted by the onset of an oil-related recession in 1986. Owner/developers with remaining inventory may contend that the 1989 Exxon Valdez Oil Spill had a negative impact on subdivided lots in select areas of Prince William Sound.

At present the existing supply of remote recreational sites in Prince William Sound is perceived to be adequate to meet existing demand. There are three real estate brokers in Valdez and none in Cordova. All three Valdez brokers indicated that market activity was minimal. Walt Wood of Valdez Realty reported that he is not able to "show" remote properties and was not involved in the brokerage of lots in any of those subdivisions. Sound Realty has had a listing of a non-waterfront lot on Latouche Island for approximately two years and reports little to no interest. Diane Hursh of Hursh & Associates was familiar only with the Ellamar development.

The three most recent projects are all located in the northern reaches of the Sound in fairly close proximity to the communities of Valdez or Cordova. The Latouche Island development is the most remote. Latouche Island is located within the immediate subject neighborhood in close proximity to Chenega. When the Latouche Island lots were first offered in the late 1970s, sales were brisk. According to Laurie Shafer, one of the developers of Addition #1, approximately 100 of 187 lots were sold in the first 72 hours of an offering in April of 1979. A fewer number were sold in a 1980 offering and Ms. Shafer still owns 44 lots.

When the Latouche Island project was undertaken, it represented the only source of private recreation lots in the Sound. However, purchases were speculative for the most part. Ms. Shafer reported that although some purchasers were generally familiar with the area, nearly every lot was selected from a plat and purchased site unseen. Only two year-round residences and four cabins are reported to have been constructed since the first phase of the project in 1976 - eighteen years ago. The 44 lots belonging to Ms. Shafer have been marketed by Marston Real Estate (Anchorage/Wasilla) for over two years. Per Ms. Shafer, the Exxon Oil Spill is responsible for the lack of sales activity.

However, long before the oil spill, three new subdivisions had nearly tripled the inventory of remote recreation lots in Prince William Sound within a span of five years (1980 - 1985). The sales of lots in those subdivisions, were not nearly so rapid and substantial inventories remain.

Another waterfront lot on Latouche has been listed with Mr. Bernie Vockner of OMB Realty. Mr. Vockner is recognized as the most active broker in remote recreational and lodge properties in Alaska. Mr. Vockner indicated that properties located considerable distances from harbors generally require larger boats to assure access. Such marine craft are typically expensive and self-contained with regard to quarters. Mr. Vockner suggested that large boat owners are probably the least likely to be purchasers. Access by light plane is complicated by unfavorable weather conditions much of the time.

The data suggests that the supply of existing lots is more than adequate to meet the current demand. And, there is the potential for additions to the supply in the foreseeable future. The University of Alaska Land Trust owns land in and near Prince William Sound. Holdings include 230 acres in Poe Bay and 323 acres in Logging Camp Bay - both located near Whittier. These tracts are the most likely to benefit in the near term should the Whittier tunnel expansion be undertaken as proposed.

The Trust also own 957 acres in Jack Bay near Valdez and 50 acres on Nuka Island near the entrance to the Kenai Fjords. According to Mr. Martin Epstein, a Trust administrator, the Trust intends to realize the economic benefit of its holdings as soon as possible. Properties and the markets in which they would be traded are evaluated in an ongoing process that is intended to recognize and take advantage of any opportunities. Breaking a parcel down into marketable denominations is a likely scenario for much of the trust's holdings that do not have significant timber resources. Mari Montgomery, a land manager for the University of Alaska Land Trust, reported that prospective purchasers for large tracts are few and the trust has been most successful in selling 1 to 5 acre parcels in several subdivisions in Central and Southeast Alaska.

There are undoubtedly spectacular attractions in Prince William Sound that would anchor a project. For example, a salmon stream at the head of a scenic

protected bay would likely attract a developer and ultimately purchasers of recreation sites. The data suggests that the initial sales of the best waterfront lots should be brisk. Subsequently, lengthy marketing periods for unsold lots or resales should be anticipated. The marketing periods necessary to sell non-waterfront lots would likely be too lengthy to justify their creation.

In conclusion, the market for small parcel recreational sites (5 to 20 acres) in the Archipelago is perceived to be limited but adequate for purposes of estimating market value. As parcel size increases, market activity decreases to the extent that the amount of data is insufficient and an expanded data search is necessary.

Commercial Recreation Sites

Commercial recreation uses include lodges, campgrounds and camper parks. There are no roads in the area surrounding the subject and as such no commercial opportunities that rely on vehicle access. In remote areas, lodge operations are the most probable commercial recreation use.

Lodge operations require a substantial investment in start-up costs and F F & E in addition to the site and improvements. Business failures are common and several lodges are usually for sale at any given time. However, the tourism industry in Alaska has experienced growth in recent years and the potential for further growth and increased opportunities is generally perceived as "good". In spite of the high failure rate of remote lodges, a few sites have recently been acquired for commercial recreation development.

Some lodge operations can be accommodated on sites containing five to ten acres. Larger parcels acquired for lodge operations range from 80 to 160 acres. The data suggests that an entrepreneur would likely budget for an adequate site on a cost per site basis rather than a cost per acre. Upper-end values generally range from $100,000 to $200,000.

On one hand, the supply of suitable lodge sites throughout Alaska may be perceived as more than adequate. Obviously, sites made strategic by location/access and the abundance of wildlife resources were the most likely to be previously claimed, settled, or otherwise utilized and already in private ownership. Arguably, most of the best commercially viable sites have long been

taken/occupied. On the other hand, trends in the visitor/recreation industry signal an emerging marketplace for non-consumptive formats such as sightseeing/photography, hiking, kayaking, etc., - and possible gambling operations.

However, based on a review of recent sales data and input from knowledgeable real estate professionals, demand for strategic commercial recreation sites appears to be limited. Nevertheless, while Prince William Sound would rate behind several other Alaska locales with regard to the relative quality of big game and sportfish opportunities, it is likely that two or three select locations offer a suitable combination of unique features and characteristics that would attract an entrepreneur within a reasonable market exposure period.

The local market for small parcel recreational sites (5 to 20 acres) is considered to be adequate for purposes of estimating market value. As previously noted, some commercial recreation operations can be accommodated on such small parcels. However, again, as parcel size increases, market activity decreases to the extent that the amount of data is insufficient and an expanded data search is necessary.

Public Recreation Sites

Sites that are well-suited for a commercial operation or a recreational subdivision are often also well-suited for public recreation (i.e. campgrounds, waysides, boatlandings, etc.) use. Numerous waysides, campgrounds, RV parks and boat launching facilities, are located throughout Alaska.

The Federal government normally develops and maintains public recreation facilities on land it already owns - usually with a National Park, Refuge or Wilderness. Although the State of Alaska owns millions of acres, it is the most likely purchaser of strategic public recreation sites. We spoke with Mr. Wyn Menefee with the State Division of Parks regarding the process by which potential acquisitions are identified and funded. Per Mr. Menefee, a strategic parcel may be targeted by extreme public pressure. Also, land management plans may authorize acquisitions such as inholdings within State parks. During the oil boom years when the State coffers were flush with cash, acquisitions were routine. However, in recent years funding has not been available. Per Mr.

Menefee, budgets are simply too tight to even prioritize a wish list. Mr. Dave Stevens, Chief of Policy and Planning for the Division of Parks, indicated that returning strategic private lands to public ownership is no longer a priority due largely to the lack of funding but also due to the vast amounts of acreage in Alaska that are already reserved or under some form of protection.

An occasional funding source for a super-strategic site is the exception. For example, the State Department of Fish and Game, operating independently of the Division of Parks, acquired the site of the old Sportsman's Lodge on the Kenai River at its confluence with the Russian River. The site was purchased to create parking and a public boat launch facility. Nearly all of the funds were provided by a Federal program and the State's participatory contribution was minor. In summary, demand by public agencies is extremely limited and as a sub-market, it is inadequate for purposes of estimating market value.

Rural Residential

There is a limited market for relatively small parcels that have been created as the result of dividing a section into homestead size parcels of 160 acres and subsequently halving or quartering them. Forty acres is one of the most commonly observed sizes of semi-remote rural properties in the Matanuska-Susitna Valley and on the Kenai Peninsula. Although there have been several recent market transactions in these locales, there is a dramatic oversupply that is expected to continue to deter subdividers for an extended term.

Where lots are truly remote, demand for homesites is not measurable. Numerous remote recreational lots, both waterfront and non-waterfront, are available and would be suitable for rural residents. Ms. Laurie Shafer, a developer of 227 on Latouche Island in Prince William Sound (currently owns 44 unsold lots), reported that only two year-round residences have been constructed on the 227 lots since the mid-70s. One of those is vacant. The lack of road access to most areas of the Sound tends to be a limiting factor and the market for rural homesites in the subject neighborhood is virtually non-existent.

Marine-Commercial

Only a handful of on-shore processing operations can be supported by the area's resources. In most locales, an adequate number has been secured for several years. Likewise, the number of small set-net sites is perceived to be adequate because there is a fixed number of permit holders. Pioneering efforts in oyster farming suggest a mariculture industry is evolving. Although initial indicators are promising, the potential is speculative and the economic feasibility has not yet been established. However, even if mariculture proves successful, on-shore sites are generally not required and increased demand is not anticipated at this time. In summary, demand for marine-commercial uses is extremely limited.

Industrial

According to a special report prepared in conjunction with this assignment (see Addenda) the market potential of known mineral prospects in the area is low. The need for surface sites related to subsurface extraction and waterfront staging/loading areas is tied to mining activity which has been minimal in recent years.

Summary

There is an active but limited market for small parcels in most Alaskan locales. Supply typically exceeds demand so that no upward pressures on values should be anticipated in the foreseeable future. The majority of the data reflects purchases of waterfront sites for recreation use. For small denominations of 5 to 20 acres, local markets like Prince William Sound may be adequate for purposes of estimating market value. However, the data indicates that market activity decreases as site/parcel size increases. For larger denominations, the local market is inadequate and an expanded data search is necessary.

THE MARKET FOR LARGE PARCELS (>640 acres - section)

The overwhelming majority of the State of Alaska is comprised of remote land to which access is limited. For the purposes of our report, wildlands, preservation and conservation lands, and wilderness will be collectively referred to as "natural lands". Generally speaking, the terms imply large scale tracts of acreage and we have focused on these in our discussion. Acquisitions of relatively small parcels for related uses will be considered in our analysis where appropriate.

"Government on all levels and even private individual donors are heavily involved in the purchase (often repurchase) of lands to add to the public domain, reclaiming the wilderness wherever it can be found."[13] There have been several such acquisitions in Alaska in recent years. However, because there are not numerous buyers for large tracts of natural lands and typically there are few, if any, alternative choices for the specific properties selected for acquisition, the adequacy of the "market" is suspect. "Adequacy" must be qualified in terms of supply, demand, and the adequacy of the existing data. While the supply of "natural lands" is large, demand is extremely low for several reasons.

First, by most measures, preservation or some form of protection is assured for vast amount of Alaska lands. "Alaska has 55 million acres of national parks. That is 70 percent of the entire national park system. We have 75 million acres of national wildlife refuges. That is 85 percent of the national wildlife refuge system. We have 58 million acres of wilderness lands in Alaska. That is 91 percent of all the wilderness in parks and 97 percent of all the wilderness in refuges."[14]

Second, for much of the rest of Alaska, remoteness, volatile markets for natural resources, and the regulations of various agencies such as U. S. Fish and Wildlife, Alaska Department of Fish and Game, etc., combine to effectively conserve and preserve.

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13. Kenneth L. Golub, MAI, "Appraising the Wilderness", *The Appraisal Journal* (July 1980) 361-365.

14. Senator Ted Stevens R-Alaska, speaking on the floor of the Senate on June 30, 1993 preceding the vote confirming George Frampton as assistant secretary of Interior for Fish, Wildlife and Parks. Excerpts from Stevens remarks were printed in an *Anchorage Daily News* article entitled "Frank words for newest Interior official" (7/6/93) B5.

Finally, the pool of purchasers for large tracts containing thousands of acres is significantly reduced when the willingness and ability of each buyer is considered. Prospective purchasers are evaluated in the subsequent discussions.

Private Conservation Groups

There are numerous private conservation groups and organizations that seek to protect and preserve natural environments. The Nature Conservancy and the Trust for Public Lands are two of the more well-known agencies and have been involved in Alaskan acquisitions in years past.

We spoke with the Seattle office of the Trust For Public Lands. The Trust is a 20 year-old non-profit organization that assists government agencies or citizen advocacy groups in locating money for the acquisition of land for outdoor recreation. Market value is the basis for their acquisitions. Mr. Peter Scholes, a director of the Trust's northwest region, indicated the Trust typically pursues "politically popular inholding acquisitions" and has been involved in three projects in Alaska. However, the Trust does not have the capability to hold and manage property over the long term. Rather, the Trust serves as more of a facilitator or broker. Currently, the Trust holds title to the oil and gas rights under 68,000 acres on the Alaska Peninsula. The oil and gas rights were previously owned by Koniag Inc. and are reported to have only a nominal speculative value. Ownership is expected to ultimately flow through to the U. S. Fish and Wildlife Service. Per Mr. Scholes, the Trust is not involved in any projects related to the Exxon Valdez Oil Spill.

replaces pages 56 & 57

The Nature Conservancy is a national non-profit organization that is dedicated to preserving habitat, particularly for endangered and threatened species. The Nature Conservancy has, at times, sought to acquire, hold, and manage habitat as an option to management by a government agency. However, according to Steve Planchon, the Conservancy's local director, with the exception of an occasional donation, there are no targeted acquisitions in Alaska at this time due to the vast amount of wildlife habitat already under some form of protection. In Alaska the Conservancy is active in several projects in which it serves primarily as a consultant providing technical expertise, or as a broker/facilitator. For example, the Conservancy took title and held for an interim period of approximately one year, the Seal Bay acquisition by the State of Alaska that was to be funded by Exxon Valdez Oil Spill settlement funds.

In late 1993, the Conservation Fund attempted to acquire a 575-acre site that straddles the mouth of the Ayakulik River on the west coast of Kodiak Island. To our knowledge, the site represents crucial habitat for only sockeye salmon and feeding brown bears - both closely monitored and regulated. The acquisition of the site is probably not necessary to maintain satisfactory populations. However, the site is unusually strategic in that it assures a degree of control over entry and use of contiguous backlands. Only similar "big-bang-for-the-buck" acquisitions are likely.

That Alaska already has substantial amounts of land in reserved or protected status is a recurring acknowledgment. This recognition undoubtedly prompts these organizations to direct their efforts where they are needed most - in select areas of the continental U. S. For example, although, Ducks Unlimited had previously undertaken projects in Alaska, all their efforts are now focused on areas outside of Alaska where wetland habitat is rapidly disappearing. Alaska has literally millions of acres of waterfowl breeding habitat. Of Alaska's 174 million acres of wetlands, approximately 115 million are owned by the Federal Government, 40 million by the State, and 19 million by Native corporations. Less than 200,000 (approximately 1/10th of one percent) are in private non-native ownership.[18] Obviously, the vast majority of these wetlands are not expected to be threatened for an extended term.

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18. "Navigable Waters And Wetlands", Spring Seminar sponsored by the Anchorage Sourdough Chapter 49 of the International Right of Way Association, Anch., Ak (4/21/94).

In summary, private conservation groups are not considered to be prospective purchasers of large tracts of Alaska's natural lands. In Alaska, they typically act as brokers or facilitators that serve as a conduit for stepped transfers of title that may be required by unique circumstances.

Individual Buyers/Donors

Individuals may be willing and able to commit personal resources to conservation. However, often the motive is more than good will and the purchase/donation is personally advantageous. For example, a party with the means could secure a large parcel to create a private retreat and subsequently receive favorable tax treatment for the donation of surplus land surrounding a core parcel retained for personal use.

Nevertheless, for whatever motive, "market" value must be the basis of the donation. Most of these transactions have occurred in the continental United States where market value is determined by a variety of economically supportable uses including timber and grazing, or approaching commercial and residential development. Again, Alaska is truly unique. With the exception of commercial stands of timber in select areas, most of Alaska's remote natural lands are not well-suited for uses that commonly represent the basis (Highest and Best Use) for land valuation in other regional markets.

If such donations continue to receive favorable treatment, an increasing pool of prospective buyers/donators may result. However, at this time any increase in demand for Alaska's natural lands from individuals is not evidenced by the data.

Timber Industry

There is an active timber industry in southeast, southcentral, and the Gulf Coast regions of Alaska. It is a volatile industry characterized by fluctuating markets and challenges by environmental groups. Nevertheless, the industry is established and there is a demonstrable demand for product. For properties with merchantible timber, eventual harvest is the most probable use.

State of Alaska

The State of Alaska already owns vast amounts of natural lands but various agencies may be authorized to acquire certain types of properties. However, except for an occasional source of funding, the State does not have the ability to purchase small inholdings within state parks, let alone entire parks themselves.

In response to a bill that would create a 45,000 acre state park on Afognak Island, Sen. Robin Taylor, R-Wrangell added amendments that would remove approximately 60,000 acres from state parklands in the form of 15 small coastal parks in southeast Alaska and Prince William Sound. "The problem is we can't even afford to empty the garbage cans in the parks we've got,". Earlier this year, the State announced plans to close 18 roadside park units because of a budget crunch.[19] By increasing the staff of seasonal volunteers, adopting a user fee system and a partial restoration of proposed budget reductions, these parks will be open for 1994. Nevertheless, at the State level, economic reality has become a primary factor in the forging of public lands policy. A trend toward higher degrees of self-support through user fees, etc., is gaining momentum - suggesting that there will be increasing pressure to economically justify not only public land acquisitions but potentially the retainer of existing public lands.

In summary, the State is not considered to be a buyer for large tracts of remote natural lands. The Exxon Valdez Oil Spill Trustee Council, as a buyer, is considered in a subsequent discussion.

U. S. Government

At the Federal level, the acquisition of additional public lands in Alaska is probably not practical given the extent of the existing inventory and the shallow depth of the public's pocket. The U. S. Fish and Wildlife Service has been "Faced with continued expansion of the sprawling system of wildlife refuges it manages and an operating budget that has not kept pace...". Potentially, "... many long-standing public activities on wildlife refuges, such as boating, off-road vehicle use and rock climbing, may be stopped." "Refuges also may be closed during slow periods when there are few visitors, such as in the winter months, and some recently established refuges may not be managed at all."[20] "National Park

19. "GOP lawmakers want to cut out coastal parks" *Anchorage Daily News,* (4/2/94) D2.
20. "Refuges go back to basics" *Anchorage Daily News,* (4/2/94).

Service Director Roger Kennedy told a House Natural Resources subcommittee there is a $5 billion backlog of physical needs in the parks, and no way to pay for the projects in this era of deficit reduction. "The National Park Service must explore new means of enhancing revenues on its own".[21]

Increasing the cost of using public lands is probably the preferred solution over increasing taxes. The current administration recognizes that grazing fees for federal lands are artificially low so that the taxpayer effectively subsidizes the cattle industry. Concerned that current mining laws effectively "give away taxpayers' assets...", Secretary of the Interior Bruce Babbitt indicates: "We're looking at moving toward business practices that are accepted in the private sector."[22]

The public, as represented by one or another Federal agency, has acquired a handful of large tracts in Alaska in recent years. However, each of these represents a settlement, exchange or the need for a specific property for a specific purpose. None occurred in a market in which there was more than one identifiable purchaser. In most cases there were no other sellers offering suitable alternatives.

On some occasions public agencies of both the State and Federal Governments are known to have paid prices in excess of appraised values. Although no other buyers were on the horizon and a position of bargaining strength is presumed, the graciousness of public agencies is understandable. Public agencies have an implied responsibility to placate an owner that a private sector buyer normally does not.

To date, demand by the U. S. Government for large tracts of natural lands is <u>not</u> evidenced by the data. In our investigation, we could confirm only 11 transactions (excluding exchanges) reflecting the purchase of tracts exceeding 1 section (640 acres) in size since 1982. Of those 11, three reflect private sector purchases based on an economic use. Two of those three reflect the same property - sold once in 1985 and subsequently foreclosed and re-sold in 1990.

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21. "Congress balks at park service fee proposal" *Anchorage Daily News,* (6/11/94) D6
22. Babbitt sees mining reform law in place by fall" *Anchorage Daily News,* (6/2/94) D4.

However, the most recent data, including this "pair of sales" suggests that values were dramatically affected by the onset of the oil related recession in 1986 and that only subsequent data is relevant. This contention is supported by a sub-market that likely represents as free and balanced a market as exists in Alaska - recreational/residential waterfront lots on the Kenai River. The Kenai River is arguably the most popular outdoor recreation attraction in all of Alaska. Nearly every accessible privately-owned river-front parcel (excepting Native Corporation lands) has been subdivided to create the maximum number of lots permitted. Supply is adequate as evidenced by several available listings at any given time. Market exposure periods that typically average six months or less indicate that demand is strong. This submarket is sufficiently adequate (numerous buyers and sellers) to identify trends.

The buyer of a lot on Upper Island reported that he paid top dollar ($38,550) for a lot adjacent to a friend's lot but that he was aware they had sold in the early 1980s for $5,000 to $15,000 more. The seller of a lot on Dow Island reported a November 1992 sale at $20,000 - $5,000 less than the 1983 purchase price of $25,000. Based on the data, sales occurring prior to 1986 have little relevance except to establish a decline in "market" values. "Market" values of remote and semi-remote recreational and rural residential properties crashed just as did virtually all property types located in and around the major communities.

Based on these observations, only 9 of the 11 large acreage sales are relevant in terms of market conditions. Only one reflects a private sector purchase based on an economic use (recreation subdivision). Another represents a targeted acquisition by a borough government of land for public use. Of the remaining 7 transactions, two represent recent acquisitions by the EVOS Trustee Council (Kachemak & Seal Bay) - only made possible by a onetime windfall of funds. The arithmetic leaves five large tracts that have been targeted and acquired by agencies of the federal government since 1986 (excluding exchanges). Of these five, three were acquired for a backscatter radar installation near Tok. Two of the three, secured by an option for an easement, were not utilized and the properties are slated for reversion back to the sellers.

In summary, agencies of the U. S. Government have purchased (for preservation/conservation) only two large tracts in recent years - a sea bird sanctuary on the Pribilof Islands and a conservation easement on a tract surrounding Tazimina Lake in the Lake Clark National Park and Preserve. A review of the data suggests that the abilities of the U. S. Government are limited and that acquisitions are more likely to be pursued using "land exchange" as the means. Clearly, demand for large tracts by various agencies of the U. S. Government is not measurable. The occasional pursuit of strategic acquisitions should not be construed as evidence of a viable market.

Exxon Valdez Oil Spill Trustee Council

The settlements of civil and criminal suits stemming from the 1989 Exxon Valdez Oil Spill have created super funds of cash. The most notable is the $900 million fund that is overseen by the Exxon Valdez Oil Spill Trustee Council. Approximately 19 parcels have been targeted for acquisition to preserve habitat. To date, acquisitions in Kachemak Bay on the Kenai Peninsula and Seal Bay on Afognak Island have been completed. However, although the transactions should reflect arm's length negotiations based on appraisals, they do not reflect the workings of a free and open market.

First, there are not numerous sellers. The Council is not free to shop throughout the state for alternatives for which there may be a greater urgency. Rather, the Council is directed to a limited number of specific properties that meet certain criteria - most notably those affected by the oil spill.

Second, there are not numerous buyers. With the exception of limited demand for stands of timber, demand for large tracts of natural lands in Alaska is virtually non-existent. The funds represent a one-time windfall, afterwhich, a reasonable probability of subsequent buyers for these targeted tracts is little to none - particularly for properties purchased at prices unsupported by any economic use. In otherwords, there is no sense of continuance. It would be difficult to support a contention that a transaction was representative of "market" if, immediately after closing, the realistic prospects for reselling or otherwise recovering the investment in the foreseeable future were zero.

In summary, this source of funds has created a "buyer" so to speak but does not establish an adequate market from which reliable indicators of "market" value can be derived. Of the data to date and the transactions that are likely to be successfully completed in the near future, the appraiser/analyst must consider:

- Were there suitable alternatives from which the purchaser could make a selection?
- Was there more than one prospective purchaser?
- Had the property been exposed to the market for a reasonable marketing period?
- Was there a reasonable probability of a sale to any other party within a market exposure period of one year? five years? ten years?
- If an appraisal influenced negotiations, was the value estimate supported by an economic use?

It is important to recognize that the "sellers" in the two acquisitions to date, are Native Corporations. As previously noted, undeveloped lands belonging to Native Corporations enjoy exemption from taxes, if any, and special protection from creditors. Furthermore, cultural resources (archaeological sites) have been documented on most of the EVOS parcels.

Understandably, the Use and/or Investment Value to a Native Corporation may be higher than "market" value. It is not unreasonable to conclude that the price at which a Native Corporation would be willing to sell - would likely be higher than the price at which a typical owner would sell. Therefore, sales prices reflected by transactions in which undeveloped Native Corporation property was conveyed may reflect only indicators of "personal value" - as opposed to the economic concept of market value.

Summary

To this point we have established that there is no measurable demand for large tracts of Alaska's remote lands with the possible exception of timberlands. Market exposure periods necessary to sell large tracts are too indefinite to project with any confidence. Acquisitions by various government agencies and the Exxon Valdez Oil Spill Trustee Council, do not establish a market in Alaska that is sufficiently adequate to draw reliable indicators of market value for the subject tract(s) as a whole. "A market in which nothing is happening is no market at all. There must be enough representative transactions to display a clear pattern."[23]

CONCLUSION - MARKET OVERVIEW

The observations and findings of the Market Overview distinguish the Alaskan market from other regional markets. The complexity of the appraisal problem is compounded by the characteristics of this unique "market" as well a property-specific features.

The handful of large-scale transactions to date do not establish an adequate market from which reliable indicators of value can be derived. The analyses of these transactions and the reasoning leading to their disqualification are presented in the Addenda of the report. "Transactions that occur in inadequate or insufficiently congruent markets, or between incompetent or ill-informed parties, are not by themselves indicative of market value, which must be estimated on some other basis if it can be said to exist at all."[24]

In developing a methodology that meets a test of reasonableness, it is important to recognize that while much of the subject is heavily timbered with merchantible Sitka Spruce, select areas may be better suited for other uses.

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23. Ibid.
24. Jared Shlaes, MAI, "The Market in Market Value," *The Appraisal Journal* (10/84) 494-518.

HIGHEST AND BEST USE - CHE01 & CHE02

Highest and Best Use is defined in the Tenth Edition of the Appraisal of Real Estate, American Institute of Real Estate Appraisers, as:

> "That reasonable and probable use that supports the highest present value, as defined, as of the date of the appraisal. Alternatively, highest and best use is the use, from among reasonably probable and legal alternative uses, found to be physically possible, appropriately supported, financially feasible, and that results in the highest present land value.

PERMISSIBLE USES

Legal restrictions, as they apply to the subject tract, may include easements, zoning regulations, if any, and restrictions related to resource management of the Chugach National Forest. Limitations and/or restrictions that may impact the utilization of the subject property and ultimately market value, are discussed in the following sections.

Zoning

The subject property and the surrounding area does not lie within the boundaries of an organized borough, county, or municipality. As such, the subject is not subject to zoning.

Easements

We were provided with a preliminary title report and the easements affecting the subject property are inventoried in the previous section. The easements affecting the subject property are minimal and do not adversely impact the utilization of the subject to its Highest and Best Use. Section line easements that typically result in a net loss of acreage have not been reserved. After a lengthy conformance process in which many easements were released, only a handful of easements now affect the subject property. Most of these have been modified in order to minimize any negative impact.

Resource Management

The majority of the subject acreage lies within the boundaries of the Chugach National Forest. However, development on private inholdings is not prohibited.

In summary, utilization of the subject to its Highest and Best Use is unrestricted.

POSSIBLE USES

The subject property consists of approximately 75,264 acres exhibiting a wide array of topographical features and physical characteristics. It is likely that several land uses could be physically accommodated at some location within its boundaries. Possible uses include:

rural residential homesites	private community/colony
private retreat	recreational cabin sites
commercial recreation	preservation/public use
military -scientific	agriculture-livestock
timber extraction	petro-chemical/mining
marine commercial	special-use permits/licensing

The probability of the possible uses listed are discussed in the following paragraphs.

Rural Residential Homesites

There is a limited market for rural home sites in Alaska. Given the limitations of access, the subject is not well-suited for rural residential uses. Although possible, rural residential uses are not probable.

Private Community/Colony

The subject represents the traditional homeland of the Chenega Natives. The community of Chenega is established on Sawmill Bay on Evans Island. The surrounding lands and waters are utilized for subsistence activities. Continued use of the subject "as-is" is probable.

In November of 1989, a remote oceanfront property on Afognak Island in the Gulf of Alaska, was purchased by a Russian religious group formerly known as the Old Believers. The site was comprised of two tracts totaling only 274 acres and valuable timber was reported to be a major component of the purchase price. Recently, a nearby 60 acre parcel was purchased by a related group. However, such purchases are rare and the probability of acquisitions for similar uses in the subject's locale is perceived to be low.

Private Retreat - Large Tracts

We are not aware of any purchases, for this purpose, of large tracts of several thousand acres. A 4,500 acre parcel on the northern tip of the Kenai Peninsula has been offered for sale for over two years at approximately $1,000 per acre. The parcel, situated within the Kenai National Wildlife Refuge features 4.5 miles of bluff on Cook Inlet and 36 lakes with a total of over 20 miles of shoreline. The offering is promoted as "perfect for major tourist wilderness resort, private hunting club, executive retreat, or private park". Although the broker reports that there have been two offers, both were over a year ago and neither came close to closing. Alaska already has vast amounts of land in national parks and reserves, and national forests and designated wilderness areas. Much of this land is accessible by the public and permitted uses often include hunting and fishing. The pool of prospective private-use purchasers for large tracts of remote property in Alaska is perceived to be extremely small and the probability of such a use for the subject properties is low.

Recreational Cabin Sites

Given the limitations of access and generally harsh climatic conditions, it is likely that subdivided private recreation sites would prove to be the Highest and Best Use for only a handful of select locations within the boundaries of the subject properties. The waterfront areas of Eshamy Lagoon (CHE01) and the northern reaches of Jackpot Bay (CHE02), are well-suited for recreation sites. General market data suggests that the initial sales of the best waterfront lots should be brisk. Subsequently, lengthy marketing periods for unsold lots or resales should be anticipated. The marketing periods necessary to sell non-waterfront lots would likely be too lengthy to justify their creation.

Commercial Recreation

In remote areas, lodge operations are the most probable commercial recreation use. While Prince William Sound would rate behind several other Alaska locales with regard to access and the relative quality of big game and sportfish opportunities, it is likely that two or three select locations offer a suitable combination of unique features and characteristics that would attract an entrepreneur within a reasonable market exposure period.

Bernie Vockner of OMB Realty is generally recognized as the most active broker of remote properties. Among his specialties are remote lodges and lodge sites. Mr. Vockner reported that there is typically, several existing commercial lodge operations for sale at any given time and a high failure rate is characteristic of this type of small business enterprise. Nevertheless, a few sites have recently been acquired for commercial lodges. However, for the most part, new facilities have not been constructed.

A lodge was reportedly proposed for a portion of a 75 acre tract in Chinitna Bay on the west side of Cook Inlet in southcentral Alaska. Since its purchase in August of 1990, no lodge facilities have been constructed.

In July of 1991, a 12 acre site in the Kakonak Bay area of Lake Iliamna in western Alaska was purchased for a lodge site. The site was considered to be prime for a commercial lodge operation and commanded a premium. Per Mr. Vockner, two full years later, lodges facilities have not been developed.

In September of 1991, a lodge operator purchased five acres on the Naknek River in Western Alaska. The site was intended for a commercial guiding and lodge operation. The sale closed in January of 1992 and to date no buildings have been constructed.

In July of 1992, a 160 acre site on the Sturgeon River on the southwest side of Kodiak Island, was purchased for a commercial fishing lodge. To date, only a 12' x 16' cabin is reported to have been constructed. In October of 1992, the same buyer negotiated the purchase of a 180 acre oceanfront site in Olga Bay on Kodiak Island. The transaction failed to close.

The sale of 110 acres on the Big Susitna River was negotiated in July of 1992. A Japanese-Hawaiian firm, planned to develop a destination resort/lodge exclusively for Japanese employees and clients. Activities would include fishing, boating, hiking, and horseback riding. Per Mr. Vockner, the purchasers could not obtain financing and the transaction failed to close.

In July of 1993, an 80 acre parcel at the confluence of the Nushagak and Iowithla Rivers (western Alaska) was purchased for a commercial fishing lodge.

In the same month, a 120 acre parcel on the Nonvianuk River near Lake Iliamna was acquired for a commercial recreation operation. During the past year, no lodge facilities have been constructed on either site.

Although many sites may be perceived as suitable for a commercial lodge operation, few have actually been constructed during the past two to three years. The economic feasibility of most commercial lodge operations is marginal and many of those planned may never be developed. However, the data suggests there is a reasonable probability a handful of entrepreneurs would successfully complete a purchase regardless of speculative prospects. Eshamy Lagoon (CHE01) and the northern reaches of Jackpot Bay (CHE02) are well-suited for commercial recreation sites. Lodges oriented toward sportfishing and hunting are the most common but trends in the visitor/recreation industry signal an emerging marketplace for non-consumptive formats such as sightseeing/ photography, hiking, kayaking, etc. Eco-tourism is the new "buzz-word".

The Afognak Native Corporation plans to launch an archaeological tourism business during the 1994 summer season. The economic feasibility of such a use is unproven in Alaska. The cost of a 9-day session is reported to be $1,950 - approximately $217 per day.[22] In contrast, the Afognak Wilderness Lodge at Seal Bay charges $350 to $400 per day.[23] The comparison suggests that while an archaeological tourism business may be feasible and productive - speculative projections do not indicate that archaeological sites can command a market premium over sites well-suited for more conventional commercial-recreation uses (hunting/fishing lodges), etc.).

22. Georgene Sink, Kodiak Daily Mirror, "For A Fee, You Can Explore Island's Past" - reprinted in Dispatch Alaska, a weekly feature in the*Anchorage Daily News,* (2/1/94) B3.
23. Fly-In Lodges, *Alaska Business Monthly,* (May 1993) 39-62.

Preservation/Public Use

Various groups or government agencies may identify and target a specific tract of property for preservation/conservation. Land uses resulting from public pressure include the reservation of natural lands for public use and or the preservation/conservation of fish and/or wildlife habitat.

The subject property and surrounding waters offer spectacular scenery and diverse species of wildlife. The subject as a whole, or select areas within its boundaries, is/are well-suited for public use and/or preservation/conservation.

However, the probability of acquisition for preservation or public use would be low. As a practical matter, public funds are generally not available. Most of the subject is fairly typical of the coastal regions of southcentral Alaska and we are not aware of any threatened or endangered species for which the subject represents strategic or crucial habitat. The efforts of private preservation/conservation groups are, for most part, directed in high priority areas outside of Alaska.

Nevertheless, as a result of the Exxon Valdez Oil Spill, 19 "key" parcels (including Kachemak Bay and Seal Bay) within the general locales of Prince William Sound, Kodiak Island, and the Kenai Peninsula, have been identified as high-priority acquisitions by state and federal officials. The prioritization process included input from biologists, ecologists, archeologists and recreation specialists. Although the subjects were not "oiled", they represent high-priority parcels likely be acquired with funds from the $900 million oil-spill settlement - assuming that negotiations can reach a successful conclusion.

replaces original pages 71 and 72

Military/Scientific

In late 1988 and early 1990, the U. S. Air Force purchased three tracts totaling approximately 11,245 acres of remote property in Alaska's interior for an "over-the-horizon backscatter" radar facility. These transactions represent a rare occurrence and in fact, the project was never completed. Two of the three tracts are slated for reversion back to the seller.

"Downsizing" better describes the overall trend. In late 1981, the U. S. Government filed a notice of its intention to relinquish the Naval Arctic Research Laboratory near Barrow, Alaska. The facility was subsequently acquired by a Native corporation in an exchange. More recently, cutbacks in military installations are in evidence. Fort Richardson near Anchorage, has reduced it's force 2,000 personnel which began in 1994. In summary, the subject is not believed to represent a strategic site for military purposes or scientific research. The probability that any of the subject properties would be acquired for such purposes is perceived as extremely low.

Agriculture-Livestock

Due to a short growing season and harsh environmental conditions, much of Alaska is not well-suited for farms, dairies, or livestock production. Recent state sponsored efforts including the Point MacKenzie dairy project and the Delta barley project have been failures for the most part. Cattle ranching on Kodiak Island has been on the decline for several years. The probability that farming and/or livestock production on the subject will be financially feasible in the near term is considered to be very low.

Timber

In late September 1993, the Eyak Corporation shut down its Cordova-area logging operation. The shut-down resulted in the loss of 80 jobs and is expected to immediately impact the economy of Cordova. "For the majority of wood we have, there are no reasonable markets".[30] "Perry Beecher, Eyak's logging contractor, said the corporation has enough trees to sustain eight to ten more

30. Luke Borer, President of Eyak Corporation to Hal Bernton, in an article entitled "Logging Concern Closes" *Anchorage Daily News,* (Tuesday, September 28, 1993) A1.

years of Sound cutting".[31] In addition, stands of timber are located on lands owned by other area Native corporations, and the State of Alaska.

Nevertheless, the subject features a substantial timber resource and commercial operations within the foreseeable future are probable. The value of this resource has been estimated by Pacific Forest Consultants, Inc. The report has undergone an extensive review process prior to incorporation into our report and we have relied on the value estimate in our analyses.

Petro-Chemical/Mining

Select locations may be well-suited for staging areas and/or drilling/mining sites - depending on market conditions. However, we are not aware of any significant oil and gas prospects within the boundaries of the subject property. Maps provided by representatives of Chenega Corporation identify a mineral "prospect" near the head of Jackpot Bay's south arm. The site is reported to be a prospect for gold, copper, lead, silver, and zinc (Prospect S-91). In a special report, prepared in conjunction with this assignment, and available under separate cover, Mr. Donald L. Stevens, Ph. D. of Stevens Exploration Management Corporation, notes:

> "Prospect S-91 has no documented reserves, very low potential for the discovery of new mineralization, and this has little market value".

This location is outside of the boundaries of the Jackpot Bay parcel (CHE02). We are not aware of any other sites within the boundaries of either of the subject parcels have been identified.

Marine Commercial

The potential for an emerging mariculture industry, and possible demand for shore-based sites and facilities is speculative at this time. The feasibility of operations in this limited access region has yet to be established. Commercial set-netting for salmon is limited to a fixed number of permit holders. Demand for onshore sites by the commercial fishing industry is minimal.

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31. "Logging Concern Closes" *Anchorage Daily News,* (Tuesday, September 28, 1993) A1.

Use Permits - Licensing

A single economically supportable use for large-scale tracts in Alaska would be extremely unusual. For remote parcels offering little commercial/industrial opportunity, special-use permits and licensing to sportsmen, outdoor enthusiasts, or commercial guides, represents a possible use from which a fairly reliable income stream could be derived. If other opportunities are sufficiently limited, licensing represents a probable use, at least for an interim period until higher and better uses are supportable.

Conclusion (Possible Uses)

In the previous paragraphs, we have considered several possible uses and evaluated their probability based on the findings summarized in the Market Overview. There is a reasonable probability that the subject will be acquired for habitat preservation purposes by the Exxon Valdez Oil Spill Trustee Council. However, non-economic conclusions of Highest and Best Use are inappropriate in an appraisal seeking "Market Value".

Based on our observations and analyses, select sites may support commercial lodge operations and attract subdividers/developers of waterfront recreation subdivisions. Timber harvesting is the most probable use of acreage where the resource is determined to be merchantible.

FEASIBLE USES

Fish, wildlife and scenic resources are the primary attractions of Prince William Sound. However, private and commercial recreational uses of the subject are the most probable for only a limited number of locations within the foreseeable future. And, recreation is not able to support even nominal values for large tracts. According to the Pacific Forest Consultants Inc., report, much of the subject's acreage is heavily forested with merchantible timber. Related uses are the most probable where operations are feasible.

MAXIMALLY PRODUCTIVE USE

In order to determine the Highest and Best Use of the subject, it is necessary to estimate the value of the timber resource and the value of the land based on the sales of properties intended for alternative uses. There is an active market for remote recreational waterfront property.

According to the timber appraisal prepared by Pacific Forest Consultants, merchantible timber quantified by the "final harvest plan" occupies only 15% of the subject's acreage (11,278 of 75,264 acres). The estimated present value of the timber resource equates to the following per acre values:

Estimated Timber Value	$30,200,000	
Total Acreage of Subject	÷ 75,264 acres	
Indicated Overall Value per Acre		**$401.25/acre**
Estimated Timber Value	$30,200,000	
Acreage w/Merchantible Timber	÷ 11,176 acres	
Indicated Value per Acre of Timbered Lands		**$2,677.78/acre**

A single Highest and Best Use for the entire parcel may be a supportable conclusion. However, select areas/sites within the boundaries of a large tract may be suitable for higher and better uses than that for the whole. Typically, remote non-timbered backlands are of low utility. Market prospects are extremely poor and only nominal per acre values may be supportable.

On the other hand, ocean, river, or lake-front acreage is suitable for a greater number of uses. This market segment is limited but active nonetheless and higher values (than backlands) are supportable.

Supportable bulk values of various land types based on our analyses of sales of properties not intended for timber harvest are summarized in the following table.

Strategic Waterfront Sites (to an average depth of 1/4 mile)	**$1,925/acre**
Non-Strategic Waterfront Acreage Featuring Favorable Topography (to an average depth of 1/4 mile)	**$690/acre**
Non-Strategic Waterfront Acreage w/Unfavorable Topography & Contiguous Backlands	**$100/acre**
Contributory Value of Subsurface Resources	**$0 /acre**

Based on our analyses, a range of $690 to $1,925 per acre is supportable for the subject's waterfront acreage to an average depth of 1/4 mile. Again, the indicated values have been adjusted for size to reflect the inclusion of these components into the whole.

By matching the timber "type" numbers of the "Final Harvest Plan" with the grid map, we are able to locate those areas within the boundaries of the subject that feature merchantible timber.

The indicated per acre value of the timber ($2,678) is higher than the supportable values of the subject's waterfront acreage summarized above. And, it is important to recognize that to some degree, each area identified in the Final Harvest Plan contributes to the overall feasibility of operations.

Based on these observations, where areas of timber are included in the Final Harvest Plan, the resource supports the highest present value and therefore represents the Highest and Best Use. Waterfront acreage not included in the Final Harvest Plan is suitable for private or commercial recreation uses where topography is favorable.

CONCLUSION OF HIGHEST AND BEST USE

Although there is a reasonable probability that the subject parcel will be acquired for preservation/conservation, the intended use does not represent the Highest and Best Use. The acquisition of this acreage is only reasonably probable due to a one-time windfall of funds - without which the probability of such an acquisition would be little to none.

Based on our analyses and observations, the Highest and Best Use as of August 1, 1994, the date of valuation, is a mixed use summarized as follows:

- timber harvest on acreage with merchantible timber
- private or commercial recreation on waterfront acreage featuring favorable topography but without merchantible timber
- speculation for waterfront acreage with unfavorable topography and low-utility backlands without merchantible timber

Special purpose licensing/permitting is a practical interim use for timberlands scheduled for later harvest and speculative backlands.

ESTIMATE OF VALUE

Methodology

Due to the assignment instructions, the final harvest plan upon which the timber value estimate is based, includes all of the timbered lands. As a result, a reliable isolation or allocation of the fee simple value of Parcel Nos. CHE 01 and CHE 02 is not possible. The isolation of the present value of merchantible timber on Parcel Nos. CHE 01 and CHE 02 would require a re-analysis according to a set of assumptions by which a stand-alone harvest plan is developed. *Therefore, the value estimate is expressed as a single total without allocation of the fee simple value to Parcel Nos. CHE 01 and CHE 02.*

Lengthy land value analyses and a timber appraisal were necessary to determine Highest and Best Use of the subject. In order to simplify the narrative, the findings are summarized in the following table and the value estimate is developed in this section. The land value analyses and the timber appraisal are presented in subsequent tabbed sections.

Strategic Waterfront Sites (to an average depth of 1/4 mile)	**$1,925/acre**
Non-Strategic Waterfront Acreage Featuring Favorable Topography (to an average depth of 1/4 mile)	**$690/acre**
Non-Strategic Waterfront Acreage w/Unfavorable Topography & Contiguous Backlands	**$100/acre**
Contributory Value of Subsurface Resources	**$0 /acre**
Estimated Timber Value	**$30,200,000**

The value estimate of the subject requires an application of the findings in a manner that recognizes the Highest and Best Use of the subject is a mixed use in which various components contribute to an overall value. Based on the Highest and Best Use analysis, our inspection of the property and a review of the data, the subject is considered to consist of the following components:

Estimated Value of Merchantible Timber for all 75,264 acres

Est. Value of 20,000 ac. (CHE01 & CHE02) Excluding Contributory Value of Merchantible Timber

- strategic waterfront sites, if any
- non-strategic waterfront acreage featuring favorable topography
- non-strategic waterfront acreage with unfavorable topography & contiguous backlands and/or cut-over timberland
- contributory value of subsurface resources

It is important to recognize that while we have identified separate components that each contribute to an overall value, our methodology has been developed and applied so as to avoid a summation of stand-alone values. Rather, the contribution of each component reflects an acknowledgment of its inclusion into the whole. The estimated value of the timber represents a discounted present value based on a consideration of market prospects over time. And, the non-timberland values reflect their "bulk" value aspect - in this case incidental to the estimated value of the timber resource. The estimated value of each component is developed in the following sections.

Estimated Value of Merchantible Timber

Merchantible Timber

The timber appraisal prepared by Pacific Forest Consultants, Inc., estimated the present value of the subject's merchantible timber, as of August 1, 1994, at $30,200,000 based on the "final harvest plan" for 11,278 acres. The present value was derived from a "total net value" (gross value less costs) of $45,860,861 discounted @ 9% over a 10-year harvest plan (see pages 33-40 of the timber appraisal).

The timber appraisal has undergone an extensive review process prior to its inclusion in our report. We have assumed the appraisal fairly represents the market value of merchantible timber. THIS IS A SPECIAL ASSUMPTION OF OUR REPORT.

Est. Value of (CHE01 & CHE02) Land Excluding Timber Value

Strategic Waterfront Sites

Each strategic waterfront site identified within the boundaries of the subject would be allocated 160 acres - the unit of comparison used in the analysis. In the event that one side of the strategic river/stream confluence or mouth is not owned by the owner of the subject, is subject to an easement, or included within the "Final Harvest Plan", 80 acres would be allocated.

The subject parcels feature two "strategic" sites - one at the outlet of Eshamy Lake where the creek enters the Lagoon. The other is at the mouth of the Jackpot Lakes/Creek system at the head of Jackpot Bay. However, merchantible timber provides the highest present value to the Eshamy site and to one-half of the Jackpot site. Therefore, the allocation to strategic waterfront acreage is only 80 acres. Based on the analysis by which the per acre indicators are adjusted for size to reflect the inclusion of this acreage into the whole, a supportable "bulk" value for this component is $1,925 per acre.

Non-Strategic Waterfront Acreage Featuring Favorable Topography

A supportable "bulk" value for this component is $690 per acre based on a subsequent analysis. Due to a shoreline punctuated by numerous coves and peninsulas, it is difficult to quantify the exact amount of this component. For the purposes of our analyses, we have estimated the acreage of this component as the distance of shoreline featuring favorable topography - times an average "depth" considered to be adequate for most probable uses of remote waterfront acreage. Topography is considered to be "favorable" when the initial 100 foot contour illustrated on the United States Geological Survey (U. S. G. S) quadrangle maps, is set-back a notable distance from the waterfront so moderately sloping usable terrain is evident.

Distance of Shoreline

The distance of shoreline featuring favorable topography is estimated based on our aerial inspection and a review of the U. S. G. S quadrangle maps (topographical maps). One inch on the topo maps equals one mile - 5,280 feet.

Appropriate Depth

The sales used in our analysis reflect a general range of parcel sizes from 60 to 180 acres with a central tendency of 160 acres. This common denomination, a quarter of a section, had been a standard for BIA allotments and federal homestead programs. Variations are often the result of irregular topographical features (shoreline) or reflect U. S. Surveys, mining claims etc.

Commonly traded parcels in denominations of 40 and 80 acres often reflect typical and logical dispositions of 160-acre tracts. A 160-acre parcel with extensive frontage would be well-suited for subdividing into more marketable parcels. It is not unreasonable to conclude that values would be maximized if the water frontage-to-depth ratio allowed for further subdividing opportunities of smaller parcels. Where backlands are undesirable, steep or otherwise unusable - 1 mile of water frontage (5,280') at a depth of 1/4 mile (1,320') would represent an optimum configuration for 160 acres. In reality, shorelines are irregular and waterfront parcels would often reflect lesser or greater depths. In our analysis, 1,320 feet is considered to be an average depth - adequate for the most probable uses of remote waterfront acreage.

Based on these dimensions, one mile (5,280') of non-strategic water frontage featuring favorable topography, at an average depth of 1,320 feet, represents 160 acres. On the U. S. G. S quadrangle maps (topographical maps), one inch equals one mile. The subject's non-strategic water frontage featuring favorable topography is measured in 1/4, 1/2 and 1 inch increments.

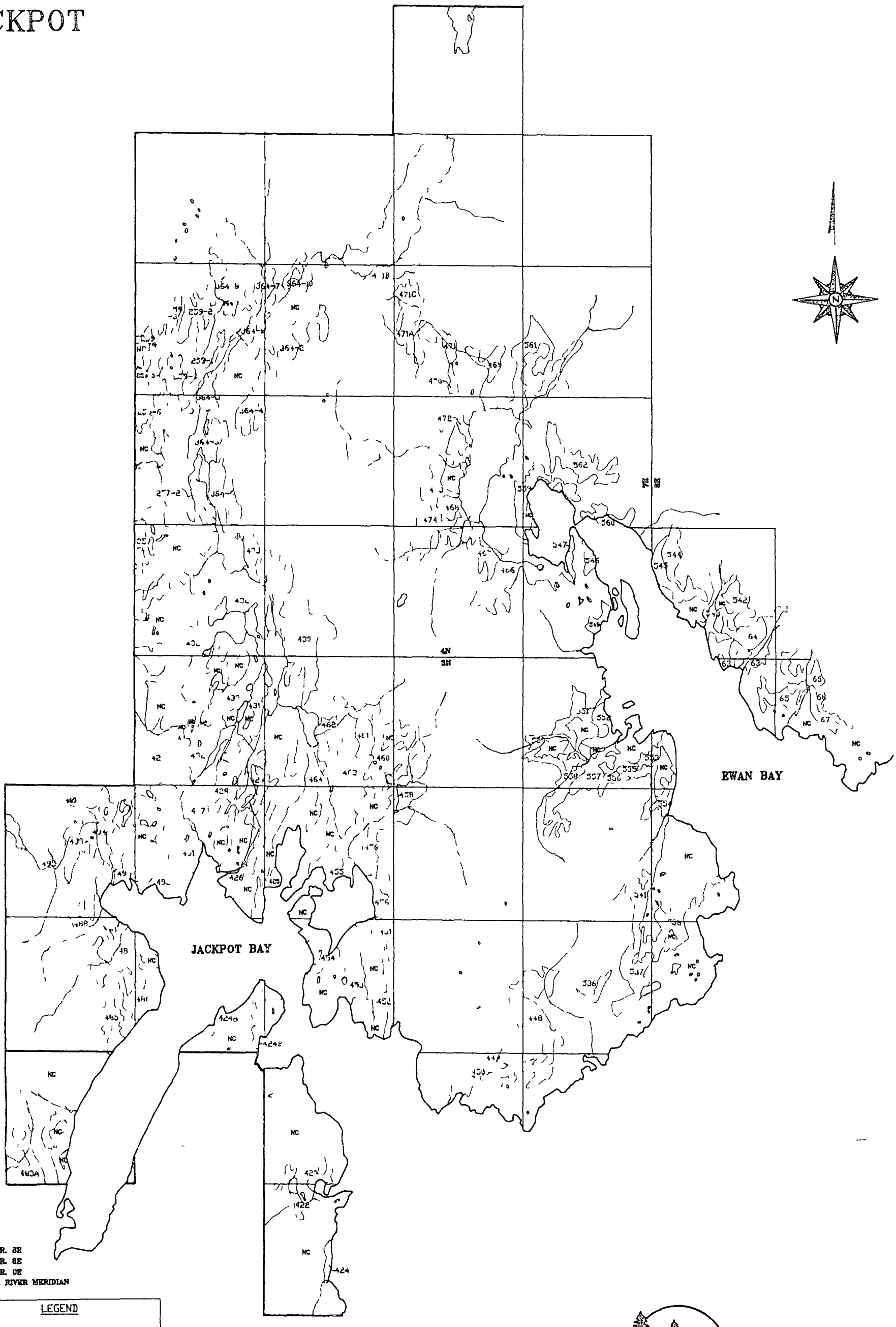
Our allocation of this component is based a review of the topographical maps and the "Final Harvest Plan" of the timber appraisal report. By matching the timber "type" numbers of the "Final Harvest Plan" of the timber appraisal with the grid map, we are able to identify non-strategic water frontage that features favorable topography but not merchantible timber (see worksheet map on the following page). Waterfront acreage in these areas is suitable for private and commercial recreation and marine commercial uses. The allocation of this component is calculated as follows:

LOCATION	ALLOCATION	AC.
north shore of Eshamy Lagoon	2 mile of frontage x 160 acres	320 ac.
south shore of Eshamy Lagoon	2.25 mile of frontage x 160 acres	360 ac.
east shore of Eshamy Lake	.75 miles of frontage x 160 acres	120 ac.
northwest end of Paddy Bay	.25 miles of frontage x 160 acres	40 ac.
north end of Jackpot Bay	2.25 miles of frontage x 160 acres	360 ac.
northeast entrance to Jackpot Bay	.5 miles of frontage x 160 acres	80 ac.
west side of entrance to Jackpot Bay	.25 miles of frontage x 160 acres	40 ac.
TOTAL		**1,320 ac.**

CHE01 - Eshamy

CHE02 - Jackpot

JACKPOT



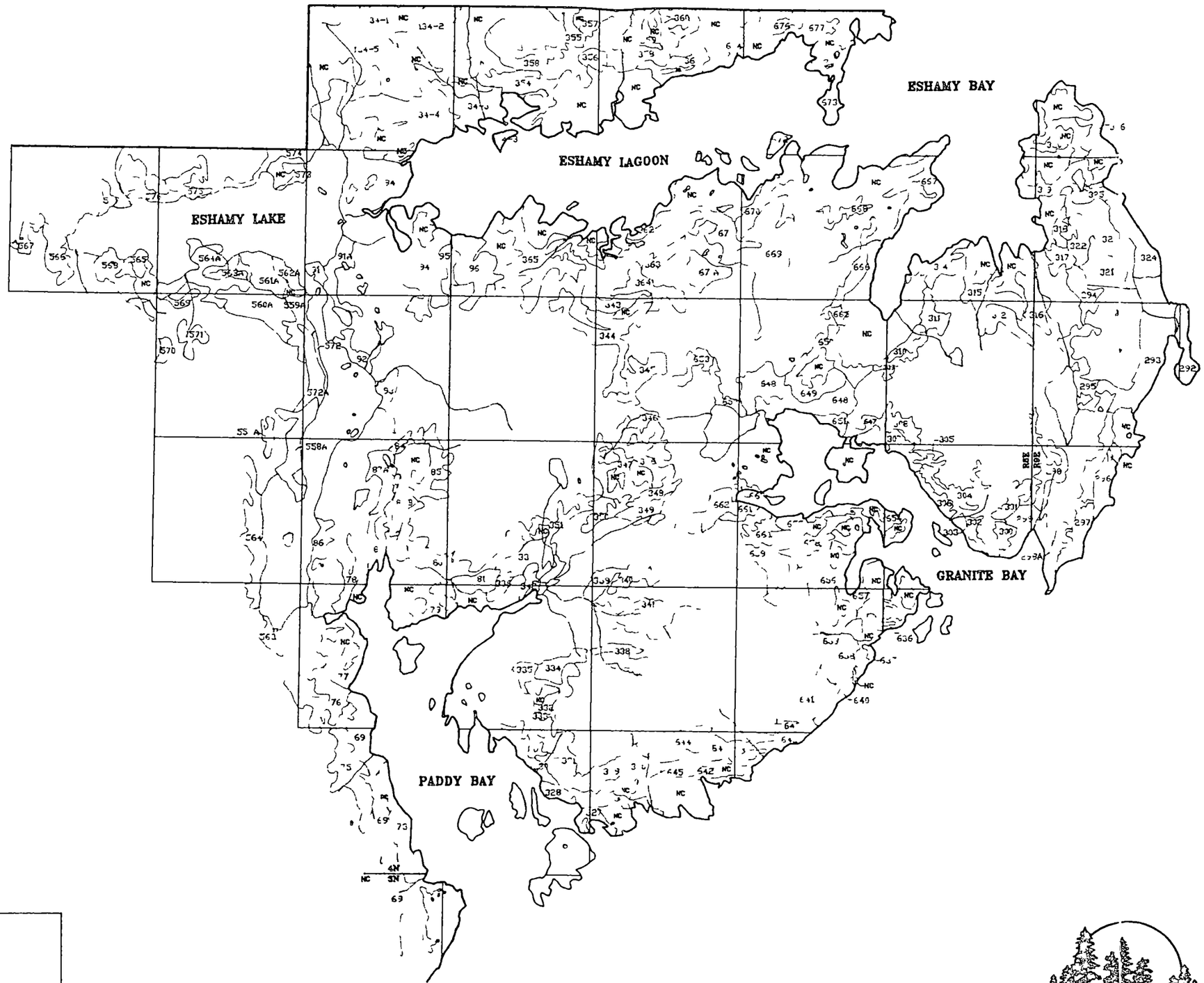
T 3N R. 8E
T 4N R. 8E
T 4N R. 9E
COPPER RIVER MERIDIAN

LEGEND

- PROJECT BOUNDARY
- 2N / 3N TOWNSHIP & RANGE
- STREAMS LAKES
- SECTION LINE
- TOPOGRAPHY LINE, 200' INTERVAL
- 241 TIMBER STAND & NUMBER
- NC NON COMMERCIAL TIMBER AREA

PACIFIC FOREST CONSULTANTS INC
200 N EDWARDS
NEWBERG OR 97132
(503) 537-9300

ESHAMY



T 3N R. 8E
T 4N R. 8E
T 4N R. 9E
COPPER RIVER MERIDIAN

LEGEND

- PROJECT BOUNDARY
- 2N / 3N TOWNSHIP & RANGE
- STREAMS LAKES
- SECTION LINE
- TOPOGRAPHY LINE, 200 INTERVAL
- 241 TIMBER STAND & NUMBER
- NC NON COMMERCIAL TIMBER AREA

0 2,100' 4,200'

SCALE: 1 = 4,200'

PACIFIC FOREST CONSULTANTS INC.
200 N EDWARD,
NEWBERG OR 97132
(503) 537-9300

Non-Strategic Wtf .Ac. w/Unfavorable Topography & Backlands and/or Cut-Over TimberLand

Based on our analyses, $100 per acre is considered to be an appropriate estimate of the nominal value of the subject's "non-strategic waterfront acreage featuring unfavorable topography and contiguous backlands" and/or cut-over timberland. We have made no adjustment for size as the indicated nominal value was derived from Comparables reflecting a range of parcel sizes that included bulk acreage. This component includes all of the acreage not included in the harvest plan and the waterfront acreage considered to be suitable for private or commercial recreation.

It should be noted that only the timber resource is the subject of the timber appraisal so that the estimated value would fairly represent either the acquisition of timber rights or the contributory value to an underlying land value. Arguably, cut-over timberland has a value as evidenced by sales of timber only (ownership of the underlying land is not conveyed). As non-productive land for which long-term speculation is the Highest and Best Use, the residual value of timberland is considered to be fairly represented at a nominal $100 per acre (see Non-Strategic Water Frontage Featuring Unfavorable Topography & Contiguous Backlands)

The calculations are summarized as follows:

Total Acreage CHE01 & CHE02	20,000	ac.
Less: Strategic Waterfront Acreage	(80)	ac.
Less: Non-Strategic Wtf w/Favorable Topography	(1,320)	ac.
Non-Strategic Wtf w/Unfavorable Topography & Backlands and/or Cut-Over Timberland	**18,600**	**ac.**

Contributory Value of Subsurface Resources

The potential of subsurface resources does not contribute to the overall fee simple value of the subject (see subsequent analysis)

FINAL VALUE ESTIMATE

Based on our analyses, the final value estimate of the subject is calculated as follows:

Allocation of Components		
Strategic Waterfront Acreage	80	ac.
Non-Strategic Wtf w/Favorable Topography	1,320	ac.
Non-Strategic Wtf w/Unfavorable Topo & Backlands and/or Cut-Over Land	18,600	ac.
Total Acreage CHE01 & 02	20,000	ac.

Value Estimate Calculations						
Estimated Value of Merchantible Timber	75,264	ac.				$30,200,000
CHE01 & CHE 02 (Fee Simple Excluding Contributory Value of Merchantible Timber)						
Strategic Waterfront Acreage	80	ac.	@	$1,925	$154,000	
Non-Strategic Wtf w/Favorable Topography	1,320	ac.	@	$690	$910,800	
Non-Strategic Wtf w/Unfavorable Topo & Backlands and/or Cut-Over Land	18,600	ac.	@	$100	$1,860,000	
Contributory Value of Subsurface Resources					$0	
Estimated Value of CHE01 & CHE 02 (Fee Simple Excluding Contributory Value of Merchantible Timber)						$2,924,800
Estimated Value						$33,124,800
					(rd)	**$33,125,000**

ESTIMATE OF VALUE - CHE01 & CHE02

(excluding contributory value of merchantible timber)

Valuation Premise

Several high-profile transactions involving large Alaska tracts do not meet the test of a market value transaction. The analyses of these transactions and the reasoning leading to their disqualification are presented in the Addenda of the report. Based on these analyses and the investigation summarized in the Market Overview, the "market" for large tracts of Alaska lands is considered to be inadequate for purposes of estimating the value of the subject. A sufficient quantity of data, qualifiable as adequate, is simply non-existent.

There is a relatively large body of data for parcels containing less than 640 acres (the equivalent of one section). The appraiser's task is to build a credible bridge from this data to the subject properties - each consisting of several thousand acres. Two acknowledgments are central to the correlation of this data.

First, select areas within the boundaries of the subject are suitable for higher and better uses than other areas. In order to recognize the positive contribution of higher-value acreage to the value of the whole, an allocation of the subject parcel(s) into meaningful components is necessary.

Second, an economic unit of acreage should be recognized - beyond which size adjustments are not supportable. Our valuation premise with regard to these acknowledgments is developed in the subsequent subsections.

Allocation

Various land uses tend to gravitate toward desirable physical features (geographic/topographic) and/or concentrations of fish and wildlife resources. However, most often, all of the water frontage on any given remote Alaskan waterbody is not in private ownership (excepting native corporations) or otherwise utilized. This characteristic is due to a combination of factors. First, the majority of Alaska's remote lands are owned by government agencies and native corporations. Second, rugged topographical features render much of the waterfront acreage unsuitable for any use. Finally, and perhaps most significant, distance and often harsh weather conditions combine to deny practical access to the majority of would-be users.

Understandably, individuals would select the sites that provided the greatest utility. For many locales, only an extremely limited amount of remote waterfront land can be expected to be utilized within the foreseeable future. For example, village sites, individual Native Allotments, and private non-Native parcels typically represent only a fraction of the total waterfront.

On a larger scale, Native Corporations selecting their entitlements pursuant to ANCSA, typically avoided unusable acreage as much as possible. Coastal lowlands, river valleys, and sloping uplands were obviously preferred to glacier-capped peaks.

Based on the typical land use patterns of most remote Alaska locales; our review of available data; our aerial inspection; the subject acreage is considered to consist of three components:

- "strategic" waterfront sites without merchantible timber
- non-strategic waterfront acreage featuring favorable topography but without merchantible timber
- non-strategic waterfront with unfavorable topography and contiguous backlands and/or cut-over timberland

Note: The overall values will not be summations of stand-alone components. Where appropriate, the component values have been adjusted for size to reflect their inclusion into the whole.

Size

Most real estate markets recognize that per acre values decrease as parcel sizes increase. This is particularly true in counties, boroughs, and municipalities where the process of subdividing larger parcels into marketable denominations has become both time consuming and expensive.

Where adequate data is plentiful, reliable size adjustments can be extracted. As previously noted, sales of large tracts of remote Alaska lands that can be qualified as "market" sales, are almost non-existent. With the exception of timberlands in Southeast Alaska, we are aware of only two private-sector purchases of large tracts (> 1,000 acres) in Alaska within the past twelve years (2,053 acres in 1982 and 2,220 acres in 1990). The data suggests that market prospects are extremely limited for 1,000 acre parcels let alone tracts containing 10,000 to 100,000 acres.

In depressed or oversupplied markets, values typically free-fall to a point at which speculators, anticipating future benefits, will buy. There is surely a price at which large tracts of apparently limited utility remote acreage would sell. However, the price that would prove to be a sufficient incentive to attract a speculator or developer/entrepreneur to the subject as a whole, within a reasonable marketing period, is impossible to predict. Available market data indicates that the most marketable denominations of acreage are 160 or less. However, a sell-out of tens of thousands of acres in a subdivision approach is too speculative to be considered reasonably probable within any foreseeable time period.

In appraisals of large tracts of remote Alaska land, a consideration for size is likely to be the most significant source of disparity. As a practical matter, again, with the possible exception of timberlands, prospective private sector buyers cannot be identified for either 1,000 or 10,000 acre tracts. There is clearly no market-driven demand for large tracts in Alaska. As a result, a sufficient quantity of adequate data is not available to support size adjustments beyond what is reflected by the sales of relatively small parcels (< 1 section or 640 acres).

To reflect considerations for progressively larger tracts, an appraiser may develop adjustments based on a mathematical model. However, analyses of size-to-price relationships typically confirm that downward size adjustments do not increase in uniform increments corresponding to increases in parcel size. Rather, their magnitude tends to diminish toward a point (size) from which further adjustments are not supportable.

This is a significant acknowledgment. Identifying that "point" as a recognized unit in terms of acreage, would serve two primary purposes. First, the potential for unsupportable theoretical adjustments to skew the analysis would be avoided. Second and most important, the potential for serious inequities would be minimized. This "potential" is illustrated in the following example.

> Two physically identical, adjacent tracts are owned by the same owner and differ only in size. One contains 3,200 acres (5 Sections) and the other is twice its size - 6,400 acres (10 Sections). Market prospects for both tracts (in bulk) are perceived to be little to none. By the application of non-market supported mechanical adjustments, a single Section (640 acres) contained within the boundaries of the 3,200 acre tract (5 Sections) would be valued higher than an identical adjacent section contained within the boundaries of the 6,400 acre tract (10 Sections).

The inequity results from a misinterpretation of the significance of the parcelization. Where contiguously owned tracts are identified separately, they may have been conveyed at different dates and/or from different grantors. It is our opinion that parcelizations based on previous conveyances or arbitrary allocations - do not create legal descriptions. Rather, the parcels represent informal assemblages of several sections and/or portions of sections that can presumably stand alone as legal descriptions. We are not aware of any entity in Alaska that would require a formal platting or subdivision procedure in order to recognize the conveyance of a single section (640 acres) from an arbitrary or informal assemblage. Based on our observations, one section (640 acres) appears to be an appropriate benchmark for our analysis. One section (640 acres) is a recognizable, conveyable unit and its relationship to smaller parcels, in the form of size adjustments, can be established from available data. Furthermore, the disposition of 640 acres, either in bulk, or in more marketable denominations, is a reasonably foreseeable event. For the purpose of the assignment, we recognize one Section (640 acres) - as the point above which marketing probabilities, and ultimately further size adjustments, become philosophical.

VALUE ESTIMATE - CHE01 & CHE02
(excluding contributory value of merchantible timber)

There are a number of acceptable procedures that can be used when valuing land. "Sales comparison is the most common technique for valuing land and it is the preferred method when comparable sales are available".[32] The Direct Sales Comparison Approach involves the comparison of the subject to similar properties that have been recently sold. Sales of similar properties are correlated to the subject by adjusting for various inequalities on an item by item basis. Elements of comparison considered to be the most relevant to the valuation of the subject are summarized as follows:

- financing terms
- market conditions (sale date)
- real property rights conveyed
- conditions of sale (motivation)
- physical features and characteristic
  - location
  - access
  - soils and topography
  - size
  - shape

As previously noted, the subject acreage is considered to consist of three components:

- "strategic" waterfront sites without merchantible timber
- non-strategic waterfront acreage featuring favorable topography but without merchantible timber
- non-strategic waterfront with unfavorable topography and contiguous backlands and/or cut-over timberland

Each component requires an individual analysis.

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32. Appraisal Institue, *The Appraisal of Real Estate,* Tenth Addition (1992) 302.

Methodology

Within the boundaries of the subject parcels is a substantial amount of acreage featuring protected beachfront and favorable topography - suitable for a variety of uses. A master valuation of representative acreage and a correlation to the subject is considered to be an appropriate approach. For the first two components, we have estimated the value of hypothetical premium "key parcels". Correlation to the subjects will be based on the recreation/tourism ratings of the Work Group ("low", "moderate", and "high"). It is not unreasonable to conclude that properties rated "high" would have a market advantage over a similar property rated "low". Available market data confirms this relationship. The following table summarizes sales of properties within areas rated by the Work Group.

Comparable	Locale	Date	Area	$/Ac.	EVOS Rec./Tour Rating
Comparable No. 19	EVOS # KON06	7-92	160	$676	"Low"
Comparable No. 12	EVOS # ENB08	10-86	69	$1,158	"Moderate"
Comparable No. 20	EVOS # AKI06	10-92	180	$1,722	"High"

In summary, actual market activity lends validity to the relevance of the Work Group ratings and our methodology.

The utility of the third component is so limited that value is not likely to be sensitive to the Work Group ratings. In our analysis, one representative value estimate for this component will be universally applied.

VALUATION - STRATEGIC WATERFRONT SITES

Select locations within the boundaries of the subject parcels may be considered geographically and physically strategic to a developer or entrepreneur. A general description of the hypothetical strategic "key parcel" is summarized in the following paragraphs.

Location

The "key parcel" is accessible by float plane or marine transport. The locale is generally described "world class" with regard to the relative quality of recreational opportunities offered. For the purposes of our analysis, "world class" is synonymous with the Work Group's recreation/tourism rating of "high.

Size

We recognize that some commercial recreation and marine commercial uses can be accommodated by sites as small as five acres. However, the sales of small sites for which further subdividing is not probable, usually do not reflect meaningful per acre indicators as they tend to be evaluated by prospective purchasers on a "per site" basis. Larger units of comparison are more appropriate for our analysis because they are more similar to the subject with regard to possible uses - including further subdividing into more marketable parcels. There is a sufficient quantity of data for parcel sizes approximating 160 acres and we have used this unit of comparison in our analysis.

Shape

An optimum shape is generally described as featuring a water frontage-to-depth ratio that allows for further subdividing opportunities.

Strategic Feature

The geographic/physical feature most likely to attract a developer entrepreneur would be the confluence of two anadromous rivers/streams, the outlet of a lake, or the mouth of a river/stream. In the optimum configuration, the site would straddle the river/stream so that control of entry is maximized.

Topography/Soils

Favorable topography/soils is described as moderately sloping with a high percentage of usable uplands.

We have identified several comparables that can be considered "strategic waterfront sites". The data is summarized in the following table. Details of the properties summarized are presented in the addenda of the report.

SUMMARY OF COMPARABLE SALES

STRATEGIC WATERFRONT SITES

#	Region	Neighborhood	Date	Adj. CEV	Acres	$/AC
1	Southeast	William Henry Bay	9-87	$149,500	159.99	$934
2	Southeast	Windham Bay	12-88	$85,000	98.50	$863
3	Western	Nushagak River	7-93	$200,000	80.00	$2,500
4	Western	Nonvianuk River/Lk	7-93	$229,000	119.99	$1,908
5	Kodiak	Horse Marine Bay	4-88	$100,000	19.30	$5,181
6	Kodiak	NW Olga Bay	6-88	$105,000	32.35	$3,246
7	Kodiak	Moser Bay	1-89	$100,000	29.10	$3,436
8	Kodiak	SW Olga Bay	3-89	$100,000	19.61	$5,099
9	Kodiak	Terror Bay	6-91	$470,000	151.21	$2,500
10	Kodiak	Ayakulik River	8-93	$1,000,000	574.88	$1,739

DESCRIPTION OF COMPARABLES

Comparable No. 1 - William Henry Bay, Southeastern Alaska (9/87)

This parcel was an old homestead (1917) located approximately equi-distant (35 miles) from Haines and Juneau at the head of a small bay off the Lynn Canal. The area is located within the boundaries of the Tongass National Forest. The parcel features only 1,799 feet of ocean frontage. However, the Beardslee River flows through the parcel so that water frontage is considered to be extensive. The river supports runs of Coho, Pink, and Chum salmon and Dolly Varden Trout. Merchantible timber, if any, was apparently not a factor and the oil and gas rights were not conveyed. A tidal flat restricts boat access at low tide. Approximately 60% to 70% of the site is fairly flat bottom land with the remainder fairly steep. The parcel was purchased for subdivision into 61 sites. Information regarding market exposure was not available.

Comparable No. 2 - Windham Bay, Southeastern Alaska (12/88)

Windham Bay is situated off Stephens Passage approximately 65 miles southeast of Juneau. The area is located within the boundaries of the Tongass National Forest. Located at the head of Windham Bay, this parcel consists of five contiguous mining claims dating to 1890. Several anadromous streams flow into the Bay. The parcel features only 1,330 feet of ocean frontage. However, Spruce Creek meanders through the parcel so that water frontage is considered to be extensive. A tidal flat restricts boat access to the creek's channel at low tide. The topo maps indicate a generally level site with moderate to steep slopes on either side of the creek. Although partially wooded, merchantible timber was apparently not a factor and the oil and gas rights were not conveyed. The acreage was reportedly purchased for recreational gold panning and as a possible future lodge site. The offering sold within a six month exposure period with a real estate broker.

Comparable No. 3 - Nushagak River, Southwestern Alaska (7-93)

Enroute to Bristol Bay, the Nushagak River collects several drainages including the upper Tikchik Lakes. The area is considered to be a "world class" trophy fishing and hunting area. The site is located approximately 26 miles east of Dillingham at the confluence of the Nushagak and Iowithla Rivers. The 80-acre site occupies only one corner of the intersection but features extensive river frontage and world class fishing opportunities. Access is by float plane or river boat. The topography is fairly level to rolling. There is no merchantible timber on the site and the oil and gas rights were not conveyed. The purchaser's intended use is for commercial recreation. The property was exposed to the market via the BIA process in which sealed bids are invited during an advertisement period of four weeks. If no bids are received, the property is listed for sale with BIA's realty department. The purchase price for this site represents the highest bid received during the initial offering.

Comparable No. 4- Nonvianuk River, Southwestern Alaska (7-93)

The Nonvianuk River flows from Nonvianuk Lake to its confluence with the Alagnak River, a tributary of the Kvichak River - the outlet of Lake Iliamna. The Alagnak is designated a "wild and scenic river" and the region is considered world class in terms of trophy fishing and hunting opportunities. The site is located approximately 100 miles east of Dillingham. It is strategic in that it

features approximately 2,500 feet of frontage on the Nonvianuk River and approximately 350 feet on Larson Lake, a small floatplane lake. The topography is fairly level to rolling. There is no merchantible timber on the site and the oil and gas rights were not conveyed. The purchasers intended use is for commercial recreation. The property was exposed to the market via the BIA process. No bids were received during the initial offering and the property was purchased during the subsequent listing period.

Comparable No. 5 - Horse Marine Bay/Lagoon, Kodiak, Alaska (4-88)

Horse Marine Bay is at the head of Moser Bay in the Olga Bay area of southwest Kodiak Island, approximately 75 miles from the City of Kodiak. Primary access is by float plane. A marine route from Kodiak would be in excess of 150 miles. This small site straddles a small creek at the entrance to Horse Marine Lagoon. An anadromous steam flows from Horse Marine Lake into the Lagoon. The "recreation/tourism" rating by the Work Group is "high" for the area. The topography is fairly level and the site features extensive frontage in relation to depth. There is no merchantible timber on the site but the subsurface rights were reportedly conveyed. The intended uses included a rural residence and commercial fishing and recreation operations. The property had been exposed to the market with a Kodiak real estate company.

Comparable No. 6 - Northwest Olga Bay, Kodiak, Alaska (6-88)

Olga Bay is located in the southwest region of Kodiak Island approximately 75 miles from the city of Kodiak. Primary access is by float plane. A marine route from Kodiak would be in excess of 150 miles. This small site straddles the mouth of an anadromous stream that drains from a small unnamed lake in the northwest part of the bay. The site is located westerly of a parcel rated as "high" (AKI06) by the Work Group. However, it is most similar yet inferior to a parcel located on the opposite shore (AKI08) rated as "moderate". Moorage is exposed to the Bay. The topography is fairly level and the site features extensive frontage in relation to depth. There is no merchantible timber on the site but the subsurface rights were reportedly conveyed. The purchaser's intended use is for commercial recreation. The property had been exposed to the market with a Kodiak real estate company.

Comparable No. 7 - Snug Cove, Moser Bay, Kodiak, Alaska (1-89)

Snug Cove is located on the west side of Moser Bay, the entrance to the Olga Bay region of southwest Kodiak Island approximately 75 miles from the city of Kodiak. Primary access is by float plane. A marine route from Kodiak would be in excess of 150 miles. The cove offers protected moorage and the site was formerly utilized by a cannery operation. A small stream flows across the site into the cove but sportfishing opportunities are minor. The Work Group's "recreation/tourism" rating for this area is "low". The topography ranges from lowlands to steep uplands and access can be complicated at low tide. Frontage in relation to depth is considered to be average (less than optimum). There is no merchantible timber on the site but the subsurface rights were reportedly conveyed. The intended use is for commercial fishing support. The property had been exposed to the market with a Kodiak real estate company.

Comparable No. 8 - Southwest Olga Bay, Kodiak, Alaska (3-89)

Olga Bay is located in the southwest region of Kodiak Island approximately 75 miles from the city of Kodiak. Primary access is by float plane. A marine route from Kodiak would be in excess of 150 miles. This small site is situated at the outlet of Olga Creek, an anadromous stream that drains the South Olga Lake system (upper and lower) into the southwest part of the bay. The "recreation/tourism" rating by the Work Group is "moderate" for the area. Moorage is exposed to the Bay. The topography is fairly level tundra and the site features extensive frontage in relation to depth. There is no merchantible timber on the site but the subsurface rights were reportedly conveyed. The purchaser's intended use was for a commercial fishing operation. The property had been exposed to the market with a Kodiak real estate company.

Comparable No. 9 - Uganik Passage, Kodiak Island, Alaska (6-91)

This former homestead is situated on Terror Bay in the Uganik Passage approximately 30 air miles southwest of the City of Kodiak. Primary access is by floatplane. A marine route from Kodiak would be approximately 95 miles. The site offers protected waters and features extensive ocean frontage at the outlet of a small anadromous stream. The locale is outside the areas rated by the Work Group but located between areas with recreation/tourism ratings of "high" (KON01) and "moderate" (AJV06). Topography ranges from moderate to steep slopes. The site features extensive frontage in relation to depth. No

merchantible timber is located on the site and only the surface estate was conveyed. The homestead was improved with an older house and miscellaneous outbuildings. The adjusted cash equivalent value reflects an allocation for the site (as vacant). The site lies within the boundaries of the Kodiak National Wildlife Refuge and was purchased by the U. S. Fish and Wildlife Service. The property had been exposed to the market for over one year.

Comparable No. 10 - Ayakulik River, Kodiak, Alaska (8-93)

The Ayakulik River is the collector for numerous drainages of western Kodiak Island including Red Lake. The river empties into the Pacific Ocean along a stretch of exposed coastline. The site is located approximately 90 air miles from the city of Kodiak. Primary access is by float plane. A marine route from Kodiak would be in excess of 150 miles. The locale is outside the areas rated by the Work Group but would be considered "world class" by most measures. The Ayakulik is perhaps second only to the Karluk River as a sportfishing destination on the Island. Topography is fairly level tundra above the river's bank. The configuration of the site is optimum in that it straddles the mouth so that control of entry is maximized. There is no merchantible timber on the site but the subsurface rights were to be conveyed. The intended use was preservation/conservation. The buyer (Conservation Fund) sought to limit access and prevent development. This site assures some degree of control over entry to and use of contiguous backlands. The data represents an offer only as opposed to a closed sale and the property had not been exposed to the market.

EXPLANATION OF ADJUSTMENT PROCESS

Financing Terms

The Adjusted Cash Equivalent Value reported in the table reflects previous considerations for terms of sale and allocations for improvements or non-realty components if any (see detailed "Comp Sheets" in addenda).

Market Conditions (sale date)

Sales occurring prior to 1986 have little relevance except to establish a decline in "market" values (see Market Overview). All of the transactions summarized and analyzed occurred from late 1987. The data reflects only spotty activity over a lengthy period of approximately 7 years. An adjustment for market conditions (time) during this period is not supported by the data and we have made no adjustment.

Conditions of Sale (motivation)

Undue stimulus and/or atypical influences, if any, are considered in the Reconciliation of Adjustments.

Real Property Rights Conveyed

The purpose of this appraisal is to estimate the market value of the fee simple interest. Although most of the comparables reflect the conveyances of only the surface estate, there is no measurable contributory value of the subject's subsurface. If an allocation for the inclusion of subsurface rights can be determined by interviews with the buyers and sellers, downward adjustments will be made.

Zoning

The properties are not subject to zoning regulations or other land use restrictions. Where comparables have been subject to zoning, it has no adverse impact on the utilization of the site to its Highest and Best Use. Therefore, we have made no adjustment.

Physical Features and Characteristics

Physical features and characteristics include; location, access; soils and topography; size and shape. Although ten transactions have been analyzed, they reflect only spotty activity over a period of approximately seven years. Due to the limited amount of data, it is extremely difficult to identify and apply reliable adjustments for various physical features and characteristics. Therefore, we have correlated the comparables to the subject in a qualitative analysis described by the Appraisal of Real Estate Tenth Edition as a "Relative Comparison Analysis". In this analysis, various physical features and characteristics are perceived as comparable/equal, superior or inferior. This technique illustrates the relative market position of the subject. A Market Data Grid and Relative Comparison Analysis is presented on the following page.

5	6	7	8	9	10
$5,181	$3,246	$3,436	$5,099	$2,500	$1,739
4-88 *(no adjust.)*	6-88 *(no adjust.)*	1-89 *(no adjust.)*	3-89 *(no adjust.)*	6-91 *(no adjust.)*	8-93 *(no adjust.)*
no known undue stimulus or duress *(no adjust.)*	no known undue stimulus or duress *(no adjust.)*	no known undue stimulus or duress *(no adjust.)*	no known undue stimulus or duress *(no adjust.)*	see reconciliation	see reconciliation
Fee Simple incl. Subsurface *not allocated*	Fee Simple incl. Subsurface *not allocated*	Fee Simple incl. Subsurface *not allocated*	Fee Simple incl. Subsurface *not allocated*	Fee Simple Surface Estate *(no adjust.)*	Fee Simple incl. Subsurface *not allocated*
$5,181	**$3,246**	**$3,436**	**$5,099**	**$2,500**	**$1,739**
Horse Marine Bay, SW Kodiak Island	NW Olga Bay, SW Kodiak Isl.	Snug Cove, Moser Bay, SW Kodiak	SW Olga Bay, SW Kodiak Isl.	Uganik Passage Kodiak Isl.	Ayakulik River, SW Kodiak Isl.
<20,000	<20,000	<20,000	<20,000	< 20,000	<20,000
150 miles +/-	150 miles +/-	150 miles +/-	150 miles +/-	95 miles +/-	150 miles +/-
most of route	most of route	most of route	most of route	most of route	most of route
"high" (Work Group) *(approx. =)*	"moderate" (appraiser) *(inferior)*	"low" (Work Group) *(inferior)*	"high" (Work Group) *(approx. =)*	"moderate" (appraiser) *(inferior)*	"high" (appraiser) *(approx. =)*
19.30 acres *(superior)*	32.35 acres *(superior)*	29.10 acres *(superior)*	19.61 acres *(superior)*	151.21 acres *(approx. =)*	574.88 acres *(inferior)*
extensive waterfront suitable for subdividing *(approx. =)*	extensive waterfront suitable for subdividing *(approx. =)*	less than optimum for subdividing *(inferior)*	extensive waterfront suitable for subdividing *(approx. =)*	extensive waterfront suitable for subdividing *(approx. =)*	extensive waterfront suitable for subdividing *(approx. =)*
straddles creek @ mouth at entrance to lagoon *(approx. =)*	straddles creek @ mouth *(approx. =)*	straddles creek @ mouth *(approx. =)*	one side of mouth of Olga Creek *(inferior)*	ocean frontage @ mouth of creek *(inferior)*	straddles river @ mouth *(approx. =)*
fairly level low % of usable uplands adequate semi-protected *(inferior)*	fairly level low % of usable uplands adeq. semi-protected *(inferior)*	level to steep low % of usable uplands protected cove *(inferior)*	fairly level high% of usable lowlands adeq. semi-protected *(inferior)*	moderate & steep slopes moderate % of usable uplands adeq. semi-protected *(inferior)*	moderate slope high % of usable uplands unprotected *(inferior)*
multi-use incl. comm rec.	commercial recreation	commercial fishing	commercial fishing	habitat preservation	habitat preservation
Negative	**Negative**	**Negative**	**Negative**	**Positive**	**Positive**

Reconciliation of Adjustments

The sales price indicators and the indicated overall adjustments are summarized as follows:

No.	Location	Date	Acres	$/AC	Net Adjust.
5	Horse Marine Bay, SW Kodiak Isl.	4-88	19.30	$5,181	Negative
8	SW Olga Bay, SW Kodiak Isl.	3-89	19.61	$5,099	Negative
7	Moser Bay, SW Kodiak Isl.	1-89	29.10	$3,436	Negative
6	NW Olga Bay, SW Kodiak Isl.	6-88	32.35	$3,246	Negative
key parcel	Southwest Kodiak Island	n/a	160.00	--------	----------
3	Nushagak River, Western Alaska	7-93	80.00	$2,500	Approx. =
9	Uganik Passage, NW Kodiak Island	6-91	151.21	$2,500	Positive
4	Nonvianuk River, Western Alaska	7-93	119.99	$1,908	Positive
10	Ayakulik River, West Kodiak Island	8-93	574.88	$1,739	Positive
1	Henry Bay, Southeast Alaska	9-87	159.99	$934	Positive
2	Windham Bay, Southeast Alaska	12-88	98.5	$863	Positive

The comparables analyzed reflect a wide range of per acre indicators within which the subject is fairly represented. The considerations given the most weight in the adjustment process are discussed in the following paragraphs.

Comparable Nos. 5, 6, 7, & 8 were included in our analysis because of their close proximity to the subject and the limited amount of data in the Kodiak area. And, three of the four feature extensive water frontage so that further subdividing to the Borough minimum of 5 acres is a possibility. The per acre indicators reflect a price-to-size relationship. However, the consistency of the sales prices (3 @ $100,000 and 1 @ $105,000) suggest the parcels were evaluated on a per site basis and that further subdivision opportunities were not a factor. Based on this observation, the relevance of per acre indicators to the valuation of larger parcels is seriously diluted - particularly recognizing that available listings of similar sized parcels in the same area have been marketed for approximately two years without favorable results (Comparable No. 20).

Furthermore, an expanded data search reveals relevant sales of similar sized-parcels outside the subject neighborhood. In summary, Comparable Nos. 5, 6, 7, & 8 can be given little if any weight in our analysis due to their small size in relation to the unit of comparison used our analysis (160 acres).

Comparable No. 9 was an inholding acquired by the United States Fish and Wildlife Service. Although purchased by a government agency, the transaction has some elements of a free, open-market transaction. The property had been exposed to the market for an extended period. While the property was listed for $1.8 million, the Service offered $468,000. The offer was rejected and the asking price was later reduced to $1 million. After a listing period of one year, the price was further reduced to $550,000 - toward a price considered to be reasonable by the Service. The negotiated price was reportedly supported by an appraisal.

The property is considered to be inferior to the subject "key parcel" and ordinarily an upward, or positive, adjustment would be appropriate. However, the transaction must be weighed with a reality check. Available data suggests that private sector purchasers cannot justify nearly a half million dollars in cash for a remote 160 acre tract (+/-) without merchantible timber. Such transactions are simply not occurring.

The market history of this property represents a classic example of an overly optimistic price free-falling to a point that it becomes a feasible undertaking for someone. In this case, that point is established by the acquisition of an in-holding by a government agency. While the procedures followed by the Service appear to have been by-the-book - the price free-fall, to a point that may have been established by a private sector buyer, was effectively interrupted. Although the sale reflects some elements of a market transaction (market exposure, arm's length negotiations), it can be given little weight in our analysis due to the "conditions of sale". The transaction is a project-related acquisition by a government agency subject to undue stimulus - consolidation of Refuge lands and the prevention of incompatible development.

Comparable 10 is the recent offer to purchase a large strategic site at the mouth of the Ayakulik River, one of Kodiak's premier destinations for sport fishermen. The site would be considered "world class" by most measures and

virtually directly comparable to the hypothetical "key parcel" with the exception of size. Based on other recent sales of strategic sites in nearby "world class" areas (Comparable Nos. 3 and 4), the reported purchase price may have been supportable and an upward adjustment for size would be appropriate.

However, it would not be appropriate to give this reported transaction too much weight even if the transaction had been consummated. First, land use economics do not support acquisitions of remote tracts at a half million dollars let alone a million. Second, to our knowledge, the property was not offered for sale nor otherwise exposed to the market. If the probability of a sale within a foreseeable marketing period is little to none, the relevance of the data is suspect. The fact that the ownership entity did not agree to the sale should not be misconstrued as an indication that an even higher value may be supportable. The decision to sell reportedly required unanimity and there was one holdout.

The site was targeted for acquisition by a conservation group seeking to restrict access and development. The group intends to pursue the acquisition and has reportedly set aside the funds for that purpose rather than using it to further other goals and objectives. This direction suggests that the eventually negotiated price will not be optimized by the influence of suitable alternatives (Principal of Substitution) and other characteristics of a free and open market. The analyst cannot know if the acquisition price reflects an extreme value or fairly represents the market norm. While the value may be supportable, the appraiser must look to the supporting data rather than this transaction itself.

Comparable Nos. 1, 2, 3 and 4 indicate a range of values for strategic sites from $863 to $2,500 per acre. Giving most weight to the recreation/tourism ratings, Comparable Nos. 1 and 2 are inferior and upward adjustments are appropriate. Comparable Nos. 3 and 4 effectively narrow the value range to $1,908 to $2,500 per acre. Both are recent sales of strategic sites in areas offering "world class" outdoor recreation opportunities. Both were purchased for commercial recreation operations and considered to be the most comparable to sites within areas rated "high" for recreation/tourism by the Work Group.

Comparable No. 4 is strategic in that it has both river and lake frontage. However, the quality of this feature is considered to be inferior to the subject "key parcel" and an upward adjustment is appropriate. Most weight is given to Comparable No. 3. The purchaser was a knowledgeable lodge operator and outdoor guide. He reportedly searched for three years before finding a site he considered to be optimum for his operation. Although the site is superior to the subject "key parcel" with regard to size, any downward adjustment is considered to be sufficiently offset by its occupation of only one corner at the confluence of two rivers. In contrast, the subject hypothetical "key parcel" represents an optimum configuration that straddles an intersecting creek/river so that control of entry is maximized.

In conclusion, it is our opinion that the value of the subject "key parcel" is fairly represented at $2,500 per acre. Again, the subject "key parcel" is described as "world class" with regard to the relative quality of recreational opportunities offered. For the purposes of our analysis, "world class" is synonymous with the Work Group's recreation/tourism rating of "high".

Correlation of the Key Parcel

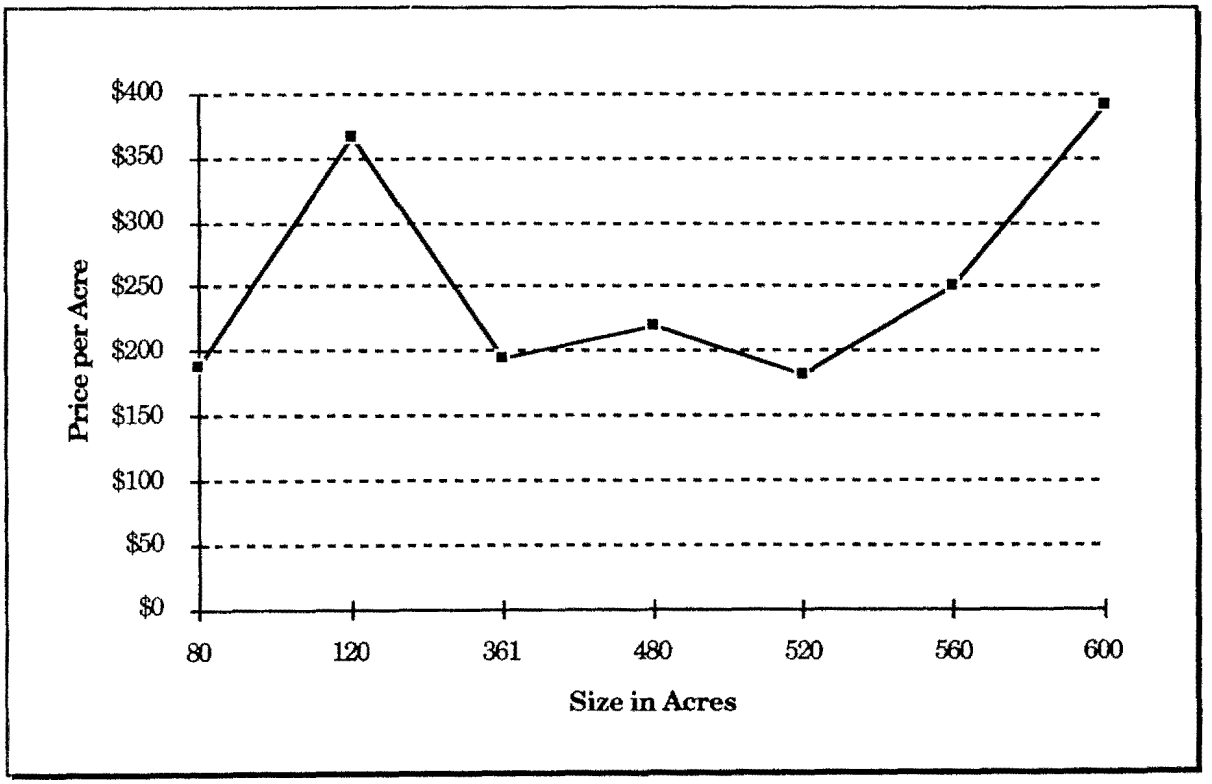
Recognizing the topography of Comparable Nos. 1 and 2 is inferior to that of the subject "key parcel", their per acre indicators ($863 & $934) are considered to be below and outside an appropriate range for the subjects. Based on this observation, strategic waterfront sites in remote locales are considered to be fairly represented within a range of per acre values from $1,000 to $2,500. Correlating the Work Group's recreation/tourism ratings with this range, the following per acre values are indicated.

Work Group Recreation/Tourism Rating	Indicated $/Acre
"High" (hypothetical "key parcel")	$2,500 per acre
"Moderate"	$1,750 per acre
"Low"	$1,000 per acre

The Work Group's recreation/tourism) rating for the subject is "high" and $2,500 per acre is considered to be an appropriate value indicator of Strategic Waterfront Sites contained within the boundaries of the subject. However, recognizing that identifiable strategic sites are not subdivided stand-alone properties, it is necessary to adjust the indicated values for size to acknowledge their inclusion into the whole.

Most real estate markets recognize that per acre values decrease as parcel sizes increase. Market derived indicators of adjustments are preferred. However, indicated price-to-size relationships are often erratic - even after considering the relative quality of the properties. Likewise, indicators derived from a relatively large sample of recent data are also inconclusive. Seven sales on the lower Kenai Peninsula have occurred since December of 1991. All are set-back from the highway with no improved access. The transactions are briefly summarized in the following table. Price-to-size relationships are illustrated in a subsequent graph.

#	Area	$/Acre	Date	Intended Use	Mkt. Exp.
25	80	$188	Feb-92	n/a	listed 10 mos.
24	120	$367	Dec-91	subdivision	not marketed
28	361	$194	May-93	timber	listed 2 mos.
26	480	$219	Oct-92	subdivision	not marketed
27	520	$183	Apr-93	timber	listed
29	560	$250	Aug-93	timber	not marketed
30	600	$392	Aug-93	homestead	n/a



The indicators are erratic, however, three of the properties (Nos. 27, 28, & 29) were purchased for their timber resources. These transactions reflect a narrow range of indicators from $183 to $250 per acre for tracts ranging in size from 361 to 560 acres.

In contrast, a wider range of indicators is reflected by Comparable Nos. 24 and 26. Both were purchased for subdividing - an economic use for which absorption, holding costs, and development costs are primary considerations in the estimation of present value. These transactions provide a more reliable

indicator of the price-to-size relationships likely to be reflected by non-timberlands.

Although neither were exposed to the market, a knowledgeable broker/developer was involved in both purchases. The two properties are generally similar with regard to soils/topography and proximity to roads/electricity. The downward adjustment indicated by a comparison of these two properties is illustrated in the following analysis.

No. Area	$/Acre	Adj.
120 acres	$367	
480 acres	$219	
Indicated Difference	$148	
Indicated Downward Adjustment		-40%

We are not aware of any other "pairs" of recent transactions that are sufficiently similar to yield reliable indicators. The "pair" analyzed reflects a 4 : 1 relationship (480 to 120 acres) - identical to the relationship of 640 acres (1 section) to 160 acres. We have tested the reasonableness of the indicated adjustment (-40%) with a mathematic model that simulates the subdivision and disposition of one section (640 acres). Assumptions are developed in the following paragraphs.

It is difficult for an appraiser to project absorption for a remote coastal area that has generally not been "open" for decades. Neither the subject nor surrounding lands have been available. The data analyzed reflects ten transactions (9 closed) over a seven year period. Their random locations define an unusually large region in relation to the subject's locale. Eliminating aged data, the six transactions that have occurred since 1989 reflect a total absorption of approximately 975 acres - approximately 195 acres per year. Four of those are located in an isolated submarket similar to Prince William Sound (Kodiak Archipelago). Assuming Comparable No. 10 would have closed, the indicated absorption of 775 acres since 1989 reflects an average of approximately 155 acres per year in this submarket.

The two indicators bracket the unit of comparison used in our analysis (160 acres) and suggest such an average annual absorption is not an unreasonable projection for a similar submarket. The absorption of 160 acres per year represents a disposition of 640 acres over a period of four years. As previously noted, 640 acres (1 section) is considered to be the point beyond which further size adjustments will not be applied.

At $1,750 per acre (mean/median for strategic waterfront sites), annual gross sales are projected at $280,000 ($1,750 x 160 acres). No upward pressure on values is anticipated. Costs of sale are estimated at 10%. Survey and administrative costs can be expected to be fairly low and we have allocated $25 per acre as a miscellaneous cost. Taxes are estimated based on the current mill rate (6.75) times the projected assessed valuation. The assessed valuation is estimated at 50% of the indicated average per acre value ($1,750 per acre) in order to reflect a consideration for the large-parcel characteristic of the subjects. Net annual sales are discounted by a range of rates considered to be appropriate for low-cost remote recreational subdivisions.

Yr.	Ac.	Gross Sales	Taxes	Devel. Costs	Costs of Sale	Net Sales	PV Disc. @ 14%	PV Disc. @ 16%	PV Disc. @18%
1	160	$280,000	($3,780)	($4,000)	($28,000)	$244,220	$214,228	$210,534	$206,966
2	160	$280,000	($2,835)	($4,000)	($28,000)	$245,165	$188,647	$182,198	$176,074
3	160	$280,000	($1,890)	($4,000)	($28,000)	$246,110	$166,117	$157,672	$149,790
4	160	$280,000	($945)	($4,000)	($28,000)	$247,055	$146,276	$136,446	$127,428
		$1,120,000					$715,268	$686,851	$660,258
					Ind.	Adj.	36.14%	38.67%	41.05%

The indicated adjustments range from approximately 36% to 41% and suggest that the adjustment indicated by the "pair" of sales (40%) analyzed is not unreasonable. However, recognizing that the extraction and disposition of strategic waterfront sites would require minimal additional upfront capital (no roads or utilities), the low-end adjustment based on the discount rate of 14% is considered to be more appropriate.

Using this model as a foundation (14% discount rate), size adjustments can be calculated to correspond with the amount of strategic waterfront acreage identified within the boundaries of each parcel. If a particular subject parcel has only one identifiable site (160 acres), a marketing period of one year would be reasonably probable and a relatively low size adjustment would be justified. Obviously, longer holding periods would be necessary to dispose of larger quantities of strategic acreage and higher size adjustments would be appropriate.

Size adjustments corresponding to holding periods determined by the amount of acreage are calculated in the following table:

Yr.	Ac.	Gross Sales	Taxes	Devel. Costs	Costs of Sale	Net Sales	PV Disc. @ 14%	Indicated Adjustment
1	160	$280,000	($945)	($4,000)	($28,000)	$247,055	$216,715	
160	**Ac.**	$280,000					$216,715	**-23% (rd)**
1	160	$280,000	($1,890)	($4,000)	($28,000)	$246,110	$215,886	
2	160	$280,000	($945)	($4,000)	($28,000)	$247,055	$190,101	
320	**Ac.**	$560,000					$405,987	**-27% (rd)**
1	160	$280,000	($2,835)	($4,000)	($28,000)	$245,165	$215,057	
2	160	$280,000	($1,890)	($4,000)	($28,000)	$246,110	$189,374	
3	160	$280,000	($945)	($4,000)	($28,000)	$247,055	$166,755	
480	**Ac.**	$840,000					$571,186	**-32% (rd)**
1	160	$280,000	($3,780)	($4,000)	($28,000)	$244,220	$214,228	
2	160	$280,000	($2,835)	($4,000)	($28,000)	$245,165	$188,647	
3	160	$280,000	($1,890)	($4,000)	($28,000)	$246,110	$166,117	
4	160	$280,000	($945)	($4,000)	($28,000)	$247,055	$146,276	
640	**Ac.**	$1,120,000					$715,268	**-36% (rd)**

Summary

We previously concluded a per acre value of $2,500 was supportable for a 160 acre strategic site within the boundaries of the subject. Recognizing such sites are not stand-alone parcels, it is necessary to reflect their inclusion into the whole by adjusting the indicated per acre value downward for size. Based on the analysis of size-to-price, downward size adjustments will be applied according to the following schedule:

Quantity of Strategic Waterfront Acreage Identified	Indicated Adjustment
≤ 160 acres	-23%
> 160 but ≤ 320 acres	-27%
> 320 but ≤ 480 acres	-32%
> 480 acres	-36%

The subject parcels feature two "strategic" sites - one at the outlet of Eshamy Lake where the creek enters the Lagoon. The other is at the mouth of Jackpot Lakes system at the head of Jackpot Bay. However, merchantible timber provides the highest present value to the Eshamy site and to one-half of the Jackpot site. Therefore, the allocation to strategic waterfront acreage is only 80 acres and the low-end discount rate is appropriate.

Based on these analyses, the per acre value of strategic acreage within the boundaries of the subject, adjusted for size to reflect its inclusion into the whole, is calculated as follows:

Indicated Per Acre Value of Strategic Sites rated "High"	$2,500
Less: Size Adjustment (23%)	($575)
Indicate "Bulk" Value of Strategic Waterfront Acreage (per acre)	$1,925

VALUATION - NON-STRATEGIC WATERFRONT ACREAGE

This component is described as featuring favorable topography but without the strategic quality of a significant geographic/physical feature. This "second tier" acreage may be suitable for a variety of uses but would be at a disadvantage if "strategic" sites are available. A general description of the hypothetical "key parcel" is summarized in the following paragraphs.

Location

The "key parcel" is accessible by float plane or marine transport. The Work Group's recreation/tourism rating for the locale "high".

Size

Sales of small sites for which further subdividing is not probable, usually do not reflect meaningful per acre indicators as they tend to be evaluated by prospective purchasers on a "per site" basis. Larger units of comparison are more appropriate for our analysis because they are more similar to the subject with regard to possible uses - including further subdividing into more marketable parcels. There is a sufficient quantity of data for parcel sizes approximating 160 acres and we have used this unit of comparison in our analysis.

Shape

An optimum shape is generally described as having extensive water frontage in relation to depth so that further subdividing opportunities are a possibility.

Topography/Soils

Favorable topography/soils is described as moderately sloping with a high percentage of usable uplands. For the purposes of our analyses, topography is considered as favorable when the initial 100 foot contour illustrated on the United States Geological Survey (U. S. G. S) quadrangle maps, is set-back a notable distance from the waterfront so moderately sloping usable terrain is evident.

The data is summarized in the following table. Details of the properties summarized are presented in the addenda of the report.

SUMMARY OF COMPARABLE SALES

NON - STRATEGIC WATERFRONT ACREAGE

#	Region	Neighborhood	Date	Adj. CEV	Acres	$/AC
11	Southeast	Haines	11-92	$100,000	153.67	$651
12	Kenai - lower	Chrome Bay	10-86	$80,000	69.09	$1,158
13	Cook Inlet - west	Chinitna Bay	8-90	$85,101	74.96	$1,135
14	SW AK.	Eagle Bay, Iliamna	6-91	$70,000	80.00	$875
15	SW AK.	Lake Clark	2-94	$105,000	159.97	$656
16	SW AK.	Lake Aleknagik	7-93	$90,000	79.95	$1,126
17	Kodiak	Uganik Bay	6-86	$85,500	78.42	$1,090
18	Kodiak	Afognak Island	11-89	$1,064,269	273.63	$3,889
19	Kodiak	Sturgeon River	7-92	$108,167	159.97	$676
20	Kodiak	Olga Bay	10-92	$310,000	180.00	$1,722
21	Kodiak	Afognak Island	4-94	$180,000	59.98	$3,001
22	Kodiak	Uyak Bay USS 9434	listing	$352,000	159.99	$2,200

DESCRIPTION OF COMPARABLES

Comparable No. 11 - Chilkat Inlet, Southeastern Alaska (11-92)

This site is located approximately 10 miles south of Haines on the opposite side of the inlet. The site lies within the Haines State Forest and Resource Management Area approximately 1 mile east of the base of Davidson Glacier. Access by small boat is practical but the site lacks protected moorage. The site features a beachfront and fairly level, wooded topography. Merchantible timber, if any, was apparently not a factor and oil/gas rights were not conveyed. The property was purchased for speculation but the most probable use is recreation. However, water frontage in relation to depth is not favorable for extensive subdividing. The property had been listed with a Haines brokerage but the buyers reportedly negotiated directly with the seller.

Comparable No. 12 - Chrome Bay, Lower Kenai Peninsula, Alaska (10/86)

The parcel is located in the Port Chatham area of the Lower Kenai Peninsula. The "recreation/tourism" rating by the EVOS Restoration Team Habitat Protection Work Group for the general locale (ENB08) is "moderate". Access by boat is from Homer (Kachemak Bay) but the route is exposed to open-ocean.

The parcel features extensive water frontage and was purchased for subdivision into marketable recreation sites. The purchaser has reportedly sold eight lots since 1987. Merchantible timber, if any, was apparently not a factor. The topography is moderately sloping and a high percentage of the acreage is usable. The site had been previously utilized in a mining operation and the mineral rights were conveyed along with the surface estate. The buyer indicated that the acquisition of the subsurface estate effectively eliminated a potential nuisance but no portion of the purchase price was allocated (to the subsurface estate). The purchaser reportedly felt the price was below market and paid the seller's asking price. However, the offering was exposed to the market with an Anchorage brokerage for approximately six months.

Comparable No. 13 - Chinitna Bay, West Cook Inlet, Alaska (8-90)

Chinitna Bay is located on the west side of Cook Inlet, approximately 45 miles west of Anchor Point. Access by small boat is impractical much of the time due to the expanse of open water that must be crossed. The area (Iniskin Peninsula) is situated within the boundaries of the Kenai Peninsula Borough. The parcel features extensive water frontage and gently sloping wooded terrain. The site was reportedly purchased for a lodge site. Merchantible timber, if any, was apparently not a factor and only the surface rights were conveyed. The offering was advertised for four to six weeks.

Comparable No. 14 - Eagle Bay, Lake Iliamna, Western Alaska (6-91)

Lake Iliamna is a popular fly-in recreation area west of the Alaska Range. At approximately 75 miles in length, Lake Iliamna is the largest fresh-water lake in Alaska and represents the centerpiece of the premier outdoor region generally referred to as "southwestern" Alaska. The area is considered to be a "world class" trophy fishing and hunting area. The site is located at Eagle Bay, six miles east of the community of Iliamna and approximately eight miles east of the airport. The area is characterized by rolling tundra, some of which is semi-wet. However, the site features a good gravel beach and extensive water frontage. As such, it is well-suited for subdividing. There is no merchantible timber in the area and the oil and gas rights were not conveyed. The property had been exposed to the market with an Anchorage broker for approximately nine months.

Comparable No. 15 - North Side of Lake Clark, Western Alaska (2-94)

Lake Clark is located to the north of Lake Iliamna in the fly-recreation area west of the Alaska Range. The area is considered to be a "world class" trophy fishing and hunting area. The site is an inholding within the boundaries of the Lake Clark National Park and Preserve. The site features moderately sloping topography and a gravel beach. Frontage in relation to depth is considered to be average (less than optimum). There is no merchantible timber in the area and the oil and gas rights were not conveyed. The site was acquired for a personal use cabin/home site. The property had been exposed to the market with an Anchorage broker for 38 days.

Comparable No. 16 - Lake Aleknagik, Western Alaska (7-93)

Lake Aleknagik is the lower lake in the Wood River - Tikchik Lakes chain that drains into Bristol Bay at Dillingham in southwest Alaska. The area is considered to be a "world class" trophy fishing and hunting area. The site is situated on the north shore of the lake approximately six miles west of the community of Aleknagik. Access is by float-plane or riverboat. The site features undulating topography and a gravel beach along an extensive shoreline well-suited for subdividing. There is no merchantible timber in the area and the oil and gas rights were not conveyed. The site was acquired for a personal use cabin/home site. The property was exposed to the market via the BIA process. No bids were received during the initial offering and the property was purchased during the subsequent listing period.

Comparable No. 17 - Uganik Bay, Kodiak, Island Alaska (6-86)

Uganik Bay is located on the northwest side of Kodiak Island approximately 30 air miles southwest of the City of Kodiak. Primary access is by floatplane. A marine route from Kodiak would be approximately 95 miles. The locale is outside the areas rated by the Work Group but located between areas with recreation/tourism ratings of "high" (KON01) and "moderate" (AJV06). Topography is reported to be poor but the anchorage good. Water frontage in relation to depth is considered to be average (less than optimum). There is no merchantible timber on the site but the subsurface rights were reportedly conveyed. The purchasers intended use was for a personal residence and commercial fishing support base. The property was not exposed to the market. The transaction was negotiated between friends.

Comparable No. 18 - Raspberry Straights, Afognak Island, Alaska (11-89)

This sale represents an assemblage of two contiguous parcels (127 & 147 acres) fronting on Raspberry Straights approximately 25 air miles northwest of the City of Kodiak. The topography is moderately sloping and the assembled site features extensive water frontage. A small creek runs through the property but the site is not considered strategic. The waters are protected but access is poor at low tide. The estimated value of merchantible timber was reported to be the major component of the purchase price. Only the surface estate was conveyed.

The site was purchased by a Russian religious group formerly known as the Old Believers. The group intended to establish an isolated colony/community and had searched extensively for a site that offered a combination of physical and locational characteristics considered to be optimum. The purchase price was reportedly negotiated prior to any appraisals and the site had not been marketed.

Comparable No. 19 - Sturgeon River, Kodiak Island, Alaska (7-92)

This parcel is situated at the head of a tidal lagoon where the Sturgeon River empties into the Shelikof Strait. The area lies within the boundaries of the Kodiak National Wildlife Refuge on the west side of the Island approximately 90 air miles southwest of the City of Kodiak. The "recreation/tourism" rating by the EVOS Restoration Team Habitat Protection Work Group for the general locale (KON06) is "low". Access by small boat is not practical and float plane access is limited to high tides. The site occupies a bench above the lagoon/river and is suitable for an airstrip. The water frontage in relation to depth is not favorable for extensive subdividing. There is no merchantible timber in the area and only the surface estate was conveyed. The site was purchased for a guided fly-in sportfishing operation. The property had been actively marketed for nearly five years and the eventual purchase price reflected extremely favorable terms.

Comparable No. 20 - Olga Bay, Kodiak Island, Alaska (10-92)

This tract is located on Olga Bay within the boundaries of the Kodiak National Wildlife Refuge approximately 85 miles southwest of the City of Kodiak. The "recreation/tourism" rating by the EVOS Restoration Team Habitat Protection Work Group for the general locale (AKI06) is "high". The site offers extensive beachfront in a small semi-protected bay but access is complicated at low tide. Approximately 30% to 40% of the backlands are reported to be poorly drained. There is no merchantible timber in the area and only the surface estate was to be conveyed. The site was intended for a fishing lodge operation. The property had been exposed to the market with a Kodiak brokerage for approximately 5 weeks. The purchase terms required approximately one-third down ($100,000). The buyer was not able to close and the transaction fell through.

Comparable No. 21 - Afognak Island, Alaska (4-94)

The site is located on the southeasterly shore of Afognak Island fronting on Kupreanof Straight approximately 25 air miles northwest of the city of Kodiak. The topography is fairly level and the site has no water frontage. The availability of legal access from the waterfront is in question as of the date of this report. The estimated value of merchantible timber was reported to be the major component of the purchase price. Only the surface estate was conveyed.

The site was purchased by a Russian family with ties to the Old Believer colony nearby (Comparable No. 18). In spite of the site's shortcomings, it was the most proximal of available alternatives at the time. The property had not been exposed to the market. The availability of the site was communicated by word of mouth.

Comparable No. 22 - Uyak Bay, Kodiak Island, Alaska (listing)

Uyak Bay is located on the northwest side of Kodiak Island. Primary access is by floatplane. A marine route from Kodiak would be in excess of 100 miles. The site is located within the boundaries of KON02, a parcel with a Work Group recreation/tourism rating of "high". Topography is moderately steep and the shoreline features a gravel beach and extensive frontage suitable for subdividing. A small cove offers protected moorage for floatplanes and/or small boats. The ratio of water frontage to depth is less than optimum but suitable for subdividing. There is no merchantible timber in the area and only the surface estate is offered. The property was exposed to the market via the BIA process. No bids were received during the initial offering and the property is currently listed for sale.

EXPLANATION OF ADJUSTMENT PROCESS

Financing Terms

The Adjusted Cash Equivalent Value reported in the table reflects previous considerations for terms of sale and allocations for improvements or non-realty components if any (see detailed "Comp Sheets" in addenda).

Market Conditions (sale date)

Sales occurring prior to 1986 have little relevance except to establish a decline in "market" values (see Market Overview). All of the transactions summarized and analyzed occurred since mid-1986. The data reflects only spotty activity over a lengthy period of approximately 8 years. An adjustment for market conditions (time) during this period is not supported by the data and we have made no adjustment.

Conditions of Sale (motivation)

Undue stimulus and/or atypical influences, if any, are considered in the Reconciliation of Adjustments.

Real Property Rights Conveyed

The purpose of this appraisal is to estimate the market value of the fee simple interest. Although most of the comparables reflect the conveyances of only the surface estate, there is no measurable contributory value of the subject's subsurface. If an allocation for the inclusion of subsurface rights can be determined by interviews with the buyers and sellers, downward adjustments will be made.

Zoning

The properties are not subject to zoning regulations or other land use restrictions. Where comparables have been subject to zoning, it has no adverse impact on the utilization of the site to its Highest and Best Use. Therefore, we have made no adjustment.

Physical Features and Characteristics

Physical features and characteristics include; location, access; soils and topography; size and shape. Although ten transactions have been analyzed, they reflect only spotty activity over a period of approximately seven years. Due to the limited amount of data, it is extremely difficult to identify and apply reliable adjustments for various physical features and characteristics. Therefore, we have correlated the comparables to the subject in a qualitative analysis described by the Appraisal of Real Estate Tenth Edition as a "Relative Comparison Analysis". In this analysis, various physical features and characteristics are perceived as comparable/equal, superior or inferior. This technique illustrates the relative market position of the subject. A Market Data Grid and Relative Comparison Analysis is presented on the following page.

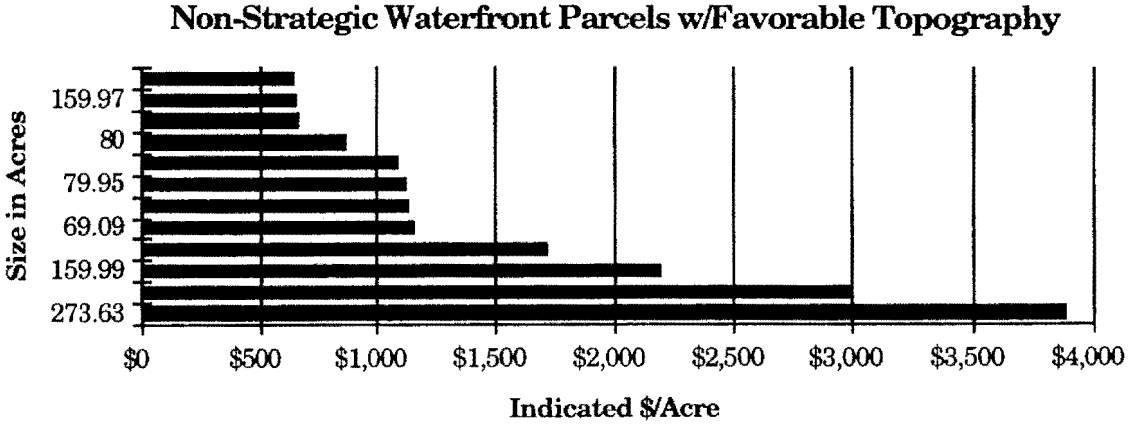
16	17	18	19	20	21	22
$1,126	$1,090	$3,889	$676	$1,722	$3,001	$2,200
7-93 *(no adjust.)*	6-86 *(no adjust.)*	11-89 *(no adjust.)*	7-92 *(no adjust.)*	10-92 offer *(no adjust.)*	4-94 *(no adjust.)*	avail. listing *(no adjust.)*
no known undue stimulus or duress *(no adjust.)*	no known undue stimulus or duress *(no adjust.)*	see reconciliation	no known undue stimulus or duress *(no adjust.)*	no known undue stimulus or duress *(no adjust.)*	see reconciliation	no known undue stimulus or duress *(no adjust.)*
Fee Simple Surface Estate *(no adjust.)*	Fee Simple including subsurface *(not allocated)*	Fee Simple Surface Estate *(no adjust.)*	Fee Simple Surface Estate *(no adjust.)*	Fee Simple Surface Estate *(no adjust.)*	Fee Simple Surface Estate *(no adjust.)*	Fee Simple Surface Estate *(no adjust.)*
$1,126	**$1,090**	**$3,889**	**$676**	**$1,722**	**$3,001**	**$2,200**
Lake Aleknagik, SW Alaska < 10,000 25 miles +/- none "high" (appraiser) *(approx. =)*	Uganik Bay, Kodiak Isl. < 20,000 95 miles +/- much of route "mod.-high" (appraiser) *(inferior)*	Raspberry Straights, Afognak Isl. < 20,000 50 miles +/- much of route "moderate" (appraiser) *(inferior)*	Sturgeon River, Kodiak Isl. Alaska < 20,000 120 miles +/- most of route "low" (Work Group) *(inferior)*	Olga Bay, SW Kodiak Isl. Alaska < 20,000 150 miles +/- most of route "high" (Work Group) *(approx. =)*	Kupreanof Straights, Afognak Isl. < 20,000 50 miles +/- much of route "mod-high" (appraiser) *(inferior)*	Uyak Bay, Kodiak Isl. Alaska < 20,000 100 miles +/- much of route "high" (Work Group) *(approx. =)*
79.95 acres *(superior)*	78.42 acres *superior)*	273.63 acres assemblage *(equal)*	159.97 acres *(equal)*	180.00 acres *(approx. =)*	59.98 acres *(superior)*	159.99 acres *(equal)*
optimum for subdividing *(approx. =)*	not favorable for subdividing *(inferior -)*	favorable for subdividing *(inferior)*	not favorable for subdividing *(inferior) -*	favorable for subdividing *(inferior)*	not favorable for subdividing *(inferior -)*	favorable for subdividing *(inferior)*
moderate slope high% of usable uplands protected lake shore *(approx. =)*	steep slope low to moderate % of usable uplands protected *(inferior)*	moderate slope high% of usable uplands & timber protected *(superior)*	fairly level bench high % of usable uplands protected *approx. =)*	fairly level moderate % of usable uplands semi-protected *(inferior)*	fairly level moderate % of usable uplands & timber unprotected *(superior)*	steep slope low to moderate % of usable uplands protected *(inferior)*
personal recreation	personal multi-use	colony	commercial recreation	commercial recreation	colony	n/a
Approx. =	**Positive**	**Negative**	**Positive**	**Negative**	**Negative**	**Negative**

Reconciliation of Adjustments

The sales price indicators and the indicated overall adjustments are summarized as follows:

No.	Location	Date	Acres	$/AC	Net Adjust.
18	Raspberry Strait Narrows, Afognak	11-89	273.63	$3,889	Negative
21	Kupreanof Strait, Afognak Island	4-94	59.98	$3,001	Negative
22	Uyak Bay, Kodiak Island	avail.	159.99	$2,200	Negative
20	Olga Bay, SW Kodiak Island	10-92	180.00	$1,722	Negative
12	Chrome Bay, Lower Kenai Peninsula	10-86	69.09	$1,158	Approx. =
13	Chinitna Bay, West Cook Inlet	8-90	74.96	$1,135	Approx. =
16	Lake Aleknagik, SW Ak.	7-93	79.95	$1,126	Approx. =
key parcel	Prince William Sound	n/a	160.00	--------	----------
17	Uganik Bay, NW Kodiak Island	6-86	78.42	$1,090	Positive
14	Eagle Bay, Lake Iliamna, SW AK.	6-91	80.00	$875	Positive
19	Sturgeon River, SW Kodiak Isl. Ak.	7-92	159.97	$676	Positive
15	Lake Clark, SW AK.	2-94	159.97	$656	Positive
11	Haines, SE AK.	9-92	153.67	$651	Positive

The comparables analyzed reflect a wide range of per acre indicators - from $651 to $3,889. The spread is illustrated in the following graph.



Eight of the twelve comparables are fairly consistent, falling within a range from $649 to $1,158 per acre. Four of the comparables are sufficiently outside the range that the reliability of their indicators ($1,722 to $3,889) is suspect.

Comparable Nos. 18 and 21 represent the extreme deviations from any market "norms" indicated by the remainder of the data. Comparable No. 18 represents the upper-end indicator for a non-strategic waterfront site. While the site may have been well-suited for the intended use, the price is not supported by other data that qualifies as adequate for purposes of estimating market value. The negotiated price appears to have resulted from a combination of influencing factors.

First, there were reportedly few alternatives that were equally suitable for their intended use. However, the buyers' criteria was atypical. The presumption that "scarcity" justifies a premium cannot be applied to the valuation of thousands of acres.

Second, merchantible timber was reported to be the major component of price. While the buyers did not intend to log the site, the presence of this resource would clearly have an impact on negotiations. Even if the buyer did not intend a commercial harvest, the timber represented an on-site source of building materials, firewood, etc. Also, a knowledgeable seller would expect a premium above the market norms reflected by the sales of non-timbered lands.

Third, the buyer's knowledge of the market is suspect. The property was not exposed to the market. And, available market data indicates that only a nominal value, if any, can be justified for cutover timberland. While the BIA was not in a position to confirm the estimated timber value, reports by other appraisers have pegged the timber component at approximately $717,000. Such an allocation would leave the cutover land component to justify a value of more than $1,000 per acre - an indicator wholly unsupported in the marketplace.

Comparable No. 21 reflects the second highest per acre indicator yet it is not a waterfront site. Like Comparable No. 18, a stand of merchantible timber was a substantial component of the negotiated price and it would be meaningless to attempt to correlate the sale to the subject properties. Nevertheless, the property had not been exposed to the market and the purchase price appears to be above-market - particularly given the per acre prices indicated by the sales of waterfront parcels. Aside from the significance of the timber component, the site is dramatically inferior in terms of physical features and characteristics to

virtually all of the other comparables analyzed. The site did not have access to/from the waterfront and the legality of the negotiated access is currently in question. A location proximal to Comparable No. 18 was a primary motivator and the purchaser reportedly had few, if any, suitable alternatives from which to choose.

Although both of these transactions represent closed sales resulting from arm's length negotiations, neither are relevant to the valuation of the subject. First, as land with merchantible timber, they are not similar to the subject (valued here excluding the contributory value of merchantible timber). Second, further colonization by this group, if any, is likely to occur in the same area. In other words, the subject neighborhood is not likely to benefit from the emergence of this small market segment. Finally, without market exposure, there is no assurance of an optimization process toward the free and open market norms suggested by the other data. In summary, no weight can be given to these transactions in the final analysis of the subject "key parcel".

Comparable No. 22 represents an available listing. While the parcel has many desirable attributes, data from the previous analysis suggests that only geographically/physically strategic parcels can be expected to realize such a price after a reasonable exposure period. Negotiated prices are most often for less than the asking price and no weight can be given this comparable. The upper end of an appropriate range for the subject is suggested by the remaining data.

Comparable No. 20 was reported as an agreement to purchase that failed to close because the buyer could not perform. A price of $310,000 ($1,722/acre) was to be paid with a large down ($100,000) and an amortized balance over 21 years (approx.) at 10%. Negotiations were arm's length and the offer followed a market exposure period. The buyer was knowledgeable and the site was to be acquired for an economic use. However, any consideration of the offer must be tempered by an acknowledgment the transaction failed to close and all of the other data reflects lower per acre indicators. Based on these observations, Comparable No. 20 can only represent the extreme upper-end of an appropriate range for the subject.

The remaining eight comparables reflect a range of per acre indicators from $651 to $1,158 and suggest two distinct stratas of value related to size. Five parcels ranging in size from approximately 70 to 80 acres reflect a value range from $875 to $1,158 per acre. Three parcels ranging in size from approximately 154 to 160 acres reflect a value range from $651 to $676 per acre. The average per acre indicator of the three larger tracts is nearly 40% less than the average of the five smaller tracts. Based on these observations, it is not unreasonable to conclude that significant concessions are necessary to dispose of acreage in denominations of 160 acres. Non-strategic acreage, even with favorable topography, is less likely to attract large commitments of capital in relation to strategic sites that are suitable for the greatest number of alternative uses.

However, the significance of the indicated size-to-price relationship is diluted by further review of the data. The low-end of the range is represented by Comparable No. 11. The parcel is not well-suited for subdividing and the water frontage is exposed to open ocean - inferior characteristics. Comparable No. 15 reflects a similar low-end indicator. The water frontage to depth ratio is less than optimum for subdividing. Furthermore, the seller accepted an offer after only 38 days on the market. The broker confirmed the seller was somewhat motivated and a higher sales price would probably have been achievable with a longer marketing period. Although both of these parcels contained approximately 160 acres, their per acre indicators are below an appropriate range for the subject.

Comparable No. 19 is another 160 (+/-) parcel located on Kodiak Island. It represents a recent acquisition by a developer/entrepreneur after the offering had been exposed to the market. The site is similar in size to the subject key parcel but inferior with regard to shape (not favorable for subdividing) and location (rated "low" by the Work Group). Based on these features and characteristics, the indicated per acre value of $676 is considered to be below an appropriate range for the subject. A nominal upward adjustment of 10% to 20% for these deficiencies would indicate a per acre value range from $744 to $811 for a 160 parcel. Based on these observations, $800 per acre is considered to be the low-end of an appropriate range within which the subject is fairly represented.

An appropriate upper-end indicator is represented within a narrow range established by Comparable Nos. 12, 13, and 16 - $1,126 to $1,158 per acre. Although all are smaller than the 160 acre unit of comparison (key parcel), various inequalities tend to offset size considerations so that an upper-end value of $1,150 per acre is supportable for a 160 acre parcel exhibiting a favorable combination of positive attributes (key parcel).

Correlation of the Key Parcel

Comparable Nos. 12, 13, 16, and 19 establish a tight range of value from $800 to $1,150 per acre for non-strategic 160 acre parcels featuring favorable topography. The indicated per acre values reflect the influence of numerous variables. As such, the isolation of reliable considerations for location, size, and other physical features and characteristics would be extremely difficult. In order to recognize the relative quality of various locales and that of the subject key parcel, we have correlated the Work Group's recreation/tourism ratings with the indicated range of values. The indicated values are summarized as follows:

Work Group Recreation/Tourism Rating	Indicated $/Acre
"High" (hypothetical "key parcel")	$1,150 per acre
"Moderate"	$975 per acre
"Low"	$800 per acre

The Work Group's recreation/tourism) rating for the subject is "high" and $1,150 per acre is considered to be an appropriate value indicator for this component. Recognizing this acreage does not represent a stand-alone component, it is necessary to reflect its inclusion into the whole by adjusting the indicated per acre value downward for size.

In the previous analysis, progressive size adjustments were developed depending on the quantities of component. Based on the extent of the subject's shoreline that could be so categorized, the upper end size adjustment would be appropriate (36%). The size adjustments were based on an analysis in which absorption is projected at 160 acres per year. However, it is not unreasonable to conclude that the absorption of non-strategic waterfront acreage would be slower than the absorption of strategic sites and downward adjustments of greater magnitude

would be appropriate. For the purposes of our analysis, we have made a downward adjustment of 40%.

Based on these analyses, the per acre value of this component, adjusted for size to reflect its inclusion into the whole, is calculated as follows:

Indicated Per Acre Value of Non-Strategic Waterfront featuring favorable topography rated "High"	$1,150
Less: Size Adjustment (40%)	($460)
Indicate "Bulk" Value of Strategic Waterfront Acreage (per acre)	$690

VALUE ESTIMATE -*NON-STRATEGIC WATER FRONTAGE FEATURING UNFAVORABLE TOPOGRAPHY & CONTIGUOUS BACKLANDS and CUT-OVER TIMBERLAND*

Traditional land use patterns in coastal environments reflect concentrations along the waterfront. Individual Native allotments in coastal areas have been selected along the waterfront with rare exception - most often in protected waters near reliable food resources. The sales histories of remote waterfront subdivisions in most Alaskan locales confirm that demand for non-waterfront sites/parcels is little to none. Based on these observations, it is not unreasonable to conclude that remote backlands have only a nominal value in relation to waterfront land. However, rugged topographical features render much of the waterfront acreage of no more utility than that of non-timbered backlands. This third component is described as "non-strategic water frontage featuring unfavorable topography and contiguous backlands".

Adequate market data for truly similar remote Alaska properties is nearly non-existent. As a result, a direct comparison of "comparables" is not practical and a narrative evaluation is necessary. In this narrative, we have used data from various submarkets to identify, and then narrow, ranges considered to be appropriate for the value of the subject.

The Lower Kenai Peninsula offers Alaska's best example of a free open market for sizable tracts of acreage. The sales summarized in the following table reflect an active market with numerous buyers and sellers. All are generally similar in that they have no improved access nor electricity. The properties were acquired for a variety of uses.

#	Location	Date	Adj. CEV	Acres	$/AC	Intended Use
23	Anchor Point	8-90	$450,000	2,220	$203	recreation subdivision
24	Anchor Point	12-91	$44,000	120	$367	rural residential subdivision
25	Happy Valley	2-92	$15,000	80	$188	rural homesite
26	Anchor Point	10-92	$105,000	480	$219	recreation subdivision
27	Anchor Point	4-93	$95,000	520	$183	selective logging & subdivision
28	Anchor Point	5-93	$70,000	361	$194	selective logging & subdivision
29	Anchor Point	8-93	$140,000	560	$250	selective logging & subdivision
30	Homer	8-93	$235,000	600	$392	farm/ranch homestead

The properties are sufficiently different from the subject that a direct comparison of numerous physical features and characteristics is not practical nor necessary. However, the data is meaningful because it establishes a range of per acre indicators - for sizable tracts of land that are suitable for uses that assure a degree of marketability. The comparables reflect a range of per acre values from $183 to $392 per acre. Indicators reflected by these eight recent transactions are summarized in the following table:

Range	$183 to $392 per acre
Mid-Point of the Range	$288 per acre
Mean	$250 per acre
Median	$211 per acre
6 of the 8 reflect indicators of	$250 per acre or less
5 of the 8 fall within a narrow range from	$183 to $219 per acre

Comparable Nos. 23 through 30 are located in close proximity to the State highway system that serves nearly 300,000 residents of Southcentral Alaska. Electricity lines and community services are nearby. Given the unusable nature of the majority of the subject's acreage (steep terrain, remote), a general range of $200 to $400 must be considered to be above an appropriate range for the subject.

The overwhelming majority of the subject's non-strategic waterfront and contiguous backlands consists of terrain - generally unsuitable for any economic use. "Speculation" fairly describes the current Highest and Best Use of property types unsuitable for any other economic use - most wetlands, featureless tundra, mountains, and cut-over timberland. For such property types, economics dictate that only casual gambles of surplus capital can be justified for potential not likely to be realized in our lifetimes. The present value (investment) that can be justified for distant potential benefits is simply not measurable and only a nominal value may be supportable.

Cut-over timberland, not in the path of encroaching residential or commercial development, may not be productive until trees near maturity - more than 50 years from re-seeding. Yet cut-over timberland may offer the most promising speculative prospects. At least the resource should regenerate given time.

The data in the following table reflects the perceptions of buyers of Alaska timberlands. Interviews with the purchasers reflect a range of indicators typically allocated to cut-over land.

SUMMARY OF COMPARABLE SALES
CUTOVER TIMBERLAND ALLOCATIONS

#	Location	Date	Adj. CEV	Perceived Value of Timber	Acres	Residual Allocated to Cut-over Land
31	Prince of Wales Isl. in SE AK	1-89	$650,000	$650,000	138.60	$0
32	Wadleigh Isl. near Klawock in SE AK	7-89	$1,000,000	$1,000,000	623.43	$0
33	Edna Bay near Wrangell in SE AK	7-89	$400,000	$400,000	512.00	$0
34	Johnson Creek near Juneau in SE AK	5-91	$125,000	$125,000	229.10	$0
35	Copper Harbor in SE AK	12-91	$800,000	$800,000	340.70	$0
36	Fidalgo Bay near Valdez in PWS	4-92	$92,000	$52,000	264.18	$50 to $100
37	Gravina Island in SE AK	2-93	$347,000	$347,000	190.40	$0 to $100

The data reflects a range of indicators from $0 to $100 per acre for cut-over timber land - a range of nominal values for land not likely to be productive or otherwise provide utility for an extended term.

We recognize that low allocations of value to cut-over land serve to minimize holding costs (taxes) for cut-over land. However, the available data indicates that market prospects for cut-over land are extremely poor and it is not unreasonable for buyers of Alaska timberlands to expect a satisfactory return of, and on, their investment - from the stumpage alone. The fact that the sellers did not retain ownership of the cut-over land supports the allocation.

Nevertheless, a zero value allocated to cut-over land is unrealistic. Remote speculative land in Alaska would have at least a novelty value. If nothing else, the future potential for cut-over land, however limited, represents a bonus or incentive that may cushion or minimize the risk of a volatile timber industry. It is not uncommon for timber volumes to prove less than original estimates.

Mr. Larry Blydenstein of MRGC Timberland (Comparable No. 37) indicated that $100 per acre would represent the upper-end of a range of speculative values that could be attributed to remote cut-over land in Alaska. Mr. Rice, of Citigreen Inc. (Comparable No. 36) reported that his company usually assumes a residual value of between $50 and $100 per acres. Mr. Claire Doig, of Forest and Land Management Inc., (Seattle) is familiar with Comparable No. 36 and indicated that $100 would represent the extreme high-end value that could be attributed to the cut-over land. The lengthy regeneration cycle typical of Alaska's timber and the lack of a market for cutover land (in Alaska) were cited as limiting factors.

The indicated range of $50 to $100 per acre is bracketed by the analysis of the recent acquisition of timberlands by the EVOS Trustee Council at Seal Bay and Tonki Cape on Afognak Island. The analysis reflects a range of values allocated to the cut-over timberland from $0 to $128 per acre depending on perspective. However, acknowledging the net result of the transaction, the upper-end of this range is not supportable.

In summary, it is not unreasonable to conclude that $50 to $100 per acre is an appropriate range of nominal values within which this third component is fairly represented. This range is supported by a recent lease of a large tract in the Matanuska-Susitna Borough (Southcentral Alaska) for a major ski resort. Comparable No. 38 is summarized in the following table.

#	Region	Neighborhood	Date	Adj. CEV	Acres	$/AC
38	Southcentral	Hatcher Pass	1993	$1,330,000	10,634	$125

The transaction provides a meaningful indicator because the lessee is a private sector entrepreneur/developer. Furthermore, although not conventionally marketed, land in Hatcher Pass has generally been available for several years. Over the past twenty years, several projects have been proposed by various entrepreneur/developers. The lease provides a relevant indicator of a "base" value of land generally unsuitable for most economic uses. There is no merchantible timber on the property and much of the terrain consists of mountain slopes. The per acre indicator of $125 per acre is illustrative of large-scale land-use economics in Alaska.

However, in a direct comparison with the subject, a downward adjustment would be appropriate. First, the location of the tract is dramatically superior to the subject. The area is already established as a popular outdoor recreation area that can be accessed by vehicle. The population base within a 50 mile radius exceeds 260,000. Secondary and peripheral opportunities will be plentiful if the resort is developed as proposed.

Second, the value indicator for the overall tract (10,634 acre) reflects the impact of strategic sites suitable for commercial and residential development. In this analysis, we are seeking only the value of the non-strategic acreage. Higher value components have been valued in previous sections.

Finally, although an agreement has been reached, the entrepreneur/developer has not been able to raise the capital necessary to undertake the proposed project. In summary, the indicator derived from the negotiated lease supports the lower range previously indicated - $50 to $100 per acre.

Summary

Based on our analyses and observations, it is our opinion that the value of this component is fairly represented within a range from $50 to $100 per acre.

We acknowledge that there is a nominal price that someone would pay, even for non-productive land not likely to be suitable for any economic use for an extended term (other than speculation). However, it is difficult to further narrow this range.

On one hand we recognize the limitations imposed by remoteness, rugged topography, and harsh climatic conditions. Based on these observations, the low-end of the range may be more realistic. On the other hand, the price level that might attract speculative, if not novelty, investments in large tracts of remote Alaska acreage (say, ≥ 640 acres - 1 section), generally unsuitable for most economic uses, has not been suggested by any market "test" that we are aware of. Marketed offerings of remote Alaska land in large denominations are extremely rare - let alone revealing cases where the property is allowed to remain on the market, at periodically reduced prices, until its purchase can be justified by a private sector buyer.

In conclusion, it is our opinion that $100 per acre is an appropriate estimate of the nominal value of the subject's "non-strategic waterfront acreage featuring unfavorable topography and contiguous backlands and/or cut-over timberland. We have made no adjustment for size as the indicated nominal value was derived from Comparables reflecting a range of parcel sizes that included bulk acreage.

VALUE ESTIMATE
CONTRIBUTORY VALUE OF SUBSURFACE RESOURCES

Minerals

Maps provided by representatives of Chenega Corporation identify a mineral "prospect" near the head of Jackpot Bay's south arm. The site is reported to be a prospect for gold, copper, lead, silver, and zinc (Prospect S-91). In a special report, prepared in conjunction with this assignment, Mr. Donald L. Stevens, Ph. D. of Stevens Exploration Management Corporation, notes:

> "Prospect S-91 has no document reserves, very low potential for the discovery of new mineralization, and this has little market value".

This location is outside of the boundaries of the Jackpot Bay parcel (CHE02). We are not aware of any other sites within the boundaries of either of the subject parcels have been identified. As a generalization, Mr. Stevens, summarizes his report as follows:

> "A search of the available published information on the mineral resources of Prince William Sound resulted in the identification of eleven mineral deposits that occur on lands selected by Chenega Corporation. A review of the literature on each of these deposits was conducted. These data suggest that all of these mineral deposits are too small or too low grade to become profitable mines, and are lacking any significant potential for the discovery of new reserves. The market value of these known deposits at this time is very low.
>
> The potential of Chenega Corporation lands for new mineral discoveries using the sophisticated geological, geochemical and geophysical techniques available to the modern exploration professional is sufficiently attractive that the mining industry may want to explore these lands, particularly where the geology is favorable for the discovery of volcanogenic massive sulfide deposits. However, the probability that new, economically viable, mineral discoveries will be made is low enough that there is no negative impact on the value of the surface estate. This writer believes that it is nearly impossible to place any market value on undiscovered mineral resources.
>
> The known mineral deposits and mineral potential of Chenega Corporation lands do not appear to have any significant market value. However, the sales comparison method of appraisal may produce sales data indicating that each known mineral deposit has a certain minimum value based on pragmatic factors adopted by participants in other land transactions."

It is extremely difficult to determine what that "certain minimum value" would be. The recent acquisition of approximately 24,000 acres within the boundaries of Kachemak State Park by the EVOS Trustee Council, reflects an allocation of $2,000,000 - approximately $83 per acre. However, the allocation was reportedly not supported by any professional evaluation. The amount represents an arbitrary consideration resulting from the argument that ownership interests should be unified in order to eliminate potential nuisances. However, such nuisance values are not typically reflected by the workings of free, open markets where the subsurface potential is not significant. For the comparables summarized in the following table, both the surface and subsurface estates were conveyed.

#	Location	Date	Property Rights Conveyed	Acres	Allocation to Subsurface Estate	Basis of Allocation
1	Chrome Bay, Lower Kenai Peninsula	10-86	surface & subsurface	69	$0	n/a
19	Prince of Wales Isl. in SE AK	1-89	surface & subsurface	139	$0	n/a
20	Wadleigh Isl. near Klawock in SE AK	7-89	surface & subsurface	623	$0	n/a
21	Edna Bay near Wrangell in SE AK	7-89	surface & subsurface	512	$0	n/a
23	Copper Harbor in SE AK	12-91	surface & subsurface	341	$0	n/a
24	Fidalgo Bay near Valdez in PWS	4-92	surface & subsurface	264	$0	n/a
25	Gravina Island in SE AK	2-93	surface & subsurface excluding oil & gas	190	$0	n/a

It is interesting to note that each of the comparables summarized represents a mineral survey or mining claim. Although it could be argued that any valuable resources had already been extracted, ever-evolving technology has the potential to revitalize worked-out claims. Nevertheless, the data indicates that the potential of the subsurface estate was hardly, if at all, a factor.

The prevention of a violation of the surface estate is a justifiable undertaking when a reasonable probability is recognized. With regard to the subject, Mr. Stevens notes; "However, the probability that new, economically viable, mineral discoveries will be made is low enough that there is no negative impact on the value of the surface estate." Such a low probability would dilute the urgency of unifying the ownership of the surface and subsurface estates - ultimately minimizing, if not negating altogether, any value that could be attributed to the subsurface estate. Simply, there may be no incentive for a buyer to commit additional capital toward unifying ownership of the estates.

In summary, available data suggests that most often, where the potential of the subsurface is little to none and ownership of the surface and subsurface estates is unified, both estates are conveyed with no additional consideration or allocation to the subsurface interest.

SUMMARY OF PER ACRE VALUE INDICATORS

Representative component values are summarized in the following table.

	Supportable "bulk" value of non-timberland
Strategic Waterfront Sites (to an average depth of 1/4 mile)	$1,925 per acre
Non-Strategic Waterfront Acreage Featuring Favorable Topography (to an average depth of 1/4 mile)	$690 per acre
Non-Strategic Waterfront Acreage w/Unfavorable Topography & Backlands	$100 per acre
Contributory Value of Subsurface Resources	$0 per acre