

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 8672

2599 SCOMM 113: HOUSE SPEC. COMM ON ECON. DEV. & TOURISM, 1999-2000

Table 19
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Overland
King Salmon Option

	Independent*	Alternative**	System***
Marine Elements			
Homer-Seldovia		4,000	
Homer-Williamsport		4,200	
Roadway Elements			
Williamsport to Pile Bay to Pedro Bay		4,200	
Pedro Bay to Iliamna	17,900	32,400	33,700
Iliamna to Igiugig	16,100	92,300	101,300
Igiugig to King Salmon	24,100	95,100	108,300

* Demand on the link as an independent element.

** Demand on the link as part of the alternative.

*** Demand on the link assuming implementation of a Cook Inlet to Bristol Bay to Alaska Peninsula roadway system.

Table 20
Cost Synopsis
Cook Inlet to Bristol Bay, Overland
Naknek Option

	Annual O&M Cost	Total Capital Cost	Annualized Cap Cost @ 7% Interest	Annualized cap cost plus O&M Cost
Marine Elements				
Homer-Williamsport-Seldovia	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-W-S Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
Iliamna-Pedro Bay-Pile Bay				
Paved	\$513,000	\$51,870,000	\$4,896,161	\$5,409,161
Unpaved	\$570,000	\$45,600,000	\$4,304,317	\$4,874,317
Iliamna to Igiugig				
Paved	\$756,000	\$78,940,000	\$7,451,378	\$8,207,378
Unpaved	\$840,000	\$69,700,000	\$6,579,187	\$7,419,187
Igiugig to Naknek				
Paved	\$1,012,500	\$102,375,000	\$9,663,476	\$10,675,976
Unpaved	\$1,125,000	\$90,000,000	\$8,495,363	\$9,620,363
Igiugig to Levelock				
Paved	\$256,500	\$27,435,000	\$2,589,670	\$2,846,170
Unpaved	\$285,000	\$24,300,000	\$2,293,748	\$2,578,748
TOTAL				
Paved Option	\$4,778,856	\$282,049,500	\$26,623,478	\$31,217,334
Unpaved Option	\$5,084,106	\$248,472,000	\$23,453,999	\$28,353,105

Table 21
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Overland
Naknek Option

	Independent*	Alternative**	System***
Marine Elements			
Homer-Seldovia		4,000	
Homer-Williamsport		4,200	
Roadway Elements			
Williamsport to Pile Bay		4,200	
Pile Bay to Pedro Bay to Iliamna	17,900	32,400	33,700
Iliamna to Igiugig	16,100	106,100	115,100
Igiugig to Naknek	24,100	110,000	123,200
Igiugig to Levelock	15,000	39,600	43,800

* Demand on the link as an independent element.

** Demand on the link as part of the alternative.

*** Demand on the link assuming implementation of a Cook Inlet to Bristol Bay to Alaska Peninsula roadway system.

Table 22
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Hovercraft Option

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @ 7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Hovercraft)	\$1,728,600	\$5,500,000	\$519,161	\$2,247,761
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$3,969,456	\$26,929,500	\$2,541,954	\$6,326,410
Unpaved Option	\$3,992,706	\$24,372,000	\$2,300,544	\$6,108,250

Table 23
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Marine
Hovercraft Option

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Hovercraft Service	6,900
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

Table 24
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Shallow-Draft Landing Vessel Option

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia*	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer, Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Shallow-Draft Vessel)**	\$318,300	\$526,000	\$49,651	\$367,951
Lake Iliamna Shoreside	\$6,250	\$250,000	\$23,598	\$29,848
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$2,565,406	\$22,205,500	\$2,096,042	\$4,476,448
Unpaved Option	\$2,588,656	\$19,648,000	\$1,854,632	\$4,258,288

*Vehicle demand for this element of the alternative was estimated at 2,800 vehicles/year.

**Vehicle demand for this element of the alternative was estimated at 770 vehicles/year.

Table 25
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay
Shallow-Draft Landing Vessel Option

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Marine Service (S.D.)	3,600
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

ALASKA STATE LEGISLATURE

House of Representatives

COMMITTEE ASSIGNMENTS:

LABOR & COMMERCE COMMITTEE, CHAIRMAN
JUDICIARY COMMITTEE, MEMBER
LEGISLATIVE COUNCIL, MEMBER
SPECIAL COMMITTEE ON UTILITY RESTRUCTURING, MEMBER
SPECIAL COMMITTEE ON ECONOMIC DEVELOPMENT & TOURISM, MEMBER

e-mail: Representative_Norman_Rokeberg@legis.state.ak.us



INTERIM:
716 WEST 4TH AVENUE, SUITE 640
ANCHORAGE, AK 99501
PHONE: (907) 269-0117
FAX: (907) 269-0119

SESSION:
ALASKA STATE CAPITOL
JUNEAU, AK 99801-1182
PHONE: (907) 465-4968
FAX: (907) 465-2040

Representative Norman Rokeberg

MEMORANDUM

TO: The Honorable Gail Phillips, Chair
Economic Development & Tourism Committee

FROM: Rep. Norman Rokeberg

DATE: January 26, 2000

RE: Pogo



Attached are several articles I collected over the summer concerning the Pogo project.

1. October 27, 1998 press release from Teck Corporation and Sumitomo regarding 1998 drill program at Pogo.
2. Teck Corporation internet page "Pogo Project"
3. Internet Information on Teck Corporation including 1999 Third Quarter Report with information on Pogo
4. March 8, 1999, Teck Corporation Internet site, "Underground Exploration Permits Received for Pogo Project, Alaska"
5. May 17, 1999, *Alaska Journal of Commerce*, "Teck begins tunnel work on Pogo Ridge gold deposit near Delta"
6. July 1999, *Business News Alaska*, "Alaska mining news summary: Industry still hurt by declining metals prices, reduced exploration funding"
7. August 1999, *Business News Alaska*, "Alaska mining news summary: Tundra telegraph lines relatively quiet this month, companies busy with their summer field programs", and "Soil-sampling, mapping begun near Pogo"
8. October 1999, *Business News Alaska*, "Low gold prices continue to batter Alaska's miners: Pogo still hot spot" and "Mining companies try to extract field data against ticking clock of remaining season"

9. **October 17, 1999, *Fairbanks Daily News-Miner*, "Teck weighs Pogo Mine route options"**
10. **October 31, 1999, *Alaska Miners Convention*, Mining moves forward in spite of low metal prices"**
11. **November 1999, *Business News Alaska*, "Alaska mining news summary: Gold prices rise put hedgers to shame", and "Teck weighs financial, environmental impacts of Pogo route"**
12. **November 1999, *Alaska Business Monthly*, "The Pogo Land Rush"**

Karl Hanneman, Alaska Regional Manager, Teck Resources. Inc., has advised my office as follows:

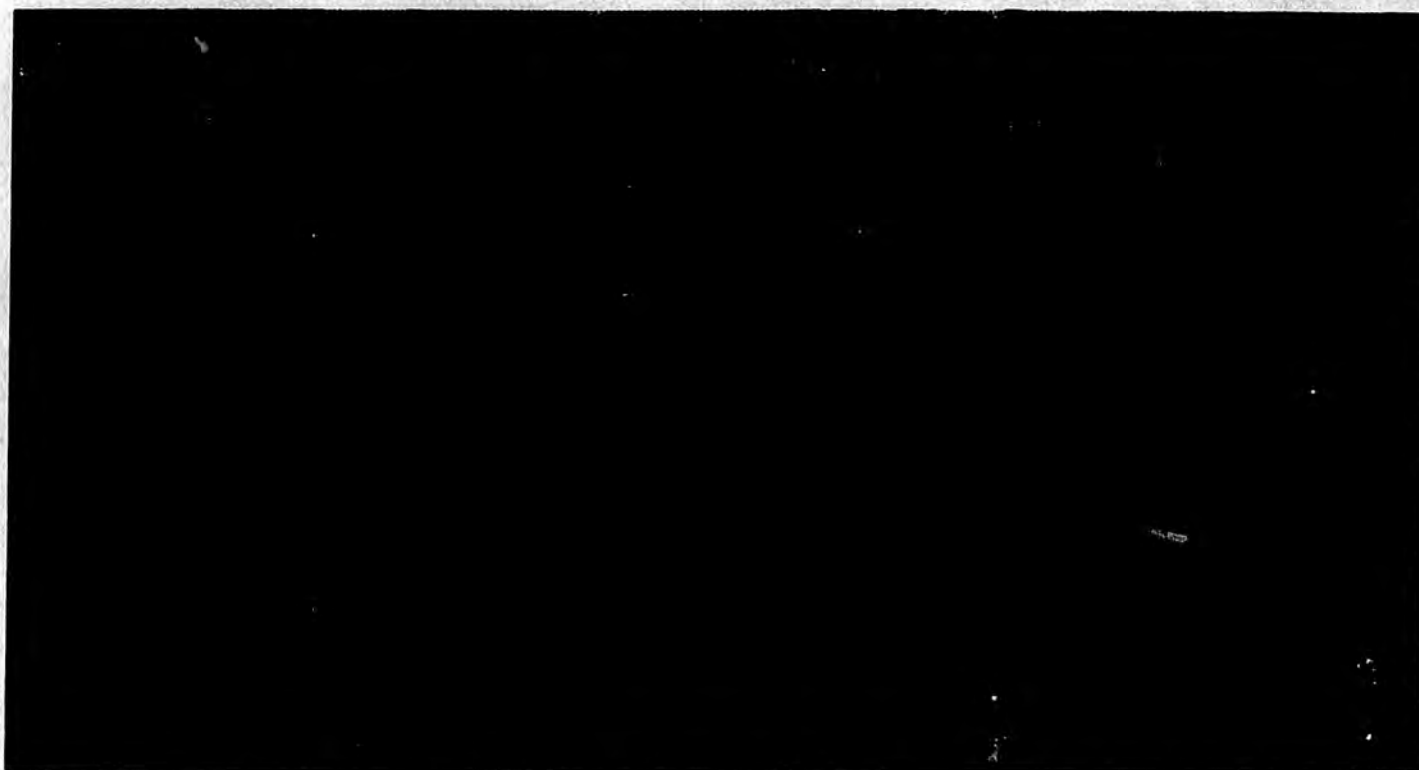
1. **MINE: Are accomplishing underground exploration. Have not yet reached the mineralized zone.**
2. **ACCESS: Feasibility and environmental assessment stage during which access consideration are as follows:**
 - a. **Air**
 - b. **Winter Road**
 - c. **All Season Road**

They are still trying to evaluate each alternative to assess which would be best for the community and the project.

Mr. Hanneman indicated that he would be willing to provide further information to the committee.

The Pogo Land Rush

Among the largest of land rushes in Alaska's rich and varied mining history, it seems that the Pogo area play has been appropriately nicknamed the "Goldpaster," even though that name was first coined as a typographical mistake in a newspaper headline.



Patricia Jones

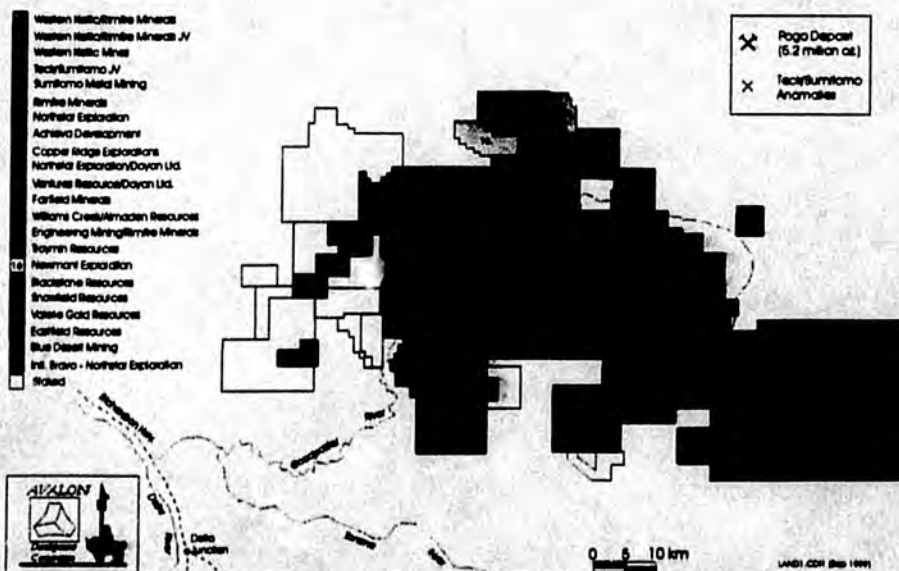
Tom Howard, left, and Ron Hanson, drillers working for Tonto Drilling, take diamond core samples in July 1998 at the Badlands hole at the Pogo prospect. Such drilling work helped spark a land rush in the upper Goodpaster River Valley.

BY PATRICIA JONES

Less than three years ago, the upper Goodpaster River valley was considered mineral-poor moose pasture by most gold prospectors. Only a handful of old-timers working placer claims and a Japanese-financed hard-rock exploration team considered the area as a prospective mining district.

But one single discovery—a 5 million ounce-plus gold deposit called Pogo—has dramatically changed geological opinion of the rolling, spruce-covered hills and river valley located about 40 miles northeast of Delta Junction in Alaska's Interior.

Now, it's the hottest place in Alaska to prospect for gold and interest in the area has sparked a virtual land rush. More than a half million acres of state



LAND STATUS OF THE GOODPASTER MINING DISTRICT

land was staked the last 18 months by prospectors hoping to find another Pogo, according to Erik Hansen, a land status consultant based in Fairbanks.

"Some Canadian junior mining companies decided to go in and stake all around Pogo," Hansen said. "That caused other people to wake up and smell the coffee."

Sumitomo Metal Mining Co., which holds the claims to the 72-square-mile claim block called Pogo, also has some surrounding and nearby land staked, compiling a considerable property package. And North Star Exploration, which signed an exploration property deal to work on Doyon Ltd. land in the area, also staked a sizeable position in the Goodpaster area.

In all, more than 700,000 acres—equal to about 1,100 square miles of land in the Goodpaster area—has been claimed for mineral exploration and development by gold prospectors.

"They've pretty much saturated the whole country with claims, so the Pogo land rush is coming to an end," Hansen said. "Next will be to see who keeps the claims and who drops them."

Prospectors are now looking at potential sites both to the northwest and the southeast of Pogo, he said. On a weekly basis, Hansen tracks claim filings and has produced a land status map of the Goodpaster mining district.

Staking the Goodpaster

During the Pogo area play, prospectors used both existing geologic data for the Goodpaster as well as the theory of closeness to make their land selections.

"It was a combination," Hansen said. "Anything in proximity of Pogo is fair game for the staking, but a lot of companies used existing public geological data to delineate targets for their staking."

Copper Ridge Explorations Inc., a recently formed junior exploration company, used both theories to select its 24,000-acre claim block located just north of the Pogo deposit, according to company president Gerald Carlson.

"By the time we decided to look for ground in the area, most of the prospective ground on the east-west trend had been taken up," he said.

Prior geological surveys conducted by the U.S. Geological Survey and

WORLDWIDE

40 YEARS EXPERIENCE
on over 500 projects as a
worldwide leader and innovator
in large two-phase thermosyphons

Thermopiles & Thermoprobes
Frozen Barrier Containment
Permafrost Foundations
Ground Stabilization
Corrosion Protection
Pressure Vessels

EXPERIENCE

Used throughout Alaska,
Canada, Greenland,
& Russia for:
Industrial Bldgs
Office Bldgs
Pipelines
Runways
Anchors
Housing
Towers
Roads
Dams



ARCTIC FOUNDATIONS INC.

5621 Arctic Blvd, Anchorage AK 99518-1667 • 907/562-2741 • Email: info@arcticfoundations.com
www.arcticfoundations.com

When You're On The Go....

Nothing Beats A Card From Home.

**A pre-paid calling card from ASTAC
is a great way to stay in touch.**

Whether you're traveling on business, your kids are off to college, or you are just taking a weekend trip, it's important to check in from time to time.

Using an ASTAC Pre-Paid Calling card lets you call home without searching for loose change or having to remember complicated long distance calling card numbers. No additional charges will appear on your normal monthly phone bill, so it's a card you can use at virtually any phone with no hassles and no headaches.

Keep in touch the easy way with a pre-paid calling card from ASTAC using ASTAC Long Distance.

1-800-478-6409



Alaska's Air Cargo Connection
Low Rates • Frequent Service
ACEPAK
Small Package Service
General & Priority Air Cargo • Charter

3551 Postmark Drive - P.O. Box 190248
 www.acepak.com Anchorage, AK 99519 email: get@gol.net


 907-587-0232
 907-587-0236

Alaska's Water Quality Professionals Since 1980

Northern Testing Laboratories, Inc.

Fairbanks Anchorage Kodiak Bay
 907-456-3116 907-349-1000 907-659-2145
 Fax: 907-456-3125 Fax: 907-349-1016 Fax: 907-659-2146





PMC
TELECOMMUNICATIONS
ASRC Communications, LTD.

Engineering
System Design
Implementation
Programming
Training
Installation
Service & Repair
Consultation



MOTOROLA

NATIONAL



MOTOROLA
Communications

- TWO-WAY RADIOS
- SALES-RENTALS
- PRIVACY TRUNKING
- UHF-VHF-MARINE

PMCT has the Answers.

Anchorage: 1-800-478-9191
 Wasilla: 1-877-373-7628
 Fairbanks: 1-800-868-2947
 E-mail: radio@pmct.asrc.com

recent stream sedimentation samples that produced trends similar to Pogo-style mineralization caused the company to select its property, called Ogopogo, he said.

"I think it is also quite significant that we were able to acquire this ground within only a few miles of the Pogo deposit itself—the 'closeology' factor," Carlson said.

Most agree that news about Pogo created this land rush. But the relatively unexplored land of the Goodpaster also made the district attractive, said Curt Freeman, a Fairbanks-based consulting geologist.

"Part of it was the fact that Pogo was unknown ... in a district that had absolutely nothing else going for it during the last 100 years. It was a dope-slap for geologists, telling us that we really don't understand what we think we do," said Freeman.

The land rush, which peaked about a year ago, was so great that junior-sized exploration firms were looking to hire claim-stakers to work on Christmas Day. Freeman was one who turned down such holiday pay.

"I don't think I could have hired a (helicopter) pilot then," he said. "The first real bunch of claim-staking started in June and July last year; then it ramped up to complete madness."

Because of the rough terrain and lack of road access, most of the land rush occurred with the help of helicopters, which were used to drop off claim-staking crews. That increased the initial land acquisition costs, as well as the first stage of exploration work conducted this past summer.

Exploration Spending

Two years ago, only Sumitomo and Teck Exploration (Sumitomo's joint venture partner on the Pogo project), were spending time and money in the Goodpaster area.

Now, about 20 companies are actively exploring the area, according to Richard Swainbank, the state's mineral development specialist headquartered in Fairbanks.

"There's a lot of interest around Pogo, but not a lot of money," Swainbank said. "If the price of gold was in the \$330 to \$380 (per ounce) range, the amount of activity in the Pogo area would

be double or triple. It's very, very hard to fund exploration programs right now."

When gold prices dropped to the \$250 per ounce range this summer, exploration crews found that funding also decreased. No matter what prospectors turned up on their properties, exploration firms couldn't seem to escape the financial drag of the slumping gold market.

"The fall in the price of gold couldn't have come at a worse time for the state of Alaska," Swainbank said. (Note: Gold prices rose in late September.)

Freeman, who has several clients holding claims in the Goodpaster area, estimates that \$3 million to \$5 million was spent during the 1999 summer season by prospectors working around Pogo.

That number does not include about \$15 million in developmental expenses incurred by Teck Exploration to start construction of a mile-long tunnel that will access the Pogo deposit.

"If you would have asked me in March how much would be spent in the area, I would have estimated two to three times that which was spent,"

said Freeman. "With the drop off in interest in gold, money for the high-risk stuff has been that much harder to come."

There's one small consolation for such tight exploration funding, Swainbank said. Less money means that prospecting work has been more carefully planned and paced, rather than a willy-nilly process that can often accompany the start of such an exciting exploration area.

"Claims will get looked at more generally, instead of bringing in drill rigs prematurely," Swainbank said. "Nothing can kill a project quicker than a dry drill hole."

"Goldpaster" District's Future

Most in the industry expect to see in upcoming months some changes in land status surrounding Pogo. Temporary prospecting sites will be converted into more tangible mining claims while less prospective land will be dropped.

"A whole bunch (of prospecting sites) are being converted and some land has been windrowed out," Freeman said.

"There's a sifting process going on right now and by the end of the year, the Hansen map will look different with checkerboard holes where land has been dropped."

In addition to land changes, Swainbank expects to see continued partnerships and consolidation of efforts between junior exploration firms and major mining companies that have money to invest in prospecting and development.

"Major companies that have cash on hand will be shopping in the bargain basement because even the cost of maintaining the claim rent on those properties has to be a pretty good-sized burden on some of the juniors," he said.

Finally, some companies are pressing on with exploration on their properties after a successful start with their ground exploration efforts earlier this summer.

"We will be soil sampling and prospecting in the area of the anomalous gold results to try to localize the bedrock source of the gold," Carlson said in early September, about his company's Ogopogo property. "We are very excited by the results of the program so far." □

Building a Diversified Platform for Sustainable Growth Within Alaska's Environmental Industry

*IT Corporation is proud to support the 1999
Alaska Miners Association, Inc., Trade Show*

4701 Business Park Blvd., Suite 36
Anchorage, AK 99503
(907) 562-3452

3437 Airport Way, Suite 203-B
Fairbanks, AK 99709
(907) 479-7720

<http://www.theitgroup.com>



Teck begins tunnel work on Pogo Ridge gold deposit near Delta

By Tim Bradner
Journal Reporter



Teck Resources crews are busy digging into Pogo Ridge at the company's big Pogo gold prospect 35 miles northeast of Delta.

The company also has initiated prefeasibility studies of development of a mine that, if positive, will be followed by environmental studies and the start of a long permitting process. Karl Hanneman, Teck's Alaska Regional Manager, told the Resource Development Council May 5.

More than 50 feet of a planned 5,500-foot underground exploration access tunnel is completed, he said. Tunnel work will pause 200 feet into the mountain to allow installation of a treatment facility to process drainage water and then resume, he said.

Teck received final clearance on permits from state agencies March 1 and federal agencies March 4. Work on a 2,000-foot

road began the same day from the present camp near the Goodpaster River, 200 feet up the side of Pogo Ridge to the portal, or entrance, to the tunnel.

Tunnel work began after heavy equipment was moved up the road. The tunnel is being built at a 15-degree downslope and upslope to come up under the ore body.

Configuration of the tunnel allows water to drain to the low point in the tunnel for treatment, with no chance of draining out with a risk of contamination of the Goodpaster River.

Teck now has about 45 people at work on the project, Hanneman said. About 30 will be employed over the next 12 to 18 months on the tunnel and test work.

Teck also plans an additional 50 test holes drilled from the surface in 1999 and a similar number in 2000 and 2001. These are mainly "in-fill" holes

to obtain ore samples between the holes drilled earlier, which are at 50-foot intervals.

Once the tunnel is completed, drilling also will be done from underground to test suspected ore deposits that are too deep to reach from the surface.

Pogo has an identified gold resource of 5.5 million ounces in 10 million tons of ore grading an average of 0.5 ounce per ton, Hanneman told the RDC.

By way of comparison, Hanneman said, at this early stage of exploration, the Fort Knox Mine near Fairbanks had about 4 million ounces of identified gold resource in a lower-grade ore body.

Pogo is a higher grade gold deposit and will be mined with a smaller, more compact underground project than the type of larger, open-pit mine used at Fort Knox, he said.

Over the next 12 to 18 months Teck will do additional exploration drilling, both from surface and from the underground tunnel, to further define the ore body.

The company will also carry out tests on strength of the rock, gain information on potential water drainage problems, and mine bulk ore samples

to test underground mining methods and procedures to extract gold from the ore.

The flat-lying orientation of the gold deposit poses a serious engineering challenge to the mining — how to "hold up the roof" — and the tests of rock strength are particularly important. About 30 people will be employed through this phase of exploration, Hanneman said.

The presence of the Pogo gold deposit was first detected in 1981 during a regional mineral reconnaissance. It wasn't until

1991 that Sumitomo Metal Mining Arizona Inc., a subsidiary of Japanese-owned Sumitomo Metals, staked claims on state lands in the area and began serious exploration.

Teck, a long-established U.S. minerals company, bought 40 percent of the project and became its operator. The discovery was announced in 1997.

Teck has become active in Alaska in recent years, but the company owns 35 percent of Cominco, which operates the big Red Dog Mine in Northwest Alaska, and 15 percent of Abacus Minerals, which is exploring, with Teck as a partner, the Niblack base metals prospect in Southeast Alaska.

Teck, which operates mines in the U.S., Canada, Chile and Australia, had \$713 million in revenues and \$193 million in profits last year. Sumitomo Metals is a subsidiary of Japan's Sumitomo Corp., a 300-year-old company that, among all subsidiaries, had \$95 billion in revenues last year.

No Interest. No Deposit. No Kidding.

Get a 0% lease on a DP2460 + SC-1 Controller. Call for details today! *



TECK CORPORATION

COMPANY OPERATIONS NEWS FINANCIALS SHAREHOLDERS

October 27, 1998

Teck and Sumitomo Announce Results of 1998 Drill Program at Pogo

Teck Corporation, Sumitomo Metal Mining and Sumitomo Corporation today announced an updated geological resource on their joint venture Pogo project in Alaska. Teck is the operator of the Pogo project and can earn a 40% interest by expending (U.S.) \$28 million to produce a feasibility study by December 31, 2000 and contributing the first (U.S.) \$33 million of development and construction costs.

The 1998 and 1997 resource calculations using a 0.1 oz/T cutoff grade are given below:

	1998			1997		
	Short Tons (millions)	Assay oz/T. Au	Contained oz. Au (millions)	Short Tons (millions)	Assay oz/T. Au	Contained oz. Au (millions)
Main Liese	7.25	0.53	3.84	8.84	0.40	3.52
Lower Liese	2.73	0.50	1.37	2.13	0.46	0.97
Total	9.98	0.52	5.21	10.97	0.41	4.49

The increased drill density in the core of the deposit confirmed the continuity of the two flat-lying lenses, and step out drilling extended the veins, particularly to the southeast.

The updated resource calculation is a result of the 1998 exploration drill program which consisted of 97 diamond drill holes totaling over 91,000 feet, the majority of which was infill drilling. In addition, the current more detailed and selective geological model of the Main Liese vein dropped some minor veins and stockwork mineralization from the earlier resource calculation, resulting in a lower tonnage but a higher average grade. The net effect including the 1998 drill results is an increase in the geological resource to 5.2 million ounces, and average grade to 0.52 ounces per ton (using the kriging method).

The deposit is still open to the southeast and the northwest. In addition, two deep drill holes have indicated a possible third zone 400 feet below the Lower Liese. Hole 98-124, which was 200 feet southeast of 97-71 (42.7 feet at 0.58 oz/T), intersected 19.2 feet at 0.75 oz/T.

In addition to further infill and step out drilling, the planned 1999 exploration program calls for an underground adit to obtain geotechnical data, test the continuity of the veins for mining, and obtain a bulk sample for metallurgical testing. Engineering and environmental studies to support a feasibility study will also be conducted.

Dr. Moira Smith, Teck's Exploration Manager for the project, said: "It is encouraging that we were able to increase the total number of ounces of gold contained in the resource by approximately 16%, even though the majority of the 1998 program was devoted to infill drilling. However, the 27% increase in the average grade should prove to be even more important, since it will have a direct impact on operating costs".

For more information, contact:

Norman B. Keevil,
President & CEO
(604) 687-1117

Michael P. Lipkewich, Moira Smith,
Sr. V.P. Mining Senior Geologist
(604) 687-1117 (250) 372-0032

[Previous..](#) [Index ..](#) [Next](#)

[Top of Page](#)



TECK CORPORATION

COMPANY OPERATIONS NEWS FINANCIALS SHAREHOLDERS

Pogo Project

The gold deposit occurs in two shallow-dipping quartz vein systems, which are generally 4 to 12 meters in thickness and are named the "L1" and "L2" lenses. Two deep drill holes have indicated the possibility of a third lense below the "L2" zone.

Exploration drilling on site.



Operations

Advanced Projects

- Antamina
- Pogo
- San Nicolas
- Carosue Dam
- White Earth

Exploration

Environment

Glossary

Teck Home

Drilling to the end of 1998 indicates a resource of 9.9 million tons averaging 0.52 ounces of gold per ton, or 5.2 million contained ounces.

The 1998 program also included geotechnical and other engineering and environmental studies, which are essential to the feasibility study that will begin in 1999.

The 1999 exploration program will consist of further surface drilling as well as an excavation of an underground adit to intercept the quartz veins to gather additional data.



3D Ore Body



Lower engineering camp with upper exploration camp in background. Current airstrip is adjacent to the Goodpaster river. Access to the upper camp is by helicopter.

Upper exploration camp with Goodpaster river in valley below. The camp is designed for 50 people and is surrounded by a 3000 foot electrified bear fence.





What's
Stock Quote
Year 2000



TECK CORPORATION

COMPANY OPERATIONS NEWS FINANCIALS SHAREHOLDERS

Founded on a gold mine 85 years ago, Teck now produces copper, zinc, niobium and coal as well as gold, from 11 mines in Canada, Chile and Australia.

As a diversified mining company, Teck offers strong financial capacity, engineering capabilities in both underground and open pit mining and processing expertise in a variety of products.



Construction started on the world-class Antamina copper zinc joint venture in Peru in 1998 and, with a new base metal discovery in Mexico and an expanding gold deposit in Alaska on the drawing boards, Teck is well positioned to continue growing into the future.

Teck Corporation
Suite 600-200 Burrard Street
Vancouver, British Columbia
V6C 3L9, Canada
E-mail: info@teck.com
Phone: (604) 687-1117
Fax: (604) 687-6100

This site is optimized for Netscape Navigator
and Internet Explorer (versions 4.x and higher).

Interim Report for TeckGold, a wholly-owned business unit of Teck Corporation.

Operations

Total gold production in the third quarter was 132,235 ounces, an increase of 12% over the previous corresponding quarter in 1998. The increase was attributable to the above-budget performance of the Hemlo mines, and to the record production result contributed by the Tarmoola mine in Australia. The average cash operating cost for the quarter was US\$181 per ounce, down 8% from the previous quarter.

Williams & David Bell (Ontario, Canada)

Production from the Williams and David Bell mines was an above-budget 75,817 ounces, up 3% from the corresponding quarter in 1998. Cash operating costs were below budget at US\$180 per ounce, down 7% on the previous corresponding quarter. The results for the quarter reflected the benefit of the first stage of the operations optimization program at Williams and David Bell, under which the David Bell ore is now treated at the Williams mill.

Tarmoola (Western Australia)

Production from Tarmoola was a record 56,418 ounces, up 26% from the corresponding quarter in 1998. Cash operating costs at Tarmoola were reduced a further 7% from the previous quarter to US\$182 per ounce. This is the ninth consecutive quarter in which production has increased and cash operating costs have decreased.

During the quarter, the Tarmoola reserve was upgraded to over 2.0 million ounces, representing a 72% increase over the previous 1998 reserve estimate after accounting for production. The grade of the primary mill feed increased to 2.4g/t from the previous 2.0g/t. Subsequent drilling results suggest that an extensive sheet of mineralization is present along the northern part of the Eastern Flank zone and that it contains localized thickenings that form continuous high-grade shoots.

Development and Exploration

At the Pogo project in Alaska, driving of an adit for underground drilling and evaluation continued to 1,600 feet, with a further 1,200 feet to go before reaching the Liese vein systems. An underground water treatment plant was constructed during the quarter and is now treating water generated from the workings. Geotechnical work on potential tailing disposal sites was carried out as well as environmental sampling to establish baseline data.

Drilling during the recent field season was primarily devoted to in-fill drilling of the L1 and L2 zones, and an updated reserve calculation will be announced later in the year. Drilling also confirmed the presence of at least two new east-dipping shear-

hosted quartz veins in the North zone, and regional surface prospecting and soil sampling has identified several new anomalous areas in the southeast part of the Pogo claims.

At the Carosue Dam project in Australia, work continued on the bankable feasibility study and further in-fill drilling has identified a series of enriched high-grade near-surface mineralized zones. Due to their relatively higher grades, these zones could potentially have a positive impact on the economics of the overall project.

TeckGold is continuing to explore at various early stage and advanced exploration projects in Hemlo (Ontario), Great Basin (Nevada), Morelos Reserve (Mexico) and in Yukon, Alaska and Peru.

Financial

This is the first quarter for which TeckGold, while consolidated by Teck, is being reported as a separate business unit. The operating financial statistics of TeckGold are set out in the following page.

For the quarter, TeckGold achieved a mine operating profit before depreciation of \$24.5 million, up 10% on the previous corresponding quarter. Mine operating profit after depreciation was \$15.7 million. The average realized gold price during the quarter (including hedging gains) was US\$313 per ounce, substantially above the average spot gold price for the period of US\$259 per ounce.

TeckGold's hedging program is set out on page 8. TeckGold maintains a conservative hedging policy where all contracts, including sold call options, are consistent with forecast production and can be satisfied by ultimate delivery. All sold call options have been priced at levels where, if exercised, TeckGold's operations are positive in cash flow and profit terms. TeckGold does not have any hedge positions which are subject to margin calls. TeckGold manages its gold lease cost exposure in a risk-averse manner with a large part of the existing hedge book locked into low lease rates maturing through to mid-2000. The hedge book has a built-in gold lease rate allowance of 2%, and actual lease costs incurred to date have been below this allowance.

"Steven G. Dean"

Steven G. Dean
Senior Vice President, Teck Corporation
President and CEO, TeckGold Limited

**TECK CORPORATION**

COMPANY OPERATIONS NEWS FINANCIALS SHAREHOLDERS

March 8, 1999

Underground Exploration Permits Received for Pogo Project, Alaska

Sumitomo Metal Mining, Sumitomo Corporation and Teck Corporation are pleased to announce that all necessary permits have been received to conduct an underground exploration program for the Pogo Project in the State of Alaska.

The program will consist of driving an adit 5200 feet under Pogo Ridge to intersect the Liese (L-1) orebody in order to obtain geotechnical data for mining method determination, confirm the continuity of the orebody for mining, and obtain a bulk sample for metallurgical testing. Underground drilling will be conducted to try to confirm a possible third zone (L-3), 400 feet below the Lower Liese zone (L-2), which has been intersected in two drill holes from surface.

The program will begin immediately with the mobilization of men and construction materials. A 3,000 foot long winter airstrip has been built to permit the use of larger aircraft.

The program will be conducted in two phases with Phase 1 to intersect the Upper Liese zone (L-1) to be completed by the Fall of 1999. A surface drilling program to further define the Upper and Lower Liese zones will be conducted in conjunction with the underground program.

A pre-feasibility study will be conducted by the fall of 1999, and a final feasibility study for the Pogo Mine Development will be completed by the end of 2000 based on results of 1999 and 2000 exploration program and engineering studies.

Contact:

Dr. N.B. Keevil	President & CEO	(604) 687-1117
Dr. K.M. Zeitler	Senior Vice President	(604) 687-1117

[Previous..](#) [Index ..](#) [Next](#)[Top of Page](#)

MINERALS

FAIRBANKS

State moves toward takeover of financially troubled Illinois Creek mine

The state announced in June that it was planning a July 1 takeover of financially troubled Illinois Creek Mine, 60 miles southwest of Galena — marking the state's first attempt to bring a producing hard-rock mine under its control.

Bob Loeffler, director of the Division of Mining and Water Management with the state Department of Natural Resources, outlined plans to cancel the lease.

"We believe the mine is an economic asset," he said June 21.

The state will seek bids from companies interested in resuming mining at the site, which is accessible only by air. If there are no bids, state officials will use a \$1.61 million bond set aside for closure of the site. A contractor would be sought to reclaim the property.

Illinois Creek shut down in 1997 when its owner, Denver-based Dakota Mining and subsidiary USMX, could not pay an equipment contractor.

Dakota eventually filed for bankruptcy protection. The mine's largest creditor, the Denver-based N.M. Rothschild & Sons bank, began foreclosure proceedings to recover \$9.2 million borrowed to build the mine.

Loeffler said a dispute about the mine's bill with equipment contractor D.H. Blattner & Sons kept the bank from finding a new company to operate Illinois Creek.

— The Associated Press

Gold-mining company lays off 15 employees, blames low prices

The lowest gold prices in 20 years have prompted a gold-mining company with prospects around the state to lay off 15 employees in Alaska.

Placer Dome Inc. is cutting exploration spending by as much as \$33 million and eliminating 200 jobs.

Two of the company's Alaska ventures, Donlin Creek in the western Interior and the Richardson project south of Fairbanks, were spared cuts.

Stan Foo, Alaska manager for Placer Dome North America, said a seven-person crew will continue identifying drill targets on the Richardson project, a 12-person crew will maintain a operation base at the Donlin Creek site, and interest in its Stuyahok prospect.

STATEWIDE

Alaska mining news summary: Industry still hurt by declining metals prices, reduced exploration funding

The 1999 field season is already proving to be exciting and challenging in ways inconceivable only a few years ago; industry must somehow convince the world it is part of the "dot com" global economy

By Curtis J. Freeman, CPG
#8801
BNA Minerals Writer

The Alaska exploration season is in full swing with drills turning and helicopters buzzing from Nome to the Canadian border.

The industry continues to be hurt by declining metals prices, reduced exploration funding and our own inability to somehow convince the world that we are part of the "dot com" global economy.

Despite these fundamental difficulties, the 1999 field season is already proving to be exciting and challenging in ways

we could not conceive of only a few years ago. As my translator told me in China "be fluid, be flexible!"

Western Alaska

Due to low metals prices and cessation of financial support from its largest shareholder, Real Del Monte announced the suspension of operations at its Nixon Fork copper-gold mine near McGrath. The mine will remain on a care and maintenance basis for the foreseeable future.

The waters remained murky (figuratively) at Dakota Mining

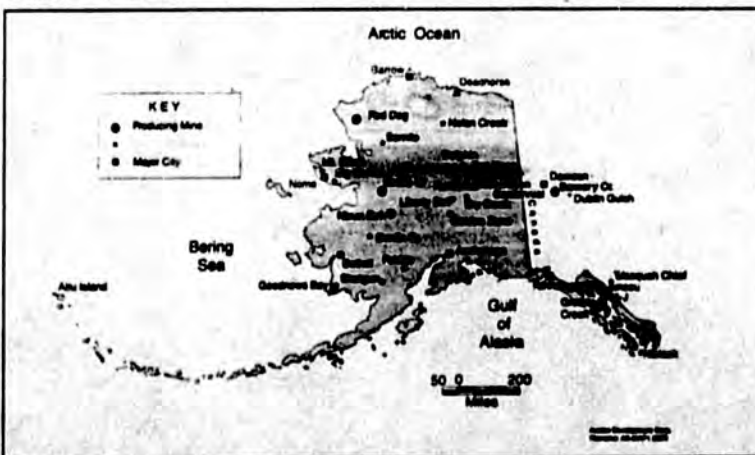
Corp.'s Illinois Creek heap leach gold mine. The jury is still out as to how final mining and closure of the property will proceed.

Assay results still are pending at Consolidated Aston Resources' Fred Creek prospect, at its Mount Distin gold project near Nome.

Eastern Interior

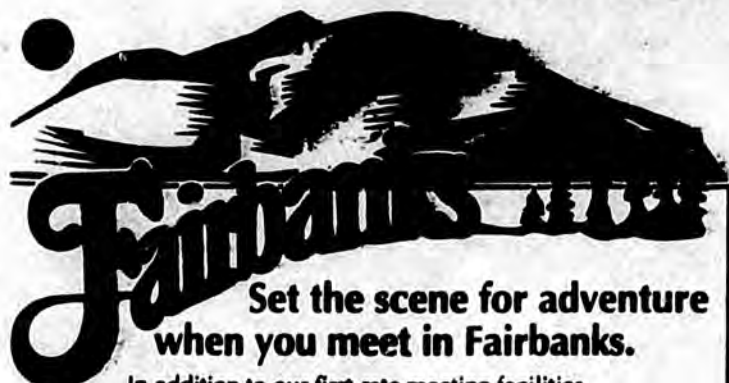
Kinross Gold continued diamond-core and reverse-circulation drilling on its Ryan Lode deposit in the Fairbanks District.

see FREEMAN page B15



Need Hose?
Don't Worry, We can help!!

Alaska Rubber & Supply has the largest in-state stock of



**Set the scene for adventure
when you meet in Fairbanks.**

In addition to our first-rate meeting facilities and accommodations, we've got the wilderness, scenery and activities that will make your meetings a true Alaskan adventure.

Log sled rides and races. Excursions into the Arctic and Denali National Park. Gold rush history and Native culture. From summer's Midnight Sun to winter's Northern Lights, you're in for adventure when you meet in Fairbanks.

etnfbk@eagle.net
fairbanks.ptialaska.net
fax: (907) 452-4190

Call for your free Meeting Planner Guide
(907) 457-3282 ext. 230



FAIRBANKS-ANCHORAGE

Fuel Tank - Pond Liners
Portable Containment Systems
Custom Covers - Winter Fronts

"We Cover Alaska"
1-800-478-8368



continued from page B15

FREEMAN

Engineering and feasibility studies are continuing at Ryan Lode. True North and the Gil prospects while pencils are sharpened at its flagship Fort Knox Mine.

The surface and underground exploration programs at Teck Corp. and partner Sumitomo Metal Mining's Pogo deposit in the Goodpaster District continued with exploration crews conducting surface diamond drilling while underground adit advancement to the L1 zone continued.

Kinross Gold announced the acquisition of the Northern Cross prospect from Copper Ridge Explorations. The Northern Cross prospect lies 2 miles north of the Pogo deposit and is host to bismuth and tungsten pan concentrate anomalies in streams underlain by rocks similar to those which host the Pogo deposit. Kinross has the right to earn up to 55-percent interest in the property by expending \$1 million on the property over 4 years. Kinross can earn a further 20-percent interest in the property by expending an additional \$2 million on property development.

Ventures Resource and equity partner Teck Resources announced the start-up of diamond drilling on their Veta property in the Goodpaster district. Extensive soil sampling will augment the company's 8,000-foot diamond drilling program at the Carrie Creek prospect.

Tri-Valley Corp. announced its Russian consultants, TsNIGRI, will return to the company's Richardson project to continue evaluation of a mineralized dike system, where previous sampling returned anomalous gold and pathfinder metals. The company also reported that Placer Dome field crews were continuing evaluation of 36 square miles of the Richardson project under option from Tri-Valley.

Copper Ridge Explorations announced it had renegotiated some of its cash and work commitments terms on its Discovery Gulch property in the Circle District. The company also announced it had acquired the right to earn 100 percent of the nearby McKenzie claim block for cash payments of \$150,000 and work expenditures of \$400,000 over 9 years. Soil auger sampling is planned on two significant gold in soil anomalies on the Discovery Gulch property while reconnaissance sampling will be conducted on the McKenzie claim block.

North Star Exploration announced its owners have agreed to acquire controlling interest in Hawks Industries, a NASDAQ-listed public company whose main assets are in the environmental services and testing sector. The acquisition will require cash payments of \$5 million to Hawks and involve equity purchase by North Star valued at \$10 million. The deal will give North Star its long-awaited access to the public marketplace. North Star indicated it will focus effort on its 7-million-acre mineral property base in Alaska and on sustainable industrial technologies related to energy, toxic and the Internet.

Pacific Bay Minerals reported receiving a geological report which recommended Phase I expenditures of \$145,000 on its Ladue River area mineral property near the Alaska-Yukon border. Specifics of this recommended program have not been made public.

Alaska Range

Atna Resources announced it has acquired an option to earn a 51-percent interest in Grayd Resources' Dry Creek and Anderson Mountain volcanogenic massive sulfide deposits in the Bonifield District. Atna must complete 10,000 feet of diamond drilling in 1999 and expend \$5 million over 5 years to earn its 51-percent interest. Initial drilling is planned to commence on the Dry Creek deposit in July. Inferred resources at Dry Creek total 2.9 million metric tons grading 4.4 percent zinc, 1.9 percent lead, 0.2 percent copper, 0.55 grams per metric ton gold.

see FREEMAN page B1

Curt Freeman's news update was prepared for Business News • Alaska on June 21, 1999. If you have any news or news leads, please contact him at (907) 452-4190.

continued from page B16

FREEMAN

and 93.6 grams per metric ton silver. The majority of these resources are located in the Fosters Creek and Discovery zones, which remain open to expansion. Exploration plans for 1999 include continued drilling in the DC North and DC South horizons and evaluation of other anomalous areas between DC North and the WTF resource area to the north.

Camnor Resources announced plans were well advanced for a diamond drilling program on its Cirque volcanogenic massive sulfide deposit in the Bonfield District. The \$125,000 program is being funded under an option agreement by **Oromin Exploration Ltd.**, a company that can earn a 36-percent interest in the project by expending \$375,000 on work commitments on the property and making cash payments of \$175,000 over 3 years. **Oromin** can increase its interest to 51 percent by making a \$500,000 cash payment to the underlying property vendor and issuing **Camnor** 500,000 shares of **Oromin** stock. Drilling at Cirque is scheduled to begin in July.

Other news

Barramundi Gold Ltd. announced start-up of a 60-hole, large-diameter core drilling program at its Longline property in the Yukon Territory. Initial drill results of the 20-meter by 20-meter shallow hole program are expected in late June.

In not-so-good news, **B.Y.G. Natural Resources** was fined \$300,000 for three violations of its water license at the recently closed Mount Nansen gold mine north of Carmacks, Yukon Territory. Site clean-up is estimated to cost \$4 million to \$8 million.

Madrona Mining Ltd. announced the signing of a letter agreement with **Kennecott Canada Exploration** on Madrona's Poker Creek property along the Alaska border in the Yukon Territory. **Kennecott** can earn a 51-percent interest in the project by expending \$1 million on work commitments on the property and making cash payments of \$150,000 over 3 years. **Kennecott** can increase its interest to 60 percent by expending an additional \$1 million on work commitments on the property and making additional cash payments of \$150,000. **Kennecott** has commenced initial field work on the Poker Creek prospect. ♦

BUSINESS NEWS

MINERALS

BRITISH COLUMBIA

Soil-sampling, mapping begun near Pogo

Camnor Resources Ltd. and Oromin Resources Ltd. have begun a \$50,000 program of soil sampling, mapping and prospecting on the South Salcha property located 26 miles northwest of Teck and Sumitomo's 5.5-million-ounce Pogo deposit.

About 70 percent of the property will be covered by 45-line-kilometers of soil sampling with 200-meter spaced lines and 60-meter spaced sample intervals for a total of approximately 750 samples.

If assay results expected by mid-August justify it, a follow-up drill program could be carried out before winter freeze-up.

The 6-square-mile property was staked based on favorable geology, gold in stream sediment anomalies, airborne geophysics anomalies and gold pathfinder stream geochemistry.

For more information, contact James D. Romano at (604) 687-7545.

HETCHIKAN

Abacus raises \$2.5 million from Ketchikan

Abacus Minerals Corp. has received a \$2.5 million long-term, non-convertible, low-interest loan from the Economic and Development Assistance Fund in Ketchikan. To meet the criteria set forth in the loan agreement, Abacus has initiated negotiations to secure the remaining \$2.2 million required to fund the next stage of development at the Niblack project.

These funds will be committed to a \$4.7 million exploration and development program at Abacus' Niblack volcanogenic massive sulfide project on Prince of Wales Island.

The exploration program at Niblack will allow for 1,700 meters of underground exploration and 5,000-6,500 meters of underground diamond drilling. Permits are in place to conduct the program.

Its objectives are to double the presently indicated resource, and demonstrate continuity prior to feasibility. The drill-indicated resource at the Niblack project is presently 2.53 million metric tons grading 3.04 grams per metric ton of gold, 38.99 grams per metric ton of silver, 1.71 percent copper, and 3.22 percent zinc.

Teck Corp. is Abacus' largest shareholder and has the right to earn a 51-percent interest in the Niblack project by placing the property into commercial production once a positive pre-feasibility study has been delivered.

Collateral on the loan will be backed with the timber rights on the patented claims at the Niblack property. The company is considering the negotiation of the early harvest and sale of select areas of timber thereby generating cash flow and supporting the loan's pay-back process.

For more information, contact Steve L. Tudoruk, at (604) 682-0301.

ALBERTA

Madrona Mining signs on Yukon property

Madrona Mining Ltd. has signed a letter of agreement with Kennebec Canada Exploration Inc. covering Madrona's 100-percent-owned Poker Creek property, a 139-claim mineral property along the Alaska border in Yukon Territory.

Kennebec has the option to spend a total of \$1 million over the next 3 years and make payments of \$150,000 to earn 51 percent. A further 9 percent may be earned over the next 2 years by expending an additional \$1 million and making payments of \$150,000. Once Kennebec has earned its 60-percent interest, the parties will form a joint venture and fund ongoing exploration/development programs on a pro-rata basis.

Kennebec Canada Exploration Inc., a RioTinto Company, has already commenced exploration on the Poker Creek property.

For more information, contact Gordon M. Steene at (403) 203-4666.

■ STATEWIDE

Alaska mining news summary: Tundra telegraph lines relatively quiet this month, companies busy with their summer field programs

Most data from summer field programs is not yet available; depressed metals prices continue to take their toll but several new property acquisitions have been funded and Alaska has one more new player

By Curtis J. Freeman, CPG
#8901
BNA Minerals Writer

The tundra telegraph lines are relatively quiet this month, primarily due to the fact that everyone is in the midst of their summer field programs and data from many of those programs are not yet available.

The depressed metals prices continue to take their toll but several new property acquisitions have been funded and at least one new company has acquired mineral properties in Alaska. As data returns we expect to see a surge in follow-up activity.

Western Alaska

Alaska newcomer Poseidon Minerals Ltd. announced it has acquired lease rights to earn a 100-percent interest in the Ganes Creek property in the Ophi District by making cash payments to the property owners totaling \$1.435 million over 10 years.

The company will conduct a mobile metal ion soil survey in 1999.

Exploration expenditures of \$30,000 are required in 1999 followed by \$100,000 in 2000.

After which yearly expenditures will increase to \$200,000.

The owner retains a 2-percent net smelter returns production royalty which can be purchased by Poseidon for \$7 million total.

Welcome to Alaska Poseidon!

Poseidon Minerals Ltd. also announced it has acquired lease rights to earn a 100-percent interest in the Colorado Creek property in the Cripple Creek District by making cash payments to the property owners totaling \$20,000 in 1999, followed by \$1.6 million over the following 20 years.

The company will conduct a mobile metal ion soil survey in 1999. Exploration expenditures of \$100,000 are required in 2000 after which yearly expenditures will increase to \$200,000. The owner retains a gold-price-dependent net smelter returns production royalty which can be purchased in part by Poseidon.

Poseidon's efforts will be

directed by Richard Duncan, an experienced Alaskan geologist formerly with Placer Dome. Welcome back to Alaska Richard!

Placer Dome continues its drilling and related pre-feasibility work on its Donlin Creek gold

the Goodpaster District. Work is scheduled to be completed in late July. Assays are pending.

Western Keltic Mines and equity funding partner Barrick Gold announced commencement of their \$500,000 1999 exploration programs on the

Curt Freeman's news updates prepared for Business News Alaska on July 28, 1999

If you have any news or news leads, please contact him at:

Curtis J. Freeman, CPG #8901
Avalon Development Corp.
P.O. Box 88380
Fairbanks, AK 99708-1380
Voice: 907/452-1100
Fax: 907/452-1100
on the web: <http://www.alaskamining.com>
Email: avalon@alaskamining.com

deposit. Exploration budgets were not seriously affected by Placer Dome's recent company-wide cutbacks.

Real Del Monte's Nixon Fork copper-gold mine near McGrath remains on a care and maintenance basis. The company is actively searching for a third party interested in acquiring the property.

Assay results still are pending at Consolidated

Aston Resources' Fred Creek prospect at its Mt. Distin gold project near Nome.

Eastern Interior

Kinross Gold continued mining at its Fort Knox Mine while engineering and feasibility studies are carried out at Ryan Lode, True North and the Gil prospects.

The surface and underground exploration programs at Teck Corp. and partner Sumitomo Metal Mining's Pogo deposit in the Goodpaster District continued with exploration crews conducting surface diamond drilling while underground adit advancement to the L1 zone continued.

Copper Ridge Explorations announced that first-phase stream sediment, pan concentrate and rock sampling had begun on its Goodpaster, Glacier Creek and Indian prospects in

California, Surf, Big Bend, Boogie and Central Creek properties in the Goodpaster District. The companies' program includes stream silt and soil sampling, prospecting, geologic mapping and 1,000 line kilometers of airborne geophysical surveys.

Results of this initial program are expected shortly.

Ventures Resource and equity partner Teck Resources continued diamond drilling on their Veta property in the Goodpaster district.

Placer Dome continued evaluation of the Richardson project under option from Tri-Valley. Like the Donlin Creek project, the Richardson project was spared during recent company-wide cutbacks.

Alaska Range

Atna Resources began a \$2-million, 10,000-foot diamond core drilling program on its Dry Creek volcanogenic massive sulfide deposit optioned from Grayd Resources in the Bonfield District. Exploration plans for 1999 will focus on evaluating the down-dip extent of mineralization in the DC North horizon.

Camnor Resources began work on its diamond drilling program at the Cirque volcanogenic massive sulfide prospect in the Bonfield District. Drilling at Cirque was scheduled to begin in July.

Atan Resources announced

see FREEMAN page B14

continued from page B13

FREEMAN

commencement of mapping, geochemical sampling, geophysics and diamond drilling on its Caribou Dome stratiform copper project in the Valdez Creek district.

Southeast Alaska

Coeur d'Alene Mines announced a series of major cost-cutting programs to cope with low metals prices. Spending at its Kensington gold project in Berner's Bay will be limited and restricted to obtaining a revised operating permit and researching cost reduction methods for the planned operation.

Abacus Minerals announced it has received a \$2.5-million, long-term, low-interest loan from the Ketchikan Economic and Development Assistance Fund. The funds will be part of a \$4.7-million underground exploration program designed to double the reserves at the company's Niblack massive sulfide deposit on Prince of Wales Island.

Current drill-indicated resources on the property stand at 2.53 million metric tons grading 3.04 grams per metric ton of gold, 38.99 grams per metric ton of silver, 1.71 percent copper and 3.22 percent zinc.

Exploration will consist of 1,700 meters of underground drifting and up to 6,500 meters of underground diamond drilling.

The EDAF loan is backed by the timber rights on Niblack's patented claims and is set at an interest rate of prime plus 1 percent until Abacus can demonstrate expenditures of \$7.5 million, after which the interest rate decreases to 3 percent.

Rubicon Minerals announced that drilling has commenced at its Palmer volcanogenic massive sulfide project near Haines. Drilling will be directed at three

previously discovered prospects: the MHC, Lower Jarvis and Cap prospects.

Other News

Barramundi Gold Ltd. announced results from its trenching and large-diameter core drilling program at its Longline property in the Yukon Territory.

Initial drill results indicate good continuity of veins in the Swede's Pit area, with the best result being 0.66 meters grading 386.6 grams per ton of gold (11.28 ounces per ton). Similar thin, high-grade intercepts were encountered in trenching.

High-grade material also was noted in wallrocks enveloping the veins, the first such documentation of wallrock-hosted mineralization on the property. Mineralization remains open along strike and down-dip.

The company also announced completion of a 54-line-kilometer REAL section IP geophysical survey over a 3,000-meter by 1,500-meter area of Swede's Pit. Several resistivity and chargeability anomalies have been identified by the geophysical surveys and will be drill tested after evaluation of the data.

Viceroy Gold announced that as a result of repurchasing its hedge position, it has realized net gains of \$23 million and retired \$7 million in debt assigned to the Brewery Creek mine in the Yukon Territory. Operations continue at the Yukon's only heap leach operation.

Engineer Mining Corp. announced that despite depressed gold prices, it is proceeding with listing of the company on the Vancouver Stock Exchange. The company's principal asset is the past-producing Engineer gold mine in the Yukon Territory. The company also owns an option on a property in the Goodpastor District in Alaska.

Yukon newcomer Aurora Gold Corp. announced the formation of Deltango Gold Ltd., a wholly owned subsidiary that has acquired 100-percent interest in five promising gold properties in the Tintina Gold belt in the Yukon Territory.

The properties — covering some 1,055 square kilometers — include the Carlisle Creek, Independence Creek, Livingstone North, White River and Sonora West properties.

The properties were acquired after identification of anomalous gold and pathfinder geochemistry — As, Sb, W, Bi, Hg — were noted in geologic terrains similar to those which host gold mineralization in Alaska.

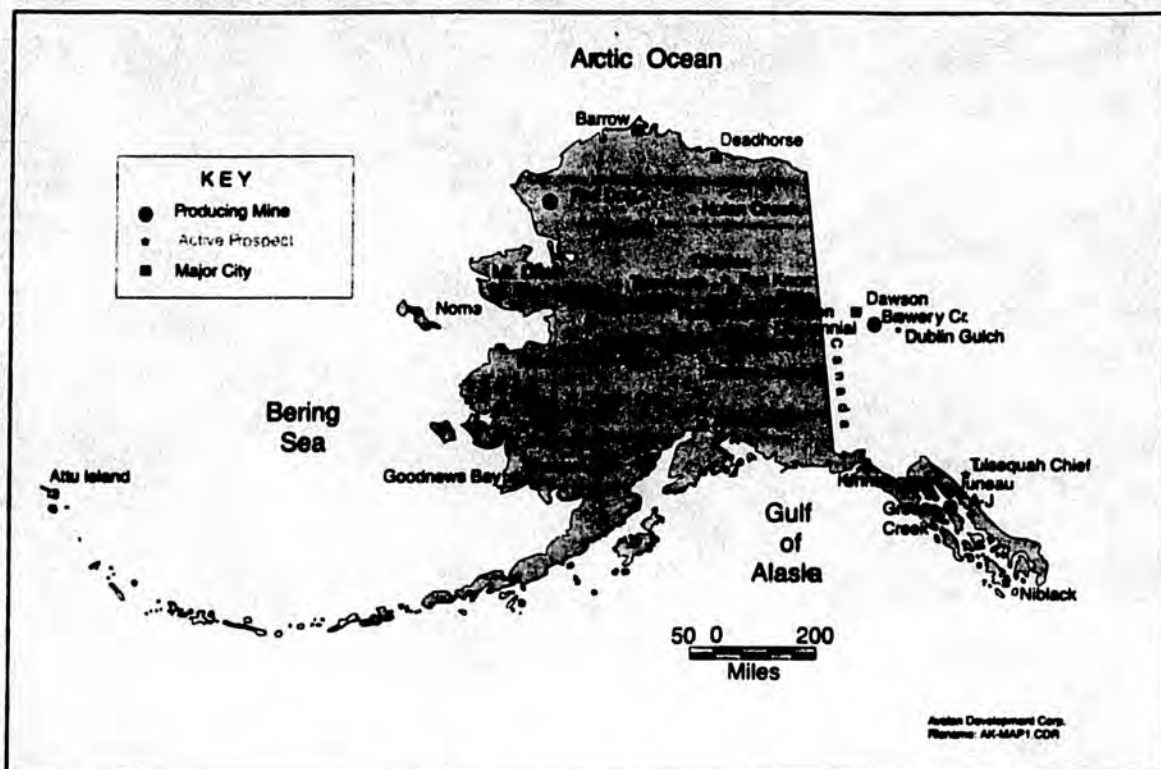
Fairbanks-based Avalon Development Corp. has been retained as Deltango's prime geological consultant. Deltango has mobilized an exploration team to conduct preliminary geochemical sampling and geologic mapping in order to prioritize these properties for further exploration. Welcome to the Yukon Aurora Gold!

If you think people have lost interest in gold, ask Gordon Brown, Chancellor of the Exchequer for Great Britain.

Following a World Gold Council advertisement in selected British newspapers, thousands of angry British citizens called a free telephone number to register their disapproval with Mr. Brown of Britain's gold sales on the open market.

At one point the phone system was answering more than 1,000 calls per hour and eventually crashed due to the logjam of calls.

It seems average British citizens are better informed than their government about the fundamental value of gold reserves!♦



**Give or take a
couple feet,
we know
exactly where
your shipment
is right now.**

Real-time tracking technology gives us the power to locate
your freight any time, any mode, anywhere we ship on
the entire continent.



MINERALS

JUNEAU

Juneau gold mine cleanup going well, contractor says

An 11-member crew doing reclamation work at the Alaska-Juneau gold mine is on schedule to have the project completed by next summer as scheduled, according to the firm overseeing the work.

About 170 million gallons of water have been pumped out of a series of mine caverns below sea level, and monitoring shows that poisonous elements in the water are at lower levels than occur naturally, said Paul Hilbelink, project manager for Kvaerner Environmental.

Kvaerner, hired by Echo Bay Alaska to seal up the mine, is discharging the mine water into Gold Creek downstream of the intake point for Juneau city water.

Kvaerner's crew also is sealing up openings to the mine and removing electrical equipment, air compressors and pumps from beneath the surface. Many surface structures have already been removed, while the fate of some remaining buildings with potential historic interest hasn't been determined, Hilbelink said.

The work does not of itself foreclose the possibility of reopening the mine, he said. Rather, Kvaerner is "bringing the mine up to Year 2000 regulatory status," he said.

But Juneau City Manager Dave Palmer said that with the price of gold at depressed levels, it's hard to foresee any mining. He noted Echo Bay spent several years and \$100 million on the project to reopen the mine before abandoning it in early 1997, due to low gold prices.

—The Associated Press

GALENA

Bankrupt Interior gold mine leased to Alaska subsidiary of Canadian

The bankrupt Illinois Creek gold mine has been leased to the Alaska subsidiary of a Canadian mining company.

Viceroy Alaska, a subsidiary of Viceroy Resources Corporation, will take over operation of the mine, which is located about 60 miles southwest of Galena.

The mine was taken over by the state Department of Natural Resources July 1 when the previous owner, Denver-based Dakota mining, declared bankruptcy.

The mine is located on state land and DNR wanted to ensure that the mine remained in compliance with environmental laws while the agency searched for a new operator.

Viceroy owns and operates the Brewery Creek gold mine in the Yukon Territory.

Under the agreement, Viceroy has been granted a lease for the property for up to 10 years.

The company plans to complete drilling to assess the remaining reserves and to complete preparation of a reclamation plan by the end of January. At that time, Viceroy has the option of completing full reclamation and resuming mining at the site.

—The Associated Press

ANCHORAGE

AMA's annual convention slated for Nov. 1-6

The Alaska Miners Association's annual convention and trade show is scheduled for Nov. 1-6 at the Sheraton Anchorage Hotel in Anchorage.

This year's theme is "The New Rush to Alaska's Riches." In addition to several short courses and technical sessions, this year's convention and trade show features a "History Night," at which attendees get together to hear talks about Alaska mining history. One of the talks this year will be on early mining in Southeast Alaska.

For more information call AMA at (907) 563-9229 or email ama@alaskaminers.org. The organization's web site is www.alaskaminers.org.

■ STATEWIDE

Low gold prices continue to batter Alaska's miners; Pogo still hot spot

By The Associated Press

The lowest gold prices in 20 years have some mining companies closing their Alaska offices, laying off workers and putting exploration effort on hold.

"We've closed our Anchorage office. We'll be working out of our homes," said Stan Foo, Alaska manager for Placer Dome, a Vancouver, British Columbia, mining company.

This summer Placer Dome abandoned its feasibility study for Donlin Creek, a gold mining project along the Kuskokwim River in Southwest Alaska and put the permitting process on hold.

When work at Donlin Creek began four years ago, gold prices ranged at between \$380 and \$400 per ounce, Foo said. Since then the price has steadily dropped. The price of gold in London closed Friday at \$254 an ounce, down from \$254.50 on Thursday.

The low prices have formed Placer Dome and its partner, the Bethel-area regional Native corporation Calista Corp., to rein in the project.

Placer Dome still exploring

But Placer Dome continues to explore two other Alaska prospects, Stuyahok and Richardson. Stuyahok is about 100 miles northeast of Donlin Creek, near the Yukon River. The



Donlin Creek, a state of Alaska mining project, predicts gold production in Alaska will fall 30 percent this year's estimated \$80,000 ounces.



Many men-and-women miners stayed home this summer because it wasn't worth it financially to mine, said Steve Barst.

Richardson prospect is east of Fairbanks near Delta Junction.

The Fort Knox gold mine near Fairbanks also is feeling the price pinch. Fort Knox, the state's largest gold mine by far, lost \$10 million in the first half of this year, said general manager Steve Land. Although the mine is operated at a profit, it loses money after up front development costs are added in. Fort Knox has no plans to lay off workers or scale back production, currently at 1,000 ounces of gold a day, Land said.

The hottest spot for exploration continues to be in the Goodpasser District near Delta Junction. Successful surface exploration programs have been completed at the Pogo deposit by partners Teck Corp. and Sumitomo Metal Mining. Pogo is considered one of the richest gold deposits in the world.

Nearby, a number of other mining companies — including several newcomers to Alaska — are exploring deposits that they hope will prove as promising as Pogo.

Kensington cuts staff

But low prices are hurting the Kensington gold mine 45 miles north of Juneau. Coeur Alaska, the company trying to develop the mine, has reduced its staff by eight, restructured the project to cut

see POGO page B24

■ STATEWIDE

Mining companies try to extract field data against ticking clock of remaining season

Properties all over Alaska are changing hands faster than leaves are falling as new field discoveries are made

By Curtis J. Freeman, CPG
#8901
BNA Columnist

The dam has finally broken and news has come in from all over the state regarding the good, the bad and the ugly results from the 1999 summer field season. Properties are changing hands faster than the leaves are falling and the Tundra Telegraph says that several new discoveries have been made. As the termination dust makes its ominous and inevitable reappearance, a final charge to the field is on by a number of junior and major mining companies trying to extract the maximum amount of field data from the little time remaining this season.

Western Alaska

Cominco announced that exploration drilling six miles north of its Red Dog mine intersected high grade zinc and lead mineralization at depths of about 2,500 feet.

three holes returned 53 feet grading 30 percent zinc and 6 percent lead, 15 feet grading 20

deal with Viceroy Resources on NovaGold's 50-square-mile Rock Creek project near Nome.



percent zinc and 5 percent lead and 160 feet grading 18 percent zinc and 5 percent lead. The as-yet unnamed prospect appears to be flat and open to expansion to the north, west and south. Drilling should have continued into September, weather permitting.

NovaGold Resources announced that it had signed a

Viceroy can earn a 65 percent interest in the project by expending \$8 million on property exploration, paying \$2 million in cash and completing a pre-feasibility study.

The primary target area encompasses the 720,000-ounce Rock Creek deposit. Minimal work will be completed by

see POGO page B23

continued from page B21

FREEMAN

Viceroy this year with NovaGold acting as operator until Viceroy has expended \$5 million on the project.

This marks Viceroy's first venture into Alaska and the return of longtime Alaskan explorer and Viceroy President Clynt Nauman. Welcome to Alaska Viceroy and welcome back Clynt!

Placer Dome has completed summer drilling on its 11.5 million-ounce Donlin

Rubicon Minerals announced discovery of a new massive sulfide showing at its Palmer volcanogenic massive sulfide project near Haines.

Creek gold deposit. The company states it has confirmed the grade of the deposit but that no high grade "surprises" were indicated.

Rumors are rampant on the Tundra Telegraph that the state of Alaska has found a responsible party to complete mining and decommissioning of the troublesome Illinois Creek heap leach gold mine. With any luck, a new operator should be in place by sometime this month.

Eastern Interior

Kinross Gold continued mining at its Fort Knox Mine and its engineering and pre-feasibility studies at Ryan Lode and True North.

The surface exploration programs have been completed at Teck Corp. and partner Sumitomo Metal Mining's Pogo deposit in the Goodpastor District while underground adit advancement to the L1 zone continues. Drilling was completed at the Sonora Creek prospect southeast of the main deposit, where several hundred strike feet of east-west trending quartz veins have returned some values in excess of 1 ounce per ton gold. A soil grid in this area is reported to be substantially better than the original Lise soil anomaly.

Western Keltic Mines and joint owner Rimfire Minerals, along with Western Keltic's equity funding partner, Barrick Gold, announced that first pass evaluations covering 71 square miles in the Goodpastor District have indicated significant gold and pathfinder anomalies, on the Boundary, Southeast Surf and Beverly Creek prospects.

The Boundary prospect is comprised of a 700-meter-long soil anomaly generated while following up a rock float sample that returned 22.5 grams per ton in gold. Gold in soils ranges from 10 to 40 ppb and is associated with anomalous arsenic, bismuth, tellurium, antimony and tungsten. The Southeast Surf soil anomaly extends over 4.5 kilometers in a northwest/southeast direction and contains gold values up to 70 ppb with associated anomalous arsenic, bismuth, antimony and tungsten. Quartz vein material from the area has returned values up to 1.02 grams per ton in gold.

The Beverly Creek prospect contains anomalous stream sediment samples with gold values up to 890 ppb. The company also reported anomalous gold and pathfinder values from rocks and stream



Curtis A. Freeman

Follow-up field work is underway on the Boundary and Southeast Surf prospects where more rigorous grid soil sampling and geologic mapping has begun.

Western Keltic and Rimfire also announced that Western Keltic has been granted an option to increase its ownership from 50 percent to 80 percent on the California, Surf, Ger, Central Creek and Big Bend properties by completing property exploration expenditures of \$2.5 million and issuing Rimfire up to 300,000 shares of common stock.

Hyder Gold announced that it has delineated a 5-kilometer-long zone of anomalous soils on its Eagle prospect with widths ranging from 200 to 1,000 meters. Gold values up to 310 ppb are associated with anomalous bismuth, arsenic, tungsten and antimony. The anomaly is associated with a Cretaceous age intrusive and is supported by anomalous stream sediment and rock geochemistry. In addition, the company indicated that the Bou prospect returned gold up to 910 ppb in intrusive hosted quartz veins, which may be related to a 500-meter-long, gold-in-soil anomaly to the northeast. Follow-up field work was planned to start last month.

Best wishes to Grayd Resources president, John McCluskey, who was struck by a car while crossing a street in downtown Vancouver.

Placer Dome completed its first full season on its Richardson project under-optimized from Tri-Valley. Results are pending.

The state of Alaska Division of Geological and Geophysical Surveys completed its planned airborne geophysical program over about 950 square miles of the Selkirk and Goodpastor mining districts. These surveys are scheduled to be released to the public in early 2000.

Alaska Range

Aina Resources announced that its 10,000-foot diamond core drilling program on its Dry Creek volcanogenic massive sulfide deposit was to be completed in early September. The property is optioned from Grayd Resources. Results of this drilling will be released when all assays are compiled. On a more personal note, best wishes to Grayd's president, John McCluskey, who was struck by a car

Vancouver.

Camnor Resources and partner Oromin Resources announced the results of their diamond-drilling program at the Cirque volcanogenic massive sulfide prospect in the Bonifield District. Drilling on the Discovery zone intercepted

NovaGold Resources announced a deal with Viceroy Resources for Rock Creek project near Nome. It's the first Alaska venture for Viceroy and the return of longtime Alaskan explorer and Viceroy President Clynt Nauman.

ed 5.5 meters grading 2.84 grams-per-ton gold, 74.5 grams per-ton silver, and 8.08 percent zinc, 2.11 percent lead and 1.36 percent copper. The Discovery zone has been traced for 700 meters along strike to the west to the JA prospect and remains open along strike and down dip to the north. Additional lower grade mineralization was intercepted at the Dol zone located 500 meters north of the Discovery zone and 250 meters lower in elevation.

Aina Resources also announced that diamond drilling was continuing on its Caribou Dome stratiform copper project in the Valdez Creek district. Results of this drilling will be released when all assays are compiled.

Southeast Alaska

Kennecott (70.3 percent) and Hecla (29.7 percent) continued production from the Greens Creek mine. No word yet on whether Kennecott has found a buyer for its interest in the mine.

Rubicon Minerals announced discov-

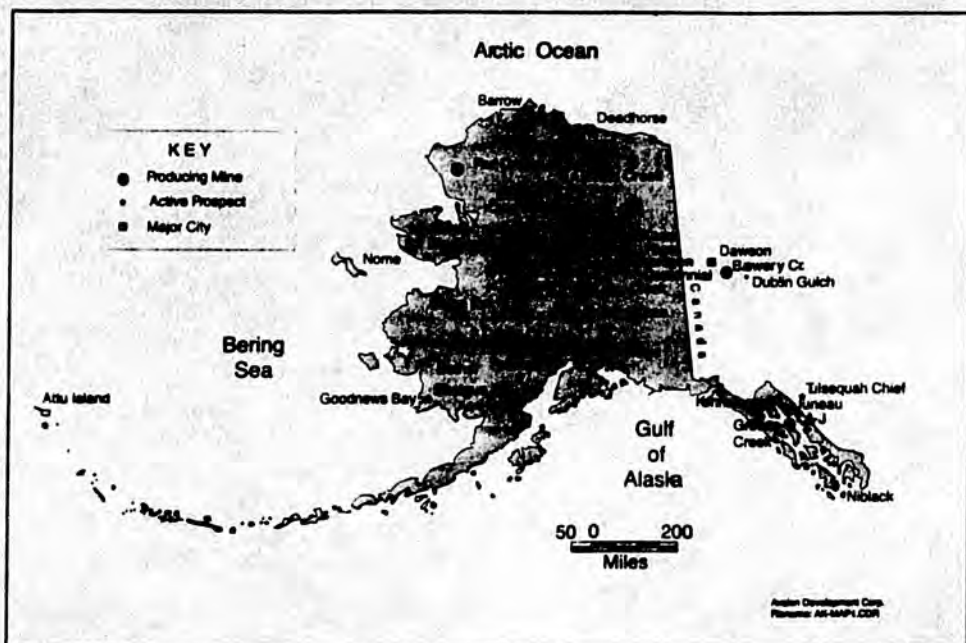
ery of a new massive sulfide showing at its Palmer volcanogenic massive sulfide project near Haines. The new RW zone is 600 feet from the Lower Jarvis zone and 1,600 feet from the Upper Main Zone along the same stratigraphic horizon. Four core holes drilled into the RW zone have extended it over 680 feet up dip on sections 170 feet apart. Mineralization is open in all directions. The drill results include 8.3 feet grading 5.85 percent zinc, 1.89 percent copper and 1 ounce per ton silver. Additional drilling is planned to test the strike potential of the RW zone.

Northern Alaska

Silverado Gold Mines announced that it had recovered 344 ounces of gold from gravels grading 0.09 ounces per ton at its Nolan Creek underground placer mine in the southern Brooks Range. The largest nugget recovered from this clean-up was 14 troy ounces.

Other News

Barramundi Gold Ltd. announced that it has optioned its Longline project in the Moosehorn Range in the western Yukon Territory to Newmont Exploration. Newmont reportedly started a 3,000-meter diamond drilling program on the property in mid-September. Newmont can earn a 51 percent interest in the property by acquiring \$1 million worth of Barramundi stock and spending \$4 million on exploration prior to the end of 2004. Newmont can earn an additional 29 percent interest by expending an additional \$15 million or completing a bankable feasibility study by 2010. ♦



We're Your Relocation Experts

PRIME MOVERS

HOUSEHOLD GOODS RELOCATIONS
Local • National • International

Anchorage 274-5777 Fairbanks 452-3843

Interior Exploration

Any also exploration program Services unique to your program

- Surveying • GPS
- Claim Staking
- Soil Sampling
- Soil Grids

P.O. BOX 84965 • Fairbanks, AK 99708
Phone (907) 455-8083 • Fax (907) 457-5073

D.C.

to encourage the creation of monuments

the House this week opposing the bill, saying that if it passed, Clinton's senior advisors would recommend a veto. The memo said the measure "would undermine the president's authority to move decisively to protect and preserve the

"It's the best we could get," said Rep. Greg Walden, R-Ore., a bill co-sponsor.

nation's treasures for future generations."

"I think it is outrageous that they oppose this legislation at a time they are supposedly advocating for public participation in these processes," said Walden, who opposes a proposal to create a national monument in southeastern Oregon to protect Steens Mountain. ♦

continued from page B21

PROS

mine and delayed production, said spokeswoman Margaret Downing. With gold prices at a record high, the state's gold mining industry is looking for ways to increase production. Many miners stayed home this summer because of a lack of financial incentive to mine, said Steve Borell, executive director of the Alaska Miner Association.

Some companies are looking for gold. USMX of Alaska and New Del Monte, which operates exploration and production in the state's north and west, and Alaska, and New York, and Montana, both went into bankruptcy and closed down over the past year, Borell said. The bankruptcies were driven by interest problems and compounded by low gold prices in 1998.

Swainbank predicts production will fall 20 percent this year.

Alaska's northernmost mine didn't operate this year. Gold Co.'s Nome dredge shut down last fall after the company was bought out by NovaGold Resources Inc., said Dick Swainbank, a state of Alaska mining expert.

Swainbank predicted gold production in Alaska will fall 20 percent this year from last year's estimate of 1.7 million ounces.

Gold mining employment in Alaska dipped by 7 percent in the past year, shedding about 130 jobs, said state labor economist Neal Fried.

Those figures don't capture the whole picture, Fried said, because a lot of gold mining in Alaska is small-scale and family-oriented, and because wages aren't involved. ♦

DO YOU

WANT

IN



8-2 for should I notify ssional aring a lesigna-rea akin t notice passed, ent with I monu-

it," said bill co-

by Utah the best 2-year out 1.7 mil- Escalante rn Utah. als were

Mining moves forward in spite of low metal prices

By Steve Borrell

Even though we have had low prices for both base and precious metals, "The New Rush to Alaska's Riches" is an accurate theme for the 1999 Alaska Miners Association Convention and Trade Show. Alaska continues to be the destination of choice for many large and junior mining companies.

In times of low prices, exploration dollars are scarce and companies are very cautious with the limited funds at their disposal. They focus on states and countries having the highest geologic potential which also have political and tax stability. State and Native Corporation lands in Alaska fit these criteria and continue to be of interest to the industry.

Alaska has the geologic potential and is known both historically and currently for some of the best deposits in the world. In their day, the Alaska-Juneau, Treadwell, Kennecott, and Alaska placer mines were world-renowned. Today Greens Creek is the largest silver mine in the U.S. and Red Dog is the largest zinc mine in the world. Furthermore, when compared with other states and countries, Alaska is essentially unexplored...so the potential for new discoveries is tremendous.

Regarding political stability Alaska also receives good marks. Recent Legislatures and Governors have been supportive of mining and have sought to encourage mineral investment and reduce the uncertainty of doing business in the state. Several relatively small but important changes have been made to statutes and regulations and these have continued to improve the business climate while maintaining stability.

For the past dozen years there has also been tax stability. Mining can never pro-

vide the level of direct tax and royalty revenues to the State that Prudhoe Bay has...nothing can. But mining can provide jobs and economic opportunities for all areas of the state. This was shown dramatically by a February 1999 McDowell Group study titled "Economic Impact of the Fort Knox Mine on the Fairbanks North Star Borough" prepared for the Borough. Even though low gold prices mean that Fort Knox is not making a profit, it is providing 260 of the best jobs in the area. Fort Knox also spends over \$35 million annually on local goods and services, generates \$4.4 million annually in mine-related revenues to the North Star Borough (\$16,900 per job created), and since coming on-line has resulted in a 7% decrease in electric rates for the residents of the Borough.

Another important factor that contributes to the interest in Alaska is land ownership. The State's land entitlement is about 104 million acres (out of the total state area of 365 million acres) and most of that has now been transferred to State ownership and management. Also, the Native Corporations are entitled to about 44 million acres and most of that has been transferred to Native ownership. The stability of the State mining law and the straight-forward business approach of the Native Corporations have given companies confidence to explore and invest here. This is in contrast to the extreme uncertainty that has arisen during the past few years of the Clinton Administration for operating on federal lands managed by the Bureau of Land Management and the U.S. Forest Service. Rules and regulations have been, and are being, changed administratively which make exploring and operating on these federal lands terribly

difficult and in some instances impossible.

Exploration successes also encourage companies to explore, and the excitement over Alaska continues. The area around the Pogo Project northeast of Delta Junction (on State land) is one of the

hottest areas in the world. Even though low metal prices make it extremely difficult to raise exploration money, companies with land positions in that area are able to raise some of the money needed and are actively exploring. The work

by Placer Dome at Donlin Creek (on Calista land) has identified a resource of 11.5 million ounces of gold. It is not yet known if this can be mined economically but anywhere in the world that is a

Continued on Page 6

WE HELP BUILD SOME OF THE BIGGEST POWER TOOLS IN ALASKA

PRICE

- Integrated Construction Management & Cost Control
- Multi-Discipline Engineering
- Skilled Craft Work Force
- Fast Track or Fixed Price Capabilities

AMERICAN
RESEARCH WIRE CORP.



Give us a call today!

907-563-5229
1-800-989-5229

Your full line Electrical Distributor ...
Serving Alaska and the
Pacific Northwest
since 1913.

NORTH COAST
ELECTRIC COMPANY

• 5410 Fairbanks Street, Anchorage • 3504 Industrial Avenue #107, Fairbanks

Power cable you can depend on.

- 1st Quality
- Tough
- ISO 9001 Certified
- Meets your demanding specifications

NCE and ANW provide you with the very best in electrical wire, cable and cord products ... ready for quick shipment to your industrial site.

And when you need to dig into difficult power and control situations, you can count on our automation specialists to provide a rock solid solution.



Mining still financially viable pursuit

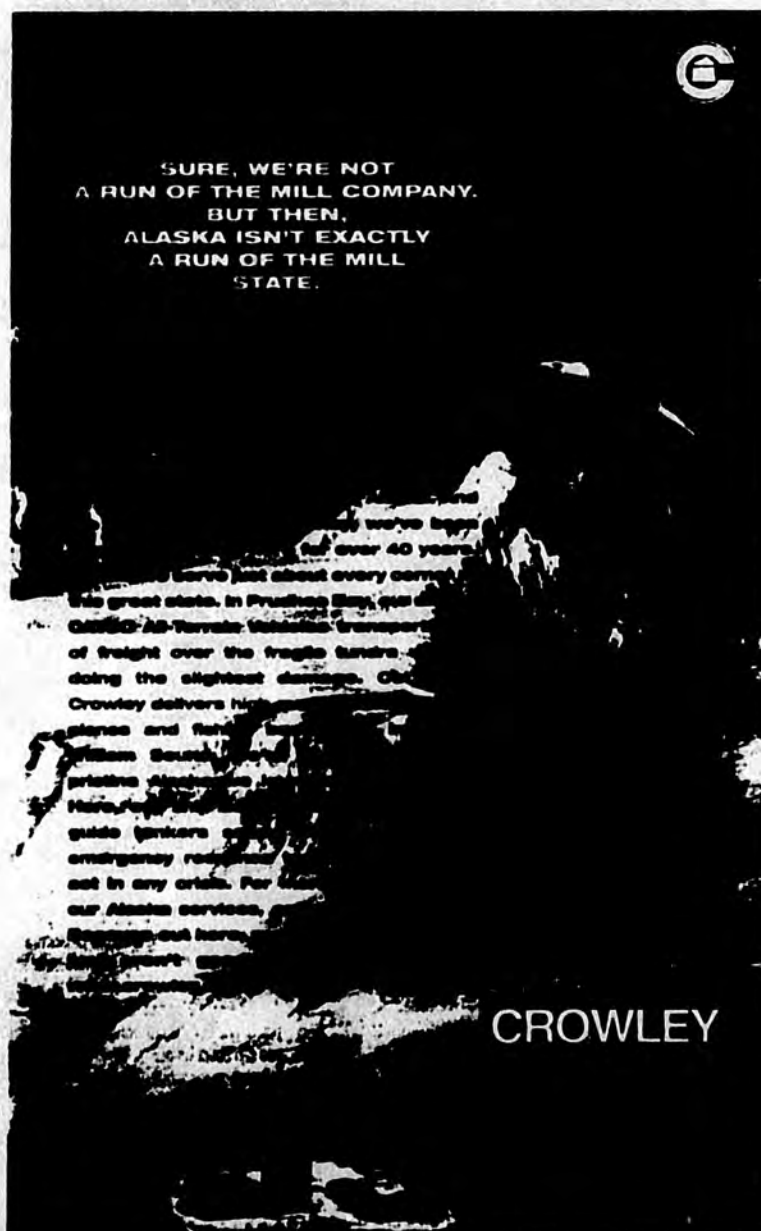
Continued from Page 5

huge deposit of gold. At Red Dog the excitement continues on both State and NANA lands as new finds almost every year are making the world's largest zinc mine into the world's largest zinc province.

A climate of tax and regulatory stability combined with these successes are central to the Alaska Miners Association 1999 Convention and are why "The New Rush to Alaska's Riches" continues in spite of low metal prices.

[Steven C. Borell is the

executive director of the Alaska Miners Association. He is a registered professional engineer in Alaska, Colorado and North Dakota and has more than 25 years experience in coal and metals mining in Alaska, the Lower 48, Canada, and South America.]



SURE, WE'RE NOT
A RUN OF THE MILL COMPANY.
BUT THEN,
ALASKA ISN'T EXACTLY
A RUN OF THE MILL
STATE.

...we've been
...for over 40 years.
...just about every corner
...in Prudhoe Bay, and
...AD-Terrate Vehicles transport
...of freight over the fragile tundra
...doing the slightest damage. Our
...Crowley delivers high
...planes and fuel
...William South
...pristine Alaskan
...Helm, who's also
...guide (parkers and
...emergency response
...not in any crisis. For
...our Alaska services,
...Please call here,
...Don't forget to
...Crowley

Registration Form

ALASKA MINERS ASSOCIATION
Convention and Trade Show
November 1 through 6, 1999

Date _____
Name _____
Company _____
Address: _____
City: _____ State: _____ Zip: _____
Telephone: _____

MEMBERSHIP

Individual Member..... \$ 75.00
Professional Member..... 200.00
Operator..... 250.00
Student..... 10.00
Corporate..... Call AMA office for information

CONVENTION REGISTRATION

Member Registration..... \$ 85.00
Non-Member Registration..... 115.00
Student Registration..... 20.00
Surcharge after Oct. 15, 1999..... 25.00

SPECIAL EVENTS

Wednesday, November 3
Luncheon..... \$19.00

Thursday, November 4
Mining District Breakfast..... \$15.00
Luncheon..... \$19.00

Friday, November 5
UAF School of Mines Breakfast..... \$15.00
Luncheon..... 19.00
Banquet..... 40.00

Short Course #1 Nov. 1 & 2
Sedex Deposits: Genesis and Exploration
(Includes Lunch on both days)..... 325.00

Short Course #2 Nov. 2
Remote Sensing Technology for Mining Applications
(Includes Lunch)..... 140.00

Short Course #4 Nov. 6
MSHA Surface Refresher
Pre-Registration..... No Charge
(Pre-registration is required. Lunch not included)
TOTAL _____

Payment Method:

Check # _____ Cash _____ M.O.# _____
P.O.# _____

To Pay by Credit Card:

1. Circle one: VISA or MASTERCARD

2. Account Number: _____

3. Expiration Date: _____

4. Signature: _____

MINERALS

WASHINGTON, D.C.

Mining regulations fine, but have 'gaps,' says panel

Environmental regulations governing mining on federal land are generally effective, but are applied unevenly and inexpertly, the National Research Council concluded in a long-awaited report.

A council committee identified "several gaps in existing regulations that need to be filled," such as tracking mining better, regulating smaller mines and giving more enforcement power to the Bureau of Land Management and Forest Service.

Congress asked the NRC to review existing rules to determine how well to protect the environment. The council was not asked to critique a set of new regulations that Interior Secretary Bruce Babbitt has been pushing for since January 1997.

But Babbitt said the report endorses the stiff new rules he wants for hardrock mining, including new restrictions on open pits and requirements that even small mining operations post bonds guaranteeing their ability to pay for environmental reclamation.

But mining industry lobbyists, as well as the federal lawmakers who requested the study, said the report shows a regulatory overhaul is unnecessary.

"I think that is a vindication," said Sen. Richard Bryan, a Nevada Democrat. "I think the report is very strong evidence that we don't need a whole new tier or level of regulations."

—The Associated Press

FAIRBANKS

Fort Knox manager heading for Chile

Steve Lang, general manager of the Fort Knox Gold Mine, is leaving his job to work in Chile.

Lang is moving to Santiago, Chile, to serve as vice president of engineering and development for Rio Algom Mining, a Toronto-based company operating a copper mine in Santiago.

"I don't think you can move much further before you start coming back," Lang joked Oct. 17.

Tom Irwin, Fort Knox's operations manager, will take over as interim general manager until a replacement for Lang is named. Lang said he didn't know when Toronto-based Kinross Gold, which owns the mine, would name a successor. He said the company was in no hurry.

Lang described his move as a great career opportunity, and said the Fort Knox mine is a solid operation.

—The Associated Press

STATEWIDE

Alaska mining news summary: Gold prices rise put hedgers to shame

Gold stormed back in late September, trading as high as \$339 an ounce before settling back to the \$315- to \$320-an ounce range

By Curtis J. Freeman, CPG
#9801
BNA Contributing Columnist

As the first snow flakes settle over Alaska, the mineral exploration industry got a much needed shot in the arm from the rapidly rising gold prices.

Although the rise was too late to affect the 1999 field season, it has put a spring in the step of most of the industry and promises to bolster operations and exploration budgets next year. Additional exploration results continued from a number of

regions of Alaska although new resource estimates are not yet available.

Western Alaska

Cominco Alaska Inc. announced it has investigated expanding the Red Dog Mine port facilities on the Chukchi Sea. In order to eliminate costly and time consuming barge transfers at the current facility, Cominco has proposed dredging a 50-foot-deep channel to a point about one mile off shore.

The facility could then be used not only to expand production from the Red Dog mine but

to reduce the cost of importing fuel for neighboring communities. The expanded port facility becomes even more attractive with Keren Zinc Co. indicating it may expand its Townsville, Australia smelter where 400,000 tons per year of Red Dog zinc concentrate already are bound.

Viceroy Alaska, a subsidiary of Viceroy Resources Corp., has reached an agreement with the state of Alaska to take over mining and decommissioning of the Illinois Creek heap leach gold mine.

see FREEMAN page B11

FAIRBANKS

Teck weighs financial, environmental impacts of Pogo route options

Mine project manager Karl Hanneman talks about access choices in a presentation to the Fairbanks Chamber's transportation committee

By Al Blavin
BNA Contributing Writer

One route is by air. Another combines a little flying and a winter trail.

A third scenario involves building an all-season road in the Goodpastor River Valley. All three lead to a remote parcel of land that is about to become Pogo Mine, a lucrative gold deposit located 40 miles from Delta Junction.

The choice is one of the more

delicate ones from both a financial and environmental standpoint. It will define the permanent access through a relatively undeveloped section of wilderness to a deposit containing 5.2 million ounces of gold.

Looking for the smallest footprint

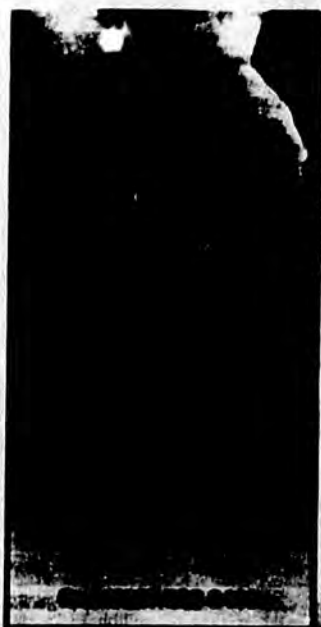
"We've got to come to grips with what's best for the project, what's best for the community and what we can get permitted," said Karl Hanneman, the Pogo project manager for the joint

venture between Teck Resources and Sumitomo Metal Mining.

Hanneman spelled out the options in mid-October to the Greater Fairbanks Chamber of Commerce's transportation committee. Some consideration is being given to a fly-in operation, which would leave the smallest footprint but bring a noise problem.

Equipment and supplies could be flown to the mine from a staging area at Fort Greely's

see TECK page B13



Looking
for an investor?



continued from page B11

FREEMAN

The two-phase program outlined by Viceroy includes confirmation drilling of the existing reserve base followed by mining and reclamation plans to be submitted by January 31. Viceroy personnel have been on-site since late September. Our hats should be doffed to Bob Loeffler and his staff at the state Division of Mining, Land and Water Management for shepherding this deal through and for making a \$75,000 profit during the two months it operated the recovery facilities at the mine!

Eastern Interior

Klarnes Gold announced its third quarter operating results that showed Fort Knox production increased 6 percent over second quarter results with mine costs at \$182 per ounce. The mine produced 97,256 ounces of gold in the third quarter and 265,685 ounces of gold through the first nine months of 1999.

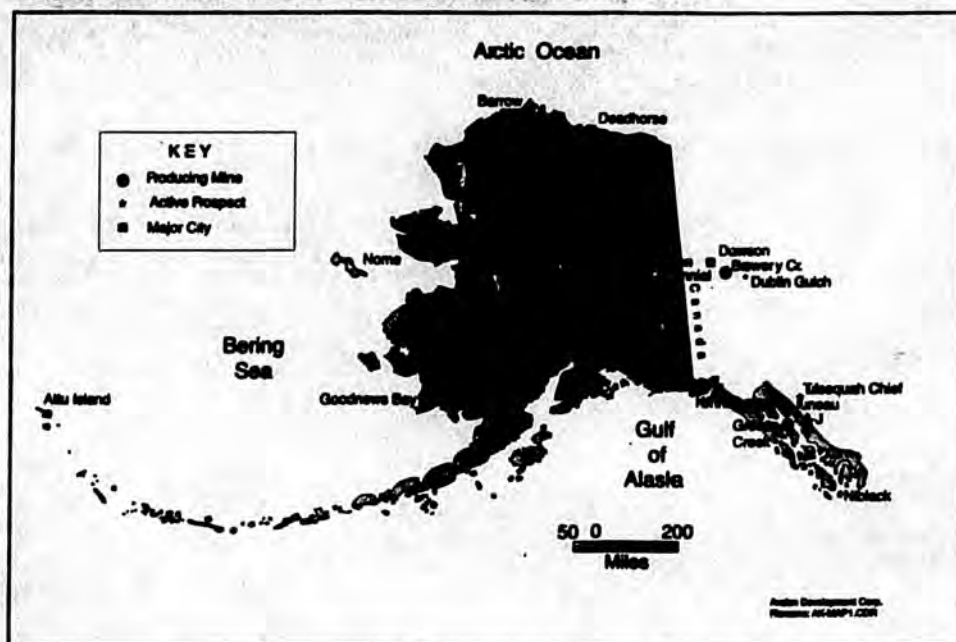
Congratulations are in order to the mine and its employees who announced that in late September Fort Knox had produced its one millionth ounce of gold since start-up. To put this into perspective, it took three years for Fort Knox to reach the one million ounce milestone. This production amount is nearly double the lode gold production from the Fairbanks District for the previous 90 years!

With the good came the bad: Fort Knox General Manager Steve Lang announced he is leaving the company to take up a challenging position as vice president of engineering and development for Rio Algom in Chile. Tom Irwin, currently operations manager at the mine, will assume Steve's duties while the company searches for a new mine manager.

I would like to personally thank Steve for the numerous professional courtesies he extended to me during my all-too-frequent mine visits and am sure I speak for the Alaska mining industry in general in wishing Steve the best of good fortunes at his new job. Oh, by the way Steve, could I arrange a mine tour down in Chile for next month?

Klarnes Gold informed Ester area residents that preliminary work at the Ryan Lode deposit confirmed the previously estimated gold grades and tonnage and that current plans call for a six-year mine life operating 12 hours a day, six to seven days a week. Environmental work also continued at the site along with baseline air quality and noise monitoring. Baseline monitoring through the winter will be required before more substantive mine plans will be presented to the public.

Klarnes Gold also announced it has entered into a joint venture agreement with Teryl Resources Corp. on Teryl's Westridge claims south of the True North



deposit.

Klarnes can earn a 70 percent interest in the deposit by expending \$1.5 million on exploration and making cash payments to Teryl totaling \$285,000 over five years. Minimal work was completed on the Westridge claims in 1999.

The state Division of Mining, Land and Water Management has begun investigation of water wells in the vicinity of the Yellow Eagle Gold mine in Ester after area residents suggested the mine's activities have adversely affected their domestic water wells.

Unlike the mine operation, most of the residents who complained had not acquired water rights for their wells. To date, no direct cause-and-effect relationship has been shown between the mine and the drop in water wells.

Great American Minerals has joint-ventured its Uncle Sam properties in the Richardson District to Kennecott Exploration. Kennecott can earn a 51 percent interest in the project by expending \$1.5 million on exploration and making cash payments of \$260,000 over six years.

Kennecott can earn additional interest in the property through a series of optional cash payments and work expenditures. Preliminary work on the Uncle Sam prospect revealed gold in rock grab samples up to .16 ounces per ton and anomalous gold in soil samples up to 430 parts per billion. The northwest trend of mineralization on the Uncle Sam prospect is parallel to that of the nearby Pogo trend.

Cannor Resources and partner Oremis Exploration announced results from their initial work program on the South Selkirk property in the Caribou District. Three east-west trending gold in soil anomalies were delineated by grid controlled soil sampling. These anomalies measure 200 meters wide and range from 800 meters to 1,400 meters long. Almost all soils and intrusive rocks contain vanadium. Some quartz veins with magnetite and hematite are present. Exploration is planned for the pro-

ject. Teck Corp. and partner Summit Metals Mining reported they are in the process of evaluating access routes and methods to their Pogo deposit in the Goodpasture District (see related story this section). Access options under consideration include an air-only route, an air- and winter-only surface route and an all-season surface road. On addition, the possibility of extending existing power grids to the mine site will greatly reduce the need for fuel haulage and will reduce emissions from the site. Completion of the evaluation is expected by year's end.

Western Keltic Mines and joint-owner, Rimfire Minerals, along with Western Keltic's equity funding partner, Barrick Gold, announced that phase-two rock and soil sampling have indicated significant gold and pathfinder anomalies on the Boundary and Southeast Surf prospects.

The Boundary prospect returned anomalous gold in 27 of 32 rock samples, including two samples containing .54 and .72 ounces of gold per ton. Anomalous gold is associated with bismuthinite and arsenopyrite. The results of 472 soil samples and an additional 22 rock samples are pending.

Work on the Southeast Surf consisted of collection of 349 soil and 42 rock samples. Results from 21 of the rock samples indicated anomalous gold in 20 samples with values ranging up to .13 ounces per

ton. Additional work is being planned for next season.

Ventures Resource Corp. and Teck Corp. announced preliminary results from their Veta property joint venture. Work completed in 1999 included 8,000 feet of core drilling in 10 holes on their North Veta and Serpentine prospects. Extensive stream sediment and pan concentrate sampling also returned anomalous gold values over a widespread area of the North Veta property. The best intercept from the five drill holes on which assays have been released was 23 feet grading .03 ounces per ton gold. Results are pending on the other drill holes.

Alaska Range

Atna Resources and Grayd Resources released results from their 10,260-foot, 14-hole diamond core drilling program on the Dry Creek volcanic massive sulfide deposit in the Bonfield District.

Significant widths of massive to semi-massive sulfide mineralization were encountered. However, base metal grades were generally lower than drilling results in 1998. With the results from three holes still pending, the best intercept to date graded 3.37 percent zinc and 1.09 percent lead over 14 feet in hole DC99-66. The results prompted Atna to terminate its interest in the Dry Creek and Anderson Mountain projects.

Atna Resources also announced the results of its diamond drilling program on the Caribou Dome stratiform copper project in the Valdez Creek district. Three diamond drill holes totaling 2,442 feet were completed along with IP, mis-ellamane and ground magnetics geophysical surveys. Drilling results include 5 feet grading 5.9 percent copper and 5 feet grading 1.9 percent copper.

Geophysical surveys indicate the mineralized horizons extend for up to 700 feet west of the No. 2 Zone and also identified a 600-foot-long anomaly south of, and parallel to, the eastern mineralized zone. The company indicated that good potential exists on the property for additional mineralization.

Grayd Resources reported additional high-grade gold was discovered on its White Gold Trend on the Rumble Creek JV in the Delta District. Results included 64.4 grams-per-ton gold in a grab sample

Cannor Alaska Inc. announced it has investigated expanding the Red Dog Mine port facilities on the Chukchi Sea. ... Cannor has proposed dredging a 80-foot-deep channel to a point about one mile off shore.

ton gold. The results for soil samples and an additional 21 rock samples are pending.

Copper Ridge Exploration announced initiation of Phase 2 soil and rock sampling on its Goodpasture claims north of Pogo. Work was completed in late September and results are pending.

Almaden Resources and Williams Creek Exploration reported that initial system sediment sampling on their Selkirk black sand south of the Pogo deposit has outlined anomalous gold in the Selkirk black sand. The company is planning to conduct a series of soil samples and anomalous gold in two other drillings on the prop-



Curtis J. Freeman

INTERIOR ENVIRONMENTAL SERVICES

Any site exploration program - Services unique to your program

- Surveying • GPS
- Claim Staking
- Soil Sampling
- Geochemical Analysis
- Environmental Monitoring

Call 907-486-0000 or 907-486-0001

MINERALS

continued from page B12

FREEMAN

at the Low Showing, 19.7 grams per ton from a pit sample near the Goldberg Saddle and 1.6 grams per ton over 15

Gold can now say what a famous pundit once said: "The reports of my demise are greatly exaggerated."

meters in a hand trench on the Low Showing. Mineralization is associated with low-sulfide quartz — sericite alteration and is part of an 8-kilo-

meter-long trend on the property.

Fort Knox Gold Resources announced that it signed an agreement with American Copper and Nickel Co. (ACNC) to acquire 100 percent interest in ACNC's Nikolai property in the central Alaska Range.

Fort Knox intends to focus on the platinum and palladium potential of the property rather than the copper and nickel potential, which was the subject of previous field activities. Palladium values up to 1.8 grams per ton were recovered on the Canwell prospect while values up to 15.6 grams per ton Pt and 2.6 grams per ton Pd were collected on the Odie prospect. Additional work has been recommended on the project for 2000.

Usibelli Coal said it has received permits to excavate trenches and collect up to 250 tons of bulk samples from its Wishbone Hill coal deposit near Palmer. Although more difficult to mine than Usibelli's flagship Healy Coal mine, Wishbone Hill coal has a higher Btu value per ton and is being looked at as possible import-quality coal for Asian markets. Past production from the Wishbone Hill mine was over 6 million tons between 1916 and 1968.

Southeast Alaska

Rubicon Minerals announced additional results from its newly discovered RW massive sulfide showing at its Palmer volcanogenic massive sulfide project near Haines. Hole RMC99-13 returned 7.2 feet grading 13.48 percent zinc, 21 percent copper and .37 ounce-per-ton silver. This intersection extends mineralization 260 feet down dip below previous drilling. Assays are pending on hole RMC99-14, where a 156-foot interval of visible stringer sulfide mineralization was observed.

Kinross Gold ... has entered into a joint venture agreement with Teryl Resources Corp. on Teryl's Westridge claims south of the True North deposit.

gold in the third quarter and 34,682 ounces of gold for the first nine months of 1999. Cash costs were \$254 per ounce with total costs of \$352 per ounce.

Production was down significantly during the quarter due in part to longer-than-normal leaching times for sedimentary ore and lower-than-expected recoveries for intrusive ore. The mine is estimating total 1999 production at 55,000 ounces at a cash cost of \$252 per ounce.

The Tundra Telegraph reported that Newmont Exploration and Barramundi Gold Ltd. have completed their initial drilling program on the Longline project in the Moosha Range in the western Yukon Territory. Results are pending.

Copper Valley Exploration announced start-up of its drilling program at the

Scheelite Dome project in the Mayo District. The 1,600-meter program is intended to evaluate the Aorta structure, where 1998 drilling intersected mineralization grading 3.67 grams-per-ton gold over 7.7 meters. Copper Ridge will have earned 100 percent interest in the project from Kennecott Canada Exploration before completion of this year's drilling program.

For all of those who declared gold dead a few months ago, I'd like to point out gold's recent \$60-to-\$70-run up and ask them how much they lost as a result of their near sacrilegious eulogy on gold. Gold can now say what a famous pundit once said: "The reports of my demise are greatly exaggerated."

In case you hadn't noticed, in late September gold stormed back onto the financial markets and traded as high as \$339 per ounce before settling back to the \$315- to \$320-per ounce range. This



breakout was prompted by the news that a coalition of European central banks agreed to limit total gold sales to 2,000 tons over the next five years. As a result, Great Britain's gold sale was more than eight times oversubscribed and those with short positions in the market were hit by unexpected calls that they are not prepared to pay.

In an ironic twist, several mining companies also were hurt by the unexpected surge, particularly those with hedge positions that are now below prevailing market prices. The hardest hit (of those that have admitted taking a beating) was Ashanti Gold, which is now looking at more than \$270 million in debts as a result of its hedging positions.

The "I told you so" crowd includes

continued from page B11

TECH

already, it's a field. But the flight path for the eight to 10 daily flights by DC-9s would be over Delta Junction.

Harvest of a fly-in operation — \$8 million to finance the on-site airstrip and \$12 million to \$14 million in annual operating expenses — could also prove too much, Kinsman said.

With a 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

A 100-foot runway, the 11,000-sq-ft hangar would house 21

Homestake Mining, which until recently was considered old-fashioned and ultra-conservative in its policy of holding extremely limited hedge positions. Who's laughing now? ♦

business sector. But it won't be enough to have off-cash mineralization and property owners who can sell the

Goodwater River Valley may get snarled along the way to development. "A big project like this is going to include a lot of environmental impact," said David Ward, executive director of the Chukchee Alaska Environmental Center. "There's a lot of concerns. Everybody's watching an eye on the Goodwater River from commercial. That's an absolute," she said. "The river's got to be protected."

She also says the project will need will have to be approved by the state and federal agencies.

Whether a power line will be cost effective in the Goodwater Valley Electric Association's area is still

Jack Rasmussen, executive director of the Alaska Electric Light & Power Co., says the project will have to be approved by the state and federal agencies.

There's a lot of money in the project, but it's a long-term investment. The project will have to be approved by the state and federal agencies.

There's a lot of money in the project, but it's a long-term investment. The project will have to be approved by the state and federal agencies.

There's a lot of money in the project, but it's a long-term investment. The project will have to be approved by the state and federal agencies.

There's a lot of money in the project, but it's a long-term investment. The project will have to be approved by the state and federal agencies.

BUY
ALASKA
KEEP THE CHANGE!!



WHY

contract with a writing and editing consultant?

To get fresh ideas into the project and a professional's perspective on alternate approaches.

We enhance your image with flawless documents and professional printing.

- ◆ Policies and procedures
- ◆ Plans and proposals
- ◆ Progress reports
- ◆ Research reports
- ◆ Process documentation
- ◆ Maintenance schedules
- ◆ Newsletters, banners and flyers
- ◆ Publishing and binding
- ◆ Distribution and control

Documentation Works
P.O. Box 772031
Eagle River, AK 99577
907-694-2371 voice
907-694-2369 fax
E-mail: randyb@alaska.net

Documentation Works



20 years of writing in Alaska

FAIRBANKS
Daily News - Miner

Fred Pratt
Stocks
Mutual funds

D-2
D-4
D-5,6

BUSINESS

Al Slavin, Business Editor; 459-7593

Sunday, October 17, 1999

Teck weighs Pogo Mine route options

By AL SLAVIN
Business Editor

One route is by air.

Another combines a little flying and a winter trail.

A third scenario involves building an all-season road in the Goodpastor River valley. All three lead to a remote parcel of land that is about to become Pogo Mine, a lucrative gold deposit located 40 miles from Delta Junction.

The choice is one of the more delicate ones from both a financial and environmental standpoint. It will define the permanent access through a relatively undeveloped section of wilderness to a deposit containing 5.2 million ounces of gold.

"We've got to come to grips with what's best for the project, what's best for the community and what we can get permitted," said Karl Hanneman, the Pogo project manager for the joint venture between Teck Resources and Sumitomo Metal Mining.

Hanneman spelled out the options last week to the Greater Fairbanks Chamber of Commerce's transportation committee. Some consideration is being given to a fly-in operation, which would leave the smallest footprint but bring a noise problem.

Equipment and supplies could be flown to the mine from a staging area at Fort Greely's airstrip, Hanneman said. But the flight path for the eight to 10 daily flights by DC-6s would be over Delta Junction.

The cost of a fly-in operation—\$8 million to bolster the on-site airstrip and \$12 million to \$14 million in annual operating expenses—could also prove too much, Hanneman said.

A second option has fewer flights by adding a winter road. That option has three scenarios, one of which involves using the existing winter trail that crosses 11 streams.



POGO DEPOSIT—Teck Resources is currently mulling over the best way into the Pogo Deposit, a remote parcel of land in the Goodpastor River Valley containing 5.2 million ounces of gold. The possible scenarios include a fly-in operation, building a new winter trail or constructing an all-season road.

Two other trail routes have been identified, traversing the north or south border of the Shaw Creek Flats, Hanneman said. This would take the burden off a winter trail that already receives substantial recreational use.

A new trail would cost an estimated \$15 million to build and \$8 million to \$9 million each year to operate and maintain.

The final option involves building a \$35 million all-season road. Annual operating and maintenance costs could reach \$6 million. An additional \$2 million would be needed to remove the road at end of the mine's life, estimated at 10 to 12 years.

While the scenarios differ in approach, they all share one common thread: Each is certain to leave someone unhappy.

The promise of a \$250 million construction project and 300 year-round jobs is certain to rally support from the business sector. But it won't be enough to stave off environmentalists and property owners who fear that the Goodpastor River valley may get trampled along the way to development.

"A big project like that is going to include a lot of change and a lot of impact," said Sylvia Ward, executive director of the Northern Alaska Environmental Center. "There's some concerns. Everybody is going to keep an eye on protecting the Goodpastor River from contamination."

"That's an absolute," she said. "The river's got to be protected."

She also worries that an all-season road will harm the Fortymile Caribou Herd.

"We'll be doing all we can to stop an all-season road," Ward said.

Hanneman has spelled out one option that may appease everyone, including environmentalists like Ward. It requires running a power line to the remote project. This would reduce the amount of fuel needed on site, reducing the amount of traffic on the selected path. It would also eliminate regulations concerning air emissions.

"It's a great example of doing something for the environment that turns out to be the right thing for the business sector as well," Ward said.

Whether a power line will be cost effective is unclear. Golden Valley Electric Association has informed Teck Resources that it would cost \$18 million to upgrade GVEA's power system between North Pole and Eielson Air Force Base.

There would also be \$15 million in expenses to run power from that point back to the project. Both of those costs, which are subject to negotiation, would fall to the project's developers if GVEA cannot find a wider customer base in the area.

Hanneman is still gathering information and hopes to complete this feasibility study within 24 months. The analysis of underground exploration work is under way along with the environmental assessment.

This information will be used as a basis for a future permit application. But Hanneman is still awaiting one more component: comment from trappers, loggers, fish and game officers and anyone familiar with the section of backcountry.

"We want to tap into the knowledge of the community to help us make a good decision," Hanneman said.

GLACIER CREEK ROAD**TABLE 1
ESTIMATED COST****Alternative 1: No-Build**

Phase 2: Design	\$ 0
Phase 3: Right-of-Way	\$ 0
Phase 4: Construction	\$ 0
Maintenance: Summer	\$ 8,105
Maintenance: Winter	\$ 0
TOTAL	\$ 8,105

Alternative 2: Upgrade Existing Route

Phase 2: Design	\$ 300,000
Phase 3: Right-of-Way	\$ 521,909
Phase 4: Construction	\$4,054,334
Maintenance: Summer	\$ 8,105
Maintenance: Winter	\$ 390,184
TOTAL	\$5,265,532

Alternative 3: Re-route road

Phase 2: Design	\$ 300,000
Phase 3: Right-of-Way	\$ 159,770
Phase 4: Construction	\$2,947,854
Maintenance: Summer	\$ 4,053
Maintenance: Winter	\$ 8,105
TOTAL	\$3,419,782

Alternative 4: Re-route road

Phase 2: Design	\$ 400,000
Phase 3: Right-of-Way	\$ 234,013
Phase 4: Construction	\$4,866,526
Maintenance: Summer	\$ 4,053
Maintenance: Winter	\$ 130,061
TOTAL	\$5,634,053

NOME, ALASKA

The Rock Creek Nome Area Road
January 27, 2000

The Rock Creek Road will help to encourage potential economic development of the hard rock mineral resources in the Nome area currently under investigation by a group of companies including Novagold, Alaska Gold, Sitnasuak, and the Bering Straights Corp.

The existing road is built along existing contours and is seasonal in nature. The road could not be used for transport of construction material during potential mine start-up due to it's windy nature, gradient and narrowness.

The new rerouted road would shorten the haul distance by two miles and be built across a flat plain that would make maintenance and use possible year round.

The City of Nome fully supports the road project for the potential economic benefit it could provide.

The City has recently lost 70 jobs due to the temporary shut down of mining operations in the Placer mining fields. The job loss is due to the current low prices of gold. Hard rock mining may still be viable at the current prices due to the higher tenor of the gold present. It must be remembered that the potential for sustained mining operations are speculative.

Currently, The rock creek gold deposit contains an estimated 500,000 ounces of gold.

GP:sp

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
P.O. BOX 1048
NOME, ALASKA 99762

PHONE: (907) 443-3444

FAX: (907) 443-2618

TO: SCOTT PETSEL	FAX #: 465-2698
LOCATION:	DATE: 1-27-00
FROM: ANDREW NIEMIEC	TIME:

NUMBER OF PAGES INCLUDING THIS PAGE 9RE: GLACIER CREEK RD.

Note: Alternative 3 is the Preferred Route.
THIS DOCUMENT WAS PREPARED IN 1995.

Total Document is ± 50pp

[] COPY OR ORIGINAL WILL ALSO BE MAILED.

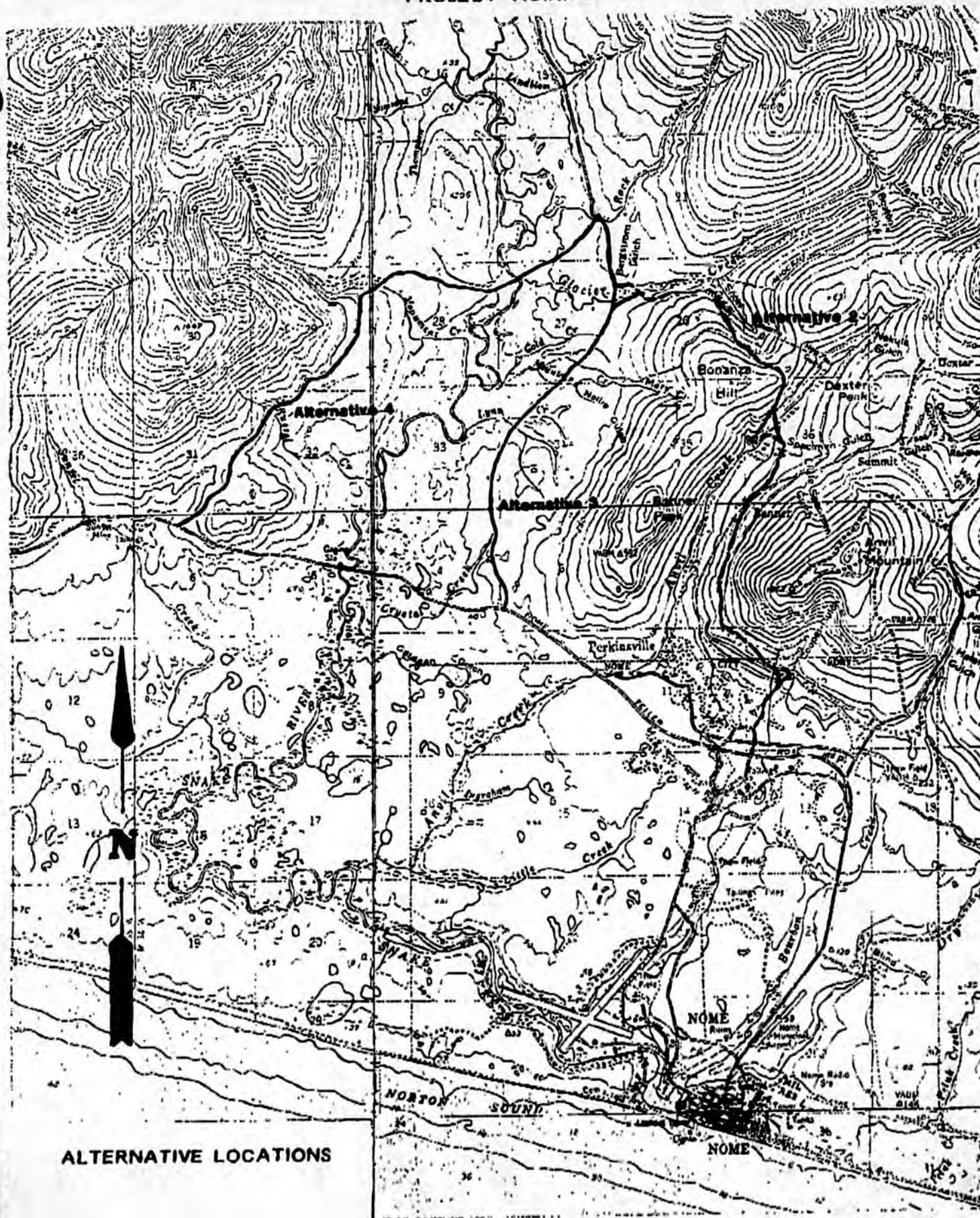
GLACIER CREEK ROAD NOME, ALASKA ENVIRONMENTAL ASSESSMENT



Glacier Creek

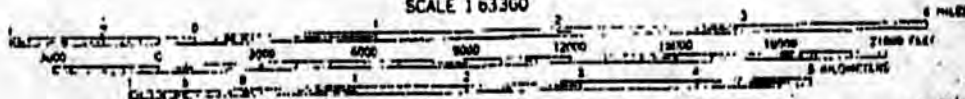
Alaska Department of Transportation
and Public Facilities
Northern Region- Western District
Division of Design and Construction
Environmental Section

PROJECT VICINITY



ALTERNATIVE LOCATIONS

SCALE 1:63360



GLACIER CREEK ROAD**CHAPTER I****PURPOSE AND NEED**

The Alaska Department of Transportation and Public Facilities (ADOT&PF) in cooperation with the Federal Highway Administration (FHWA) is proposing to either upgrade or reroute Glacier Creek Road in Nome Alaska. The proposed project's objective is to enhance economic development. Glacier Creek Road accesses numerous gold mining operations with new development and exploration expected during the next several years.

The proposed project would provide an all-season, year-round¹ access road to areas that are believed to contain large mineral deposits. The existing road was originally constructed as a sidehill cut for much of its length and is therefore susceptible to early and lengthy closure due to snow accumulation.

Glacier Creek Road has major deficiencies, especially for heavy equipment. Grades on the existing road are severe, and when combined with the many sharp curves sight distance becomes severely limited. The existing road is approximately 4.3 meters [14 feet] wide, is gravel surfaced, and without shoulders. There is very little room for maneuverability or passing. These aspects are a hinderance for drivers, especially when a vehicle breaks down, becoming more extreme when operating larger equipment.

Several large gold deposits have been identified in the vicinity of Glacier Creek Road by private sector exploration firms. Reports from both federal and state agencies have also documented the potential for economic lode gold deposits in this area. Additionally, there are several gold mines currently in production. However, the

¹ Currently, Glacier Creek Road is not maintained during the winter.

NOME, ALASKA

GLACIER CREEK ROAD

operation of these current mining ventures are sometimes hindered by the length of time the existing road is open to traffic.

Currently, mining companies are in the process of defining the Rock Creek ore body, in the anticipation of bringing it into production. (Rock Creek crosses the existing Glacier Creek Road at about 1 kilometer [$\frac{3}{4}$ mile]) beyond Glacier Creek. Exploration of the entire area is under the "Rock Creek" designation and encompasses nearly 13,760 hectares [34,000 acres]. An adjacent 14,165 hectares [35,000 acres] tract is also being explored. Until recently, these two tracts were being explored by separate companies. The Kennicott Mining Company has assumed Newmont Exploration's 13,760 hectare [34,000 acres] tract.

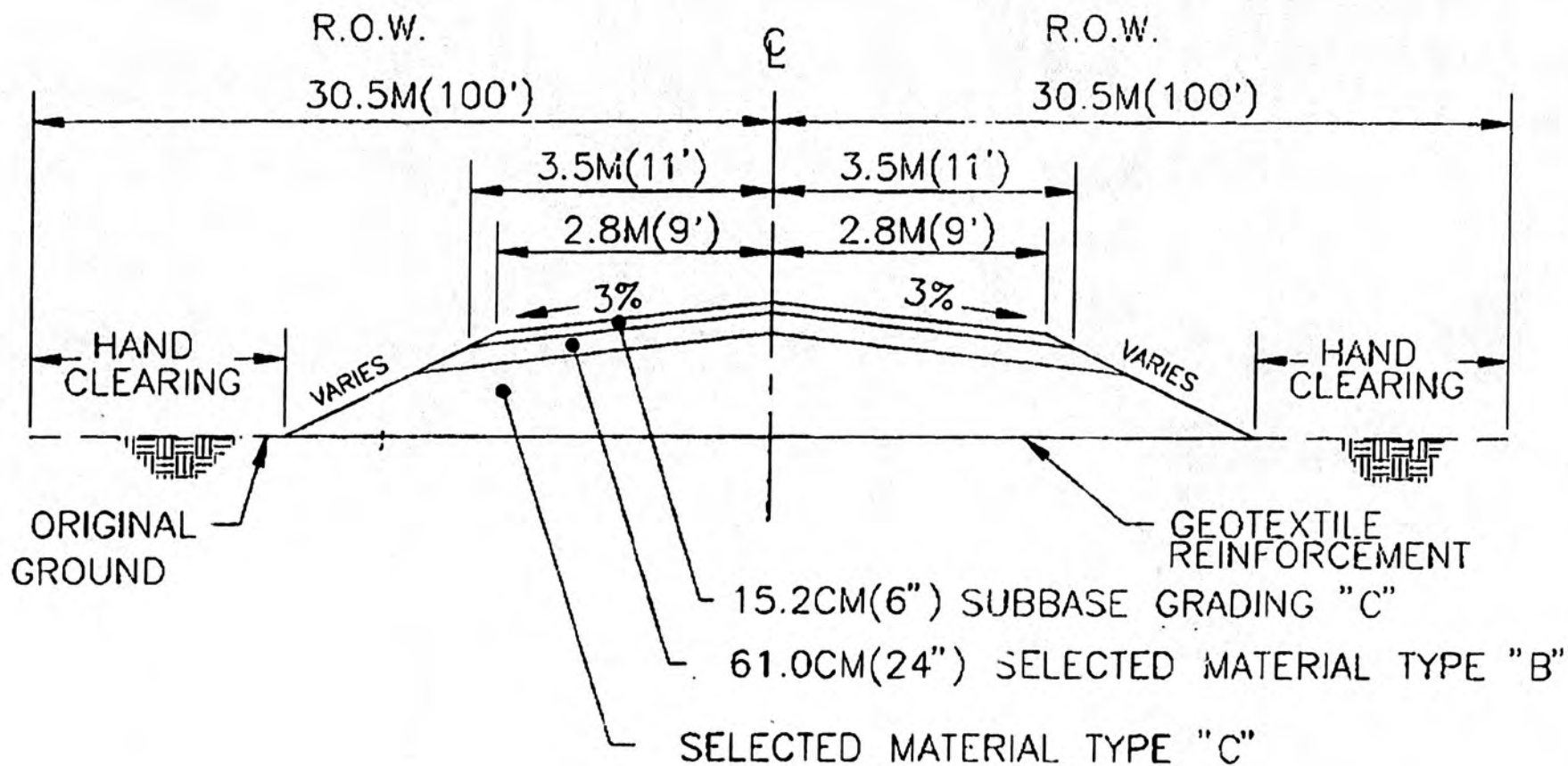
It is estimated that between 100-200 jobs would be created if a new mine were to begin production. This is a significant economic boost to an area which has a labor force of about 3,000 and an unemployment rate typically near 10 percent.

CHAPTER II**ALTERNATIVES**

Four alternatives have been evaluated for this proposal. They are the no-action (or no-build), upgrade the existing roadway alignment, and two options to re-route the road.

All of the build alternatives would have a finished road width of 5.5 meters [eighteen feet] including shoulders. The typical section for the build alternatives would have foreslopes varying from 1:4 to 1:1 $\frac{1}{2}$ [4:1 to 1 $\frac{1}{2}$:1]. Design criteria recommended with all build versions would result in horizontal curves at or above the minimums. Other recommendations include flatter grades, and hand clearing alders and willows out of the right-of-way to help facilitate snow removal. The proposed facility would require additional right-of-way to establish a corridor width of approximately 30.5 meters [100 feet].

NOME, ALASKA



TYPICAL SECTION

GLACIER CREEK ROAD**Alternatives 3 & 4****Re-route Glacier Creek Road**

Two locations were considered for realignment. An alternate route on the west side of the Snake River (Alternative 4) was investigated and discarded because of its longer length and higher cost; and a greater potential for environmental impacts, particularly with regard to crossing the Snake River. Because of its width, crossing the Snake would entail a bridge structure substantially increasing construction costs.

The recommended route, Alternative 3, starts on the east side of the Snake River, approximately 10 kilometers [6.3 miles] on the Bob Blodgett Nome-Teller Highway traversing into the Snake River valley and intersecting into the existing Glacier Creek Road near Kilometer 9 [Mile 5.6]. From this point, the existing Glacier Creek Road would be upgraded to Rock Creek. The approximate length would be 6 kilometers [3.6 miles].

A spur road connecting the new alignment with the existing Glacier Creek Road south of Glacier Creek is also proposed to access the area to eliminate the need for a new and additional crossing of Glacier Creek. This spur road would be about one-quarter mile long (approximately 400 meters). Two 3.7-meter [12-foot] culverts would replace the existing road crossing at Glacier Creek.

The topography along this alignment is flat, open terrain with sparse vegetation consisting of a combination of alpine tundra/barren ground system, with alders and willows lining the numerous drainage channels. Underlying soils are primarily undisturbed tundra consisting of fine material with a high moisture content that is interspersed with ice lenses.

The major advantage of this alternative is that it allows the desired all-season capability with minimal maintenance efforts. Another cost saving would be realized by incorporating an overlay throughout the proposed alignment and hand-clearing alders

NOME, ALASKA

GLACIER CREEK ROAD

and willows to the right-of-way limits. This in turn would reduce snow drift accumulation on the road's surface enhancing vehicle safety and minimizing maintenance costs.

A potential disadvantage with this alternative is possible differential settlement of the embankment placed over undisturbed tundra. Although eventually this type of problem generally reaches a point of equilibrium.

Right-of-way costs would be increased with this alternative. Land ownership along the proposed route is primarily native corporation lands.² This alternative's alignment would for the most part, avoid the numerous patented mining claims, except near the end of the project where the many claims cannot be avoided.

Alternative 3**Preferred Alternative**

The department is recommending re-routing the road to the east of the Snake River, as described above. This alternative is preferred because it offers the best means to satisfy the purpose and need for the proposed project. It would provide users with a safe, all-season driving surface at minimum costs; and with minimal social, economic and physical environmental impacts.

²The Bering Straits Native Corporation has passed Resolution #2-4-94-2 granting a perpetual subsurface easement and restrictive covenant to the ADOT&PF to facilitate the Glacier Creek Road proposal. However, it is the village corporations who have been granted surface rights to the land.

NOME, ALASKA

2. COOK INLET TO BRISTOL BAY CORRIDOR ALTERNATIVE, OVERLAND

This alternative would provide a surface transportation link between Cook Inlet and Bristol Bay. In so doing, this alternative would improve mobility and access for many communities in the study area, including Pedro Bay, Nondalton, Iliamna, Newhalen, Igiugig, Levelock, Naknek and King Salmon – providing them for the first time a well developed surface transportation link to the Kenai Peninsula, Anchorage, and the state's primary roadway network. This alternative also has significant potential for improving the efficiency of regional freight movement and economic development.

Explored in this alternative are four separate options for traversing the roughly 250 miles between Homer and Bristol Bay (Table 10). Two of the options provide an uninterrupted set of roadway links – one via King Salmon, the other via Naknek. Meanwhile, the other two options provide a roadway connection until Iliamna, but then traverse the rest of the distance by either a shallow-draft landing vessel, or hovercraft.

Table 10
Cook Inlet to Bristol Bay Corridor Alternative
Four Options

OVERLAND OPTIONS		COMBINATION OVERLAND/MARINE OPTION	
Via King Salmon	Via Naknek	Via Shallow-Draft Landing Vessel	Via Hovercraft
• Homer to Williamsport Marine Service • Williamsport to Pile Bay Roadway Link • Pile Bay to Iliamna Roadway Link • Iliamna to Igiugig Roadway • Igiugig to King Salmon Roadway Link	• Homer to Williamsport Marine Service • Williamsport to Pile Bay Roadway Link • Pile Bay to Iliamna Roadway Link • Iliamna to Igiugig Roadway • Igiugig to Levelock Roadway Link • Igiugig to Naknek Roadway Link	• Homer to Williamsport Marine Service • Williamsport to Pile Bay Roadway Link • Lake Iliamna–Kvichak River Service via Shallow-Draft Landing Vessel	• Homer to Williamsport Marine Service • Williamsport to Pile Bay Roadway Link • Lake Iliamna–Kvichak River Service via Hovercraft



DR PB

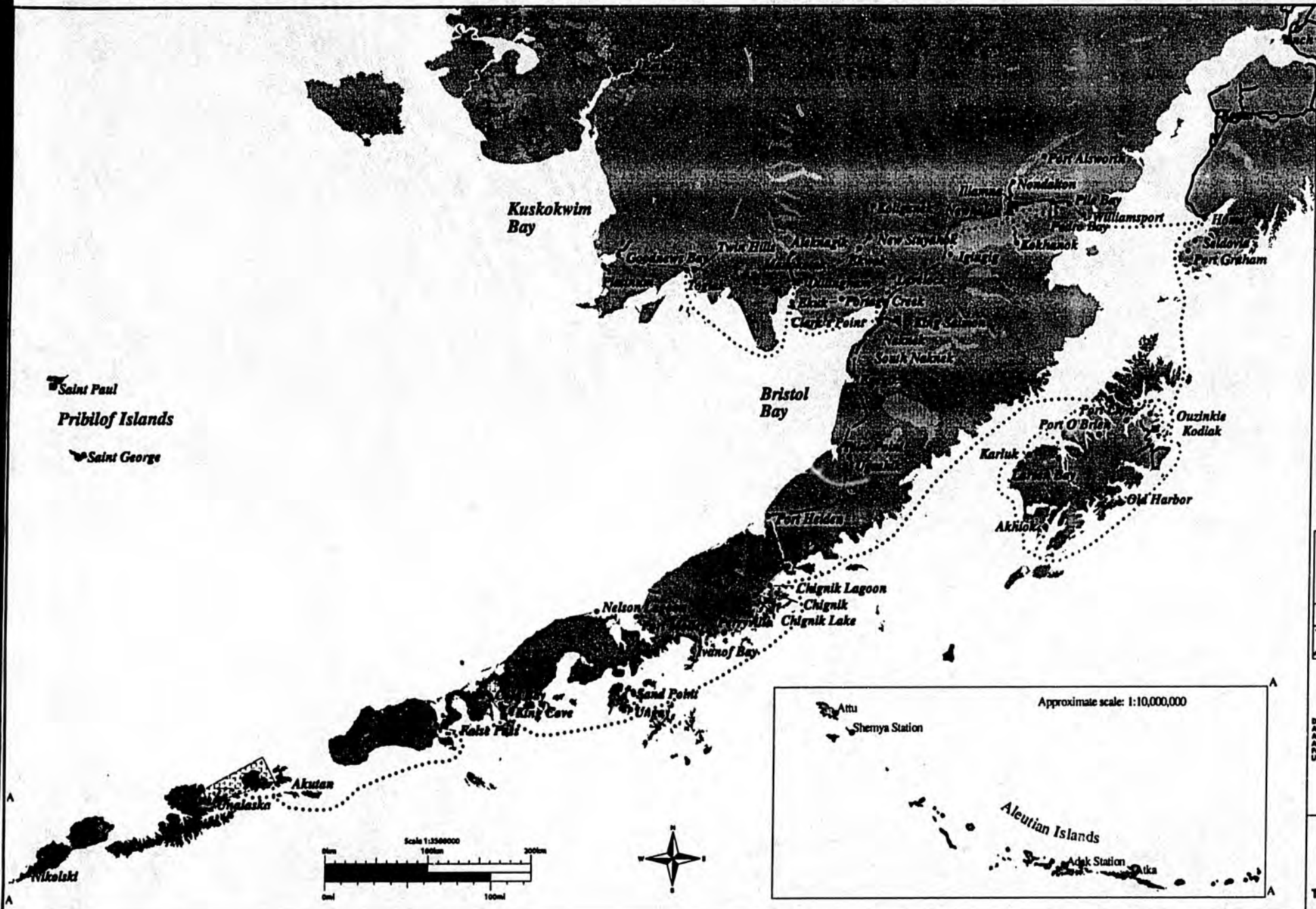
File: 100-100 Date: 12/1/99 By: N/A

- Cook Inlet to Bristol Bay Corridor
- Kodiak Inter-Island Ferry
- Dedicated Tustumena Service
- Southern Peninsula Road System
- Northern Peninsula Road System
- Bristol Bay Ferry
- Winter Trail Markers
- Study Corridors
- Existing Roads
- Regional Hubs



Data Sources:
Alaska Department of Labor
Alaska Department of Natural Resources
Alaska Department of Transportation
Federal Highway Administration
US Army Corps of Engineers

Southwest Alaska
Transportation Plan
Initial Transportation
System Alternatives
Technical Memorandum



This alternative would provide several benefits to the region and to the communities along the proposed corridor, including the following:

- It would open up a shorter, less dangerous, less expensive freight route from Cook Inlet to Bristol Bay. A continuous surface route across the top of the Alaska Peninsula would mean that it would no longer be necessary to transport goods by barge all the way around the Alaska Peninsula.
- By making scenic wilderness areas, businesses, and lodges along the corridor more accessible to visitors, this alternative would support tourism in the region.
- This alternative would provide the communities of interior Southwest Alaska with greater connectivity to one another, which would promote their economic development.
- This alternative would provide communities along the corridor with a modal alternative to reaching major activity centers such as Anchorage and Kodiak by air.
- Insofar as this alternative is based in large part on the existing road from Williamsport to Pile Bay, it provides a cost-effective means of expanding the core highway system because the right-of-way for this link is already established and owned by DOT&PF.
- The project would promote the economic development of Bristol Bay fisheries. Boat repair and storage facilities are limited in Bristol Bay, requiring many boat owners to bring their boats to Homer. The overland route avoids the time-consuming and hazardous open ocean voyage around the Alaska Peninsula, thereby saving money and increasing safety. The route also saves deterioration of fishing boats not designed for extensive open ocean travel.

Baseline

A key baseline improvement programmed within the proposed corridor is completion of the Iliamna-Nondalton Road, a \$9.75 million project which will complete the roadway connection between Iliamna and Nondalton by bridging the Newhalen River and constructing three final miles of roadway on the Nondalton side of the river. This baseline improvement would integrate Nondalton, a community with a 2020 base population forecast of 317 into the rest of the proposed corridor. The other baseline improvement relevant to this proposed alternative is DOT&PF's Winter Trail Marking project, which will mark 314 miles of trails – from Goodnews Bay all the way to Levelock and Naknek, communities served directly by the proposed corridor.

Element 1. Homer-Seldovia-Williamsport Marine Service

Proposed in this alternative is new marine service linking Seldovia and Homer, on the Kenai Peninsula, with Williamsport, which lies on the western shores of Cook Inlet, just off Iliamna Bay. This link would provide the first element of a surface transportation corridor linking Alaska's overland transportation system and population concentrations with the communities of the Lake and Peninsula and Bristol Bay Boroughs.

As envisioned, this marine service would not only provide a new link between Williamsport and Homer, but it would also continue to serve the linkage between Homer and Seldovia now provided by current AMHS service. In fact, as configured for planning purposes, it could provide an equal or greater level of service frequency and capacity compared to the current service provided by the *Tustumena*.

THE VESSEL

A separate alternative proposed in this document is a reconfiguration of AMHS service that would result in the dedication of the *Tustumena* to ports in the Southwest Alaska Study Area (along with connections to the Kenai Peninsula). As such, a new vessel was explored to provide the proposed service between Homer, Seldovia, and Williamsport. Given the run across lower Cook Inlet, an area noted for steep seas, strong currents, and winter ice floes, the vessel providing this service would have to be capable of navigating in high winds, seas, spray icing conditions, and sea ice.

For planning purposes, a basis vessel was chosen to illustrate this alternative. The basis vessel selected, the *M/V Nunaiq*, is a 150'-6" long, with a 47' beam, an 8' depth, a 3'-9" to 6'0" draft and a cruising speed of 9 knots. Although the basis vessel and others of this type have extensive operation experience in Alaska waters, some design enhancements, including minimum ice strengthening, expandable passenger capacity, and increased freeboard and bulwark height should be considered. The capital cost of such a vessel is estimated at \$2.75 million.

SCHEDULE AND FREQUENCY OF SERVICE

Physical laws regarding the resistance of displacement vessels limit conventional monohull ferries with length on the order of 150' to speeds between 9 and 12 knots. Even at 12 knots, the 152 nautical mile trip between Homer and Williamsport would take more than 12 hours for running time alone (without allowance for port time, startup, or shutdown). Another factor in scheduling this service hinges on the shallow water and dredged channel at Williamsport, which would make it prudent to time trips to match the tide at Williamsport. As such, one round trip between Homer and Williamsport could be scheduled in any 24-hour period, but the timing of departures and arrivals would vary from day-to-day based on tides. Based on a 9-knot service speed (and allowing one half hour for morning startup and one-half hour for evening shutdown) the service day for a Homer-Williamsport round trip would be about 18 hours, which would allow six hours in any 24-hour day to adjust for the tide.

One way, the trip from Homer to Seldovia can be made in two hours, and two round trips per day, during daylight hours, are easily feasible. According to the schedule developed for this planning effort, the vessel could service Williamsport on seven days in a two-week period, and Seldovia on the other seven days.

In a 44-week service year (with ten weeks provided for annual maintenance), the vessel would call at Williamsport and Homer 154 times apiece, and at Seldovia 308 times. The proposed service concept would provide much more frequent service to Homer and Seldovia, which received 58 port calls apiece in 1997, according to the "AMHS 1997 Annual Traffic Volume Report." As configured for planning purposes, the service proposed would provide an annual passenger capacity of 15,092, compared to the *Tustumena's* 12,760.

Table 11
Seldovia Service Comparison

SELDOVIA			
	<i>Tustumena</i>	New Vessel	Historical Demand
Annual Trips	58	308	
Annual Passenger Capacity	12,760	15,092	2,303
Annual Vehicle Capacity	3,132	6,160	878
WILLIAMSPORT			
Annual Trips	NA	154	
Annual Passenger Capacity	NA	7,546	NA
Annual Vehicle Capacity	NA	3,080	NA

Note: Annual capacities and historical demand are stated on a one-way basis. Two-way capacities are exactly twice the one-way capacities. One-way historical demand is the larger of the historical demand values from either the Homer-Seldovia or the Seldovia-Homer trip directions.

Operating costs for the Homer-Williamsport-Seldovia marine service element of this alternative are summarized in Table 12.

Table 12
Homer-Seldovia-Williamsport Ferry Service
Operating Costs

	Minimum	Maximum
Shoreside Maintenance	\$185,000	\$185,000
Hull Maintenance & Pass. Services Maint.	\$36,000	\$44,000
Machinery Maintenance	\$128,000	\$156,000
Crew	\$698,932	\$833,152
Fuel	\$159,000	\$194,000
Lubricating Oil	\$3,600	\$4,400
Ports and Terminals O.H.	\$223,176	\$223,176
Management O.H.	\$366,741	\$366,741
Shoreside O.H.	\$69	\$69
Insurance	\$19,000	\$23,000
TOTAL: (Estimated Annual Operating Cost)	\$1,819,518	\$1,873,694

OPERATIONAL ISSUES

Williamsport would require substantial navigational improvements in order to accommodate AMHS service. Williamsport is located at the head of tide flats that go dry at low water. In addition, large boulders dot the shoal water approaches to Williamsport. Although shallow-draft vessels could presumably call briefly at high tide, dredging the channel would be required to service other types of vessels, including the basis vessel envisioned to provide the marine service in this alternative.

The U.S. Army Corps of Engineers (COE) completed a study exploring the feasibility of a dredging project at Williamsport in 1995. That report recommended excavation of a 2,700-meter long channel, ending at Williamsport, in Iliamna Bay. The channel bottom would be 30 meters wide at 0.5 below Mean Lower Low Water. The channel would end with a turning basin 5 meters long and 55 meters wide. The turning basin would provide access to a sheet-pile bulkhead dock and an adjacent paved, 8-meter wide launch. Capital costs for the project were estimated at \$3,822,000, of which federal funding in the amount of \$1,691,400 was identified as available, leaving \$2,130,600 to non-federal sources. Annual M&O costs for the project were estimated at \$185,000.⁵

The COE study conducted a rigorous benefit-cost analysis for the project, which determined that benefits would exceed costs at a 3.1:1.0 ratio. While the COE study determined that dredging a channel to Williamsport would be a worthwhile project, the lack of a local sponsor terminated further work on the project. However, it was noted that the project could proceed if a local sponsor, such as the State of Alaska, were secured.

Element 2. Williamsport to Pile Bay Roadway Link

Although a roadway currently exists between Williamsport and Pile Bay, it is quite primitive and in poor repair. The existing road is 15.5 miles long, consisting of one graded and drained earthen travel lane with no shoulder. In poor condition, the road is maintained only during the summer when a maintenance contractor is available. Portions of the road do not meet minimum width standards and are too narrow for current use. One of four bridges along the project corridor has washed out, and the others, all of which have sufficiency ratings below 50, are narrow and cannot accommodate oversized traffic. The major limitation restricting boat-haul traffic is the existing metal bridge across the Iliamna River, whose interior dimension of only 12 feet, is too narrow for the typical gillnet boat.

The project proposed in this link would reconstruct and widen the existing road to design standards applicable to a rural major collector traveled by 250 vehicles or less per day. The road's four bridges would be repaired, replaced, or widened, as appropriate. The road would be maintained year-round.

The road climbs 850 feet through the Chigmit Mountains in the first two miles benched on steep rock slopes. The road through this section is narrow and subject to avalanche hazards. As such, winter maintenance through this stretch would likely be difficult and expensive.

⁵ This maintenance cost includes annual grading of the dock, ramp, and staging area; annual surveys the first 4 years, then every 5 years; maintenance dredging every 5 years; replacement of fender piles, ramp concrete, and sheet-pile cathodic protection every 10 years; and replacement of the sheet pile after 30 years.

Total capital costs for this project are estimated at \$14,857,500 for a paved surface, and \$12,300,000 for a gravel surface. Annual M&O costs are estimated at \$209,250 and \$232,500 respectively. Demand as part of the full alternative is estimated at 4,200 person trips per year (Tables 19 and 21).

Element 3. Pile Bay to Iliamna Roadway Link

This roadway would complete a link from Williamsport through to Iliamna, allowing travel from Cook Inlet into the interior of the Lake and Peninsula Borough at least as far as Iliamna. The road would connect as far as Nondalton, given that Iliamna-Nondalton link has been programmed and is part of the baseline. This roadway link would provide Pile Bay and Pedro Bay access to the airport at Iliamna and would allow for a tourism circuit from Cook Inlet and potential access to Lake Clark National Park. The project would also provide the potential for interconnection of the electric power of the Tazimina Hydroelectric project.

This project would build 38 miles of new roadway between Iliamna and Pile Bay, passing through Pedro Bay. Although no road yet exists from Iliamna to Pile Bay, a 46-mile trail from Iliamna to Pedro Bay does exist, as does a 12-mile trail from Pedro Bay to Pile Bay, denoted by the Alaska Department of Natural Resources as a RS2477 route. A likely corridor would follow the RS2477 trail route, traveling about half a mile inland from the northern shore of Lake Iliamna. As proposed, this road would cross about 15 creeks, which would require culvert placements or short-span bridges at these junctions. Like the other roadway links proposed in this regional plan, the road would be constructed to meet AASHTO design standards for a rural major collector with daily travel of under 250 vehicles per day.

The corridor envisioned consists of relatively easy terrain with numerous stream crossings. Construction would include typical fill construction techniques. No unusual construction or design issues are anticipated. Normal annual maintenance would be required for roadway upkeep. Because the area receives just over 60 inches of snow per year, plowing would probably account for the bulk of annual maintenance costs.

Total capital costs for this project are estimated at \$51,870,000 for a paved surface, and \$45,600,00 for a gravel surface. Annual M&O costs are estimated at \$513,000 and \$570,000, respectively. Demand for this roadway link is estimated at 17,900 person trips per year as an independent project and 32,400 person trips per year as a component of the alternative (Tables 19 and 21).

Element 4. Iliamna to Igiugig Roadway Link

The 56-mile road link proposed to connect the communities of Iliamna and Igiugig, which lie along the northern shores of Lake Iliamna, would cross lowlands dotted with many lakes, streams, and rivers. Bridges would be required to cross the Newhalen River, the Kvichak River, and many smaller rivers along the coast of Lake Iliamna. The 56-mile road would be built according to AASHTO design standards for a rural major collector serving 250 vehicle or less per day.

This project's major construction issues pertain to the development of bridges over the Newhalen and Kvichak Rivers. Construction materials would have to be barged in via the Kvichak River, and landings would have to be developed for staging. Permitting and land use concerns would also be an issue given the increase in traffic and the presence of structures

that may affect the fishing industry and other traditional area uses. Normal annual maintenance would be required for the bridge and roadway upkeep. Because total precipitation is 20 inches annually, including 45 inches of snowfall, snow removal would constitute the primary maintenance cost.

Total capital costs for this project have been estimated at \$78,940,000 for a paved surface and \$69,700,000 for a gravel surface. Annual M&O costs have been estimated at \$756,000 and \$840,000, respectively. Demand for this roadway link is estimated at 16,100 person trips per year as an independent project, 92,300 person trips per year as a component of the alternative, King Salmon option, and 106,100 person trips per year as a component of the alternative, Naknek Option (Tables 19 and 21).

Element 5a. Igiugig to Naknek Roadway Link

Constructing a 75-mile road between Igiugig and Naknek would provide one means of completing the proposed corridor from the Kenai Peninsula to Bristol Bay. This link would provide interior Southwest Alaska communities with ground access to the regional hub of King Salmon, where many goods and services are available.

The terrain between Igiugig and Naknek consists of coastlands and wetlands, with scattered lakes and ponds. The southwesterly route proposed along the Kvichak River would have to avoid numerous wetlands and lakes. Culverts to provide fish passage would be required at creek crossings, including Pecks Creek and Ole Creek. With the Kvichak River's turn to the south, the road alignment would parallel connecting into Hallersville from the north. The road would then be directed east and around the large mouth of the Wild and Scenic Alagnak River to an easier crossing of the river upstream. The crossing would take place approximately three miles east of Hallersville and then turn southwest toward the Kvichak River mouth. Once reaching Cape Horn, the road alignment would follow the pioneer route⁶, which runs along the coast through Kvichak, Koggiung, and Libbyville before ending on the north side of Naknek.

Normal annual maintenance would be required for bridge and roadway upkeep. With total precipitation amounting to 20 inches annually, with 45 inches of snowfall, snow removal would require the bulk of the maintenance expenditure.

Total capital costs for this project have been estimated at \$102,375,000 for a paved surface and \$90,000,000 for a gravel surface. Annual M&O costs are estimated at \$1,012,500 and \$1,125,000, respectively.

Demand for this roadway link is estimated at 24,100 person trips per year as an independent project and 110,000 person trips per year as a component of the alternative (Table 21).

Element 5b. Igiugig to King Salmon Roadway Link (Alternative Route)

A 56-mile roadway between Igiugig and King Salmon would provide an alternative route to finish the overland crossing of the Alaska Peninsula connecting the Kenai Peninsula with

⁶ This pioneer route is still used to access setnet sites along the coast.

Bristol Bay. Currently, passengers and freight are moved between Igiugig and King Salmon by aircraft or by boat along the Kvichak River with a transfer by road to King Salmon. The eastern portion of the terrain between these communities is characterized by large mountains and foothills to the north of Naknek Lake. The western portion of the area comprises coastlands and wetlands with scattered inland lakes and ponds.

Beginning in the village of Igiugig, the proposed roadway alignment would travel to the south-southwest, crossing Pecks Creek and Ole Creek along with many other small crossings. Continuing south-southwest, the alignment would require crossing the Alagnak River (a Wild and Scenic River) and would navigate along the foothills of the mountains north of Naknek Lake, outside of Katmai National Park and Preserve. The roadway would be routed to the southwest, crossing many branches of Pauls Creek and take a southerly bearing toward King Salmon Creek. Once the road alignment had crossed King Salmon Creek, it would travel along the banks until it connected into the pioneer road system, built by the U.S. Air Force north of King Salmon. After following the pioneer road southwest, the road would terminate on the northwest side of King Salmon at the Alaska Peninsula Highway.

Large river crossings, each of which would require fish passage culverts, are the primary construction issue for this link. With 20 inches of total precipitation annually, including 45 inches of snowfall, snow removal would account for the bulk of maintenance costs.

Total capital costs for this project have been estimated at \$76,440,000 for a paved surface and \$67,200,000 for a gravel surface. Annual M&O costs have been estimated at \$756,000 and \$840,000, respectively. Demand for this roadway link is estimated at 24,100 person trips per year as an independent project and 95,100 person trips per year as a component of the alternative (Table 19).

Element 6. Levelock Link to the Igiugig-Naknek Roadway

Building a connection between Levelock and the Igiugig-Naknek roadway link would integrate Levelock, which lies on the north shore of the Kvichak River, to the rest of the surface transportation corridor proposed in this alternative. This would permit the village of Levelock, (2020 base population forecast = 139) access to the larger communities of King Salmon and Naknek. This link could also serve as the beginning of a future route connecting the southwestern peninsula with communities further west, such as Dillingham.

The proposed 19-mile route, which would stem from the proposed link connecting Igiugig and Naknek, would require a 400-foot bridge across the Kvichak River. In addition, the proposed alignment would encounter several creeks, including Yellow Creek and Levelock Creek.

The terrain to be crossed in this proposed link is relatively flat, with occasional creek crossings that would require accommodation of fish passage. The bridge and roadway would require normal annual maintenance, most of which would be devoted to snow removal, insofar as the area receives about 20 inches of precipitation annual, including 45 inches of snowfall.

Total capital costs for this project have been estimated at \$27,435,000 for a paved surface and \$24,300,000 for a gravel surface. Annual M&O costs have been estimated at \$256,500 and \$285,000, respectively.

Demand for this roadway link is estimated at 15,000 person trips per year as an independent project and 39,600 person trips per year as a component of the alternative (Table 21).

Marine Options

Each of the four options for linking the Kenai Peninsula with Bristol Bay is the same as far west as Iliamna, at which point they diverge into two overland and two marine options. Discussed below are the two marine options for completing the stretch from Iliamna to Bristol Bay. Initially, the consultant team explored use of a shallow-draft landing vessel to provide service from Iliamna west to Bristol Bay along Lake Iliamna and the Kvichak River. However, initial analysis revealed that such service would be constrained by two factors: (1) winter ice; and (2) seasonally low water, which, combined, would restrict the navigable season from May to October. For this reason, Hovercraft service, which can negotiate both ice and shallow water, was also explored. The results of both sets of analysis are summarized below.

Element 7. Iliamna to Naknek Via Shallow-Draft Landing Vessel

Private and commercial vessels, including barges, are already in use on this waterway system. This option proposes ferry service along Lake Iliamna and the Kvichak River. Iliamna Lake is navigable between May 1 through October 31. While the lower reaches of the Kvichak River are navigable during the ice-free season, the upper reaches of the river are subject to seasonal low water that could impact navigability for some conventional vessels.

The vessel envisioned to provide this service is a shallow-draft landing vessel about 50 feet long, with a 16-foot beam, and with a running draft of approximately 14 inches. The vessel explored for planning purposes can accommodate two loaded full-sized pickup trucks and up to six passengers. The six-passenger threshold is highly desirable because this capacity would allow, according to USCG regulations, the service to operate with just two crew, each holding a USCG boat operator's license, a relatively easily acquired credential.

It would be possible, given the distances between ports served, to operate this service on a "dayboat" concept, which provides substantial operating cost savings, insofar as operations require no more than a single crew for no more than 12 hours per day of service. This would be feasible, providing that the vessel employed is capable of traveling comfortably in excess of the peak river current by a sufficient margin to make the transit in under 12 hours. For planning purposes, we currently believe that a 15-knot vessel could provide round trip service from the western terminus on a three-day turnaround basis (with two 12-hour layovers enroute). A 25-knot vessel could provide the same service on a two-day turnaround basis (with one 12-hour layover enroute). The schedule proposed for planning purposes would have Naknek, at the route's southern terminus, as its "home" port. Table 13 shows a model high-speed, shallow-draft, landing craft schedule for a typical voyage originating in Naknek and returning to Naknek at the end of the second day. Note that one 12-hour minimum layover is required on Iliamna Lake for crew rest.

Table 13
Model Schedule
High-Speed (25 knot), Shallow-Draft Landing Craft

	Arrival		Departure		Port Time	Sailing Time
	Day	Time	Day	Time	Duration	Duration
Naknek			Monday	6:00		1:16
Levelock	Monday	7:16	Monday	7:46	0:30	4:56
Igiugig	Monday	12:42	Monday	13:12	0:30	1:36
Newhalen	Monday	14:48	Monday	15:18	0:30	0:14
Iliamna	Monday	15:32	Monday	16:02	0:30	0:55
Pedro Bay	Monday	16:57	Monday	17:27	0:30	0:22
Pile Bay	Monday	17:49	Tuesday	5:49	12:00	1:36
Kokhanok	Tuesday	7:25	Tuesday	7:55	0:30	0:41
Newhalen	Tuesday	8:36	Tuesday	9:06	0:30	0:41
Kokhanok	Tuesday	9:47	Tuesday	10:17	0:30	0:41
Newhalen	Tuesday	10:58	Tuesday	11:28	0:30	1:36
Igiugig	Tuesday	13:04	Tuesday	13:34	0:30	1:59
Levelock	Tuesday	15:33	Tuesday	16:03	0:30	1:04
Naknek	Tuesday	17:07				

Although accommodating the vessel envisioned to provide service on this link would not require extensive or particularly expensive shoreside infrastructure, some minor landing area upgrades, such as road extensions and gravel or concrete pads, would be needed.

Accordingly, the costs of such improvements have been estimated at \$25,000 at each of eight ports proposed for service, for a total of \$200,000. In addition, navigation aids needed on the Kvichak River itself have been estimated at a cost of \$50,000. Combined M&O costs for all shoreside improvements have been estimated at \$6,250 annually.

In addition to the shoreside improvements just mentioned, of course a new vessel would have to be acquired – at an estimated cost of \$526,000. Vessel-related M&O costs, which include crew, fuel, insurance and overhead, are estimated at \$318,300. The total cost breakdown for this project is provided in Table 14.

Table 14
Capital and M&O Costs for Proposed
Lake Iliamna/Kvichak River Marine Link
(Shallow-Draft Landing Vessel Option)

Vessel Acquisition Cost	\$481,000 F.O.B. Seattle \$45,000 Delivery by barge	
Subtotal: (Acquisition Cost)	\$526,000	
	Minimum	Maximum
Hull Maintenance	\$1,500	\$2,000
Machinery Maintenance	\$4,000	\$5,500
Crew	\$144,000	\$223,000
Fuel	\$90,000	\$110,000
Lubricating Oil	\$1,200	\$1,400
Berthing	\$3,000	\$4,000
Insurance	\$22,000	\$25,000
Subtotal: (Annual Operating Cost)	\$265,700	\$370,900

Table 15
Capital and M&O Costs
Shoreside Improvements

Landing area upgrades (road extensions, gravel or concrete pads, etc.) at eight (8) communities (Allowance: 8x\$25,000)	\$200,000	
Aids to navigation on Kvichak River	\$50,000	
Subtotal: (Acquisition Cost)	\$250,000	
	Minimum	Maximum
Annual Maintenance	\$5,500	\$7,000
Subtotal: (Annual Operating Cost)	\$5,500	\$7,000

Demand for this service link is estimated at 3,600 person trips per year.

Element 8. Iliamna to Egegik Marine Service via Hovercraft

Hovercraft, which can operate at speeds over 40 knots over land, ice cover, seas with up to four-foot waves, beaches, and shallow water, were also explored as a means of linking the western portion of the Kenai Peninsula to Bristol Bay corridor. Two models of hovercraft with extensive Alaskan operating experience were explored in analyzing this option: the turbine-powered LACV-30 type hovercraft and the conventionally-powered AP.1-88. Of the two, the

AP.1-88 was found to be more suitable for Lake Iliamna-Kvichak River service, due to its smaller size, lower operating costs, and lower noise impacts.⁷ Like the shallow-draft landing vessel option described above, crew costs for hovercraft operations would be relatively low. It is possible that the AP.1-88 could be operated with a crew of two: a master, who would have to have a USCG hovercraft endorsement,⁸ and a mate to crew the aft compartment.⁹

Using a hovercraft rather than a shallow-draft landing vessel to connect the communities along Lake Iliamna and the Kvichak River would have several advantages over the use of a shallow-draft landing vessel:

- **Longer service period.** Hovercraft operation would offer the advantage of a year-round, as opposed to May through October service season. Unlike a shallow-draft vessel, the Hovercraft would be able to operate over the winter ice of Lake Iliamna, and probably over the Kvichak River's ice. However, the Hovercraft would likely be out of service for about 20 days each for the periods of winter freezeup and spring thaw, which could be scheduled for annual maintenance. In any case, the total service period of the Hovercraft would be approximately 46 weeks compared to 26 weeks for the shallow-draft vessel.
- **Fewer shoreside improvements required.** The AP.1-88 is able to utilize an unimproved or minimally improved loading/unloading facility, unlike a shallow-draft landing vessel, which would require landing pads.
- **Freight-carrying flexibility.** The version of the AP.1-88 currently operating in Alaska is configured for 24 passengers with adjustable interior bulkhead to accommodate freight. The aft superstructure doors are wide enough to pass a full size pallet.

Some disadvantages associated with hovercraft operations have also been identified:

- **Noise.** Although the diesel-powered AP.1-88 is not as noisy as the turbine-powered LACV-30, it is relatively noisy compared to the conventional hull option. In any case, current hovercraft operations in Bethel, Alaska, on behalf of the U.S. Postal Service will provide an opportunity to assess noise impacts firsthand.
- **Limited payload.** Although the AP.1-88's 16,000-pound cargo capacity slightly exceeds that of the shallow-draft landing vessel, its deadweight capacity is modest. However, given early, planning-level demand estimates, it is thought to be sufficient.
- **Relatively high maintenance costs.** Although maintenance costs for Hovercraft are not well established, they are presumed to be higher than those for conventional hull craft, due to two factors: (1) their higher level of mechanical sophistication; and (2) wear and tear on the craft's rubber skirt. In addition, it would be necessary to wash the craft down when operating over brackish water near Naknek in order to prevent salt water damage to the air screws and other machinery.

⁷ Although other hovercraft are commercially available, most are much smaller and would not meet the projects freight and passenger load requirements envisioned in this option. In addition, two existing AP.1-88 vessels, although built in Canada, have unrestricted Jones Act waivers allowing their use in the United States.

⁸ A hovercraft endorsement from the USCG can be earned upon completion of 36 hours of classroom study and 36 hours of operating time.

⁹ Although the mate need not be fully qualified, he or she must have a radar rating.

MODEL SCHEDULE

The AP.1-88 hovercraft is fast enough that the highly desirable result of 12-hour dayboat operation would be achievable. In fact, Table 17 shows a model schedule based on the following operating speeds: 40 knots per hour on the lower Kvichak River, 30 knots on the upper Kvichak River, and 50 knots on Lake Iliamna. In order to maintain 12-hour service days, port calls are limited to 20 minutes. This model schedule accomplishes the daily round trip in 11 hours, allowing a half hour in the morning for startup and a half hour in the evening for shutdown. For the purposes of illustrating this schedule, Naknek serves as homeport.

The acquisition cost for an AP.1-88 hovercraft is estimated in the range of \$5 to \$6 million, depending on classification and regulatory requirements, outfitting, delivery costs, and acquisition scheme. A summary of estimated Hovercraft operating costs is provided in Table 18.

Table 16
AP.1-88 Hovercraft

Annual Operating Costs	
Maintenance	\$1,408,000
Crew	237,250
Fuel	14,608
Lubricating oil	<u>2,282</u>
Subtotal	\$1,662,140
Miscellaneous (4%)	66,460
Total	\$1,728,600

The operating cost summary contained in Table 18 assumes that hovercraft service is provided five days a week except during break-up and freeze-up, for which 20 days apiece are allocated and assumed to be used for annual maintenance.

Demand for this service link is estimated at 6,900 passenger trips.

Table 17
Model Schedule
(40 kt lower river; 30 kt upper river; 50 kt lake)

	Arrival		Departure		Port Time	Sailing Time
	Day	Time	Day	Time	Duration	Duration
Naknek			Same Day	6:30		0:45
Levelock	Same Day	7:15	Same Day	7:35	0:20	1:30
Igiugig	Same Day	9:05	Same Day	9:25	0:20	0:50
Newhalen	Same Day	10:15	Same Day	10:35	0:20	0:10
Iliamna	Same Day	10:45	Same Day	11:05	0:20	0:30
Pedro Bay	Same Day	11:35	Same Day	11:55	0:20	0:15
Pile Bay	Same Day	12:10	Same Day	12:30	0:20	0:50
Kokhanok	Same Day	13:20	Same Day	13:40	0:20	0:50
Igiugig	Same Day	14:30	Same Day	14:50	0:20	1:30
Levelock	Same Day	16:20	Same Day	16:40	0:20	0:45
Naknek	Same Day	17:25				

Table 18
Cost Synopsis
Cook Inlet to Bristol Bay Overland
King Salmon Option

	Annual O&M Cost	Total Capital Cost	Annualized Cap Cost @ 7% Interest	Annualized Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia Marine	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-W-S shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Roadway Elements				
Williamsport to Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
Pedro Bay to Pile Bay to Iliamna				
Paved	\$513,000	\$51,870,000	\$4,896,161	\$5,409,161
Unpaved	\$570,000	\$45,600,000	\$4,304,317	\$4,874,317
Iliamna to Igiugig				
Paved	\$756,000	\$78,940,000	\$7,451,378	\$8,207,378
Unpaved	\$840,000	\$69,700,000	\$6,579,187	\$7,419,187
Igiugig to King Salmon				
Paved	\$756,000	\$76,440,000	\$7,215,395	\$7,971,395
Unpaved	\$840,000	\$67,200,000	\$6,343,205	\$7,183,205
TOTAL				
Paved Option	\$4,778,856	\$228,679,500	\$21,585,727	\$25,666,583
Unpaved Option	\$5,084,106	\$201,372,000	\$19,008,092	\$23,337,198

Table 19
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Overland
King Salmon Option

	Independent*	Alternative**	System***
Marine Elements			
Homer-Seldovia		4,000	
Homer-Williamsport		4,200	
Roadway Elements			
Williamsport to Pile Bay to Pedro Bay		4,200	
Pedro Bay to Iliamna	17,900	32,400	33,700
Iliamna to Igiugig	16,100	92,300	101,300
Igiugig to King Salmon	24,100	95,100	108,300

* Demand on the link as an independent element.

** Demand on the link as part of the alternative.

*** Demand on the link assuming implementation of a Cook Inlet to Bristol Bay to Alaska Peninsula roadway system.

Table 20
Cost Synopsis
Cook Inlet to Bristol Bay, Overland
Naknek Option

	Annual O&M Cost	Total Capital Cost	Annualized Cap Cost @ 7% Interest	Annualized cap cost plus O&M Cost
Marine Elements				
Homer-Williamsport-Seldovia	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-W-S Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
Iliamna-Pedro Bay-Pile Bay				
Paved	\$513,000	\$51,870,000	\$4,896,161	\$5,409,161
Unpaved	\$570,000	\$45,600,000	\$4,304,317	\$4,874,317
Iliamna to Igiugig				
Paved	\$756,000	\$78,940,000	\$7,451,378	\$8,207,378
Unpaved	\$840,000	\$69,700,000	\$6,579,187	\$7,419,187
Igiugig to Naknek				
Paved	\$1,012,500	\$102,375,000	\$9,663,476	\$10,675,976
Unpaved	\$1,125,000	\$90,000,000	\$8,495,363	\$9,620,363
Igiugig to Levelock				
Paved	\$256,500	\$27,435,000	\$2,589,670	\$2,846,170
Unpaved	\$285,000	\$24,300,000	\$2,293,748	\$2,578,748
TOTAL				
Paved Option	\$4,778,856	\$282,049,500	\$26,623,478	\$31,217,334
Unpaved Option	\$5,084,106	\$248,472,000	\$23,453,999	\$28,353,105

Table 21
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Overland
Naknek Option

	Independent*	Alternative**	System***
Marine Elements			
Homer-Seldovia		4,000	
Homer-Williamsport		4,200	
Roadway Elements			
Williamsport to Pile Bay		4,200	
Pile Bay to Pedro Bay to Iliamna	17,900	32,400	33,700
Iliamna to Igiugig	16,100	106,100	115,100
Igiugig to Naknek	24,100	110,000	123,200
Igiugig to Levelock	15,000	39,600	43,800

* Demand on the link as an independent element.

** Demand on the link as part of the alternative.

*** Demand on the link assuming implementation of a Cook Inlet to Bristol Bay to Alaska Peninsula roadway system.

Table 22
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Hovercraft Option

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @ 7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer-Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Hovercraft)	\$1,728,600	\$5,500,000	\$519,161	\$2,247,761
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$3,969,456	\$26,929,500	\$2,541,954	\$6,326,410
Unpaved Option	\$3,992,706	\$24,372,000	\$2,300,544	\$6,108,250

Table 23
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay Marine
Hovercraft Option

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Hovercraft Service	6,900
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

Table 24
Cost Synopsis
Cook Inlet to Bristol Bay Marine
Shallow-Draft Landing Vessel Option

	Annual O&M Cost	Total Capital Cost	Annualized Capital Cost @7% Interest	Annual Capital plus O&M costs
Marine Elements				
Homer-Williamsport-Seldovia*	\$1,846,606	\$2,750,000	\$259,581	\$1,921,187
Homer, Williamsport Shoreside	\$185,000	\$3,822,000	\$360,770	\$545,770
Lake Iliamna (Shallow-Draft Vessel)**	\$318,300	\$526,000	\$49,651	\$367,951
Lake Iliamna Shoreside	\$6,250	\$250,000	\$23,598	\$29,848
Roadway Elements				
Williamsport-Pile Bay				
Paved	\$209,250	\$14,857,500	\$1,402,443	\$1,611,693
Unpaved	\$232,500	\$12,300,000	\$1,161,033	\$1,393,533
TOTAL				
Paved Option	\$2,565,406	\$22,205,500	\$2,096,042	\$4,476,448
Unpaved Option	\$2,588,656	\$19,648,000	\$1,854,632	\$4,258,288

*Vehicle demand for this element of the alternative was estimated at 2,800 vehicles/year.

**Vehicle demand for this element of the alternative was estimated at 770 vehicles/year.

Table 25
2020 Annual Travel Demand Estimate
Cook Inlet to Bristol Bay
Shallow-Draft Landing Vessel Option

	Travel Demand
Marine Elements	
Homer-Seldovia	4,000
Homer-Williamsport	4,200
Lake Iliamna Marine Service (S.D.)	3,600
Roadway Elements	
Williamsport to Pedro Bay	4,200
Pedro Bay to Iliamna	22,100

FROM THE OFFICE OF REP. SHARON CISSNA

HIGHWAY OF ALL ALASKANS

For the Economic Development and Tourism Committee
Rep. Gayle Phillips, Chair

PROVIDING ACCESS TO THE E-COMMERCE HIGHWAY

During the legislative interim there have been major changes in the possibility of all Alaskans having the opportunity to obtain access to the Internet. The project discussed during last year's committee meetings has changed due to some of these recent developments.

Our office has begun to work toward methods of developing a broad-based mentoring program that would set up a pilot project to bring together Alaskans who

have mastered developing successful e-commerce businesses with Alaskans who have a dream but need help achieving the reality.

This program would create a partnering between the federal available funds, the Department of Community and Economic Development, municipal and village governments, and individual vol-

ATTACHED ARE DENALI COMMISSIONS EFFORTS ON RURAL CONNECTIVITY, PRESS RELEASE ON GCI'S LATEST SATELLITE, THE DIGITAL DIVIDE & EXAMPLES OF ALASKAN E-COMMERCE

The Denali Commission is sending out an RFP for an extensive State-wide Telecommunications Survey. This will provide an inventory of all telecommunications services currently available in 316 Alaskan villages.

This week-end PBS is airing a documentary *The Digital Divide*, highlighting the growing divide between

those with and without Internet access. (Coincidentally, the President will mention this Divide in his State of the Union address tonight.)

GCI launched a telecommunications satellite Monday (coming on-line in March) that will double the company's satellite capacity and increase Internet speed in some remote villages.



Rural Alaska Challenges

Infrastructure

Fuel Storage

Power Utilities

Sanitation

Solid Waste

Water &
Wastewater

Health Care
Facilities

Transportation

Telecommunication

Housing

Schools

Community
Facilities

Economic Development

Education,
Training,
Capacity
Building

Telecommunications

"Simply put...Everyone should be able to get access at a reasonable cost. Without this principle, new technology could create another class of 'haves and have nots' in our state, instead of fulfilling the promise of erasing distance and equalizing opportunity."

*Lt. Governor Fran Ulmer
State of Alaska*

"With the emerging digital economy becoming a major driving force of our nation's economic well-being, we must ensure that all Americans have the information and tools and skills that are critical to their participation. Access to such tools is an important step to ensure that our economy grows strongly and that in the future no one is left behind."

*Secretary William M. Daley
Department of Commerce*

Background:

Internet technologies, which are revolutionizing business and industry in urban areas of Alaska are not reaching the rural communities of our state. The positive impact Internet connections will have on education, training, health care and economic development in rural communities can not be overemphasized. The negative impact of leaving the rural communities behind in technological advances will only further compound the challenges of self-sustainability for rural Alaska.

The remoteness and sparse population, that so uniquely identifies rural Alaska, also are the primary limitations for private telecommunications to justify connections in most communities.

With the advent of the Universal Service Fund E-Rate Program, which provides up to 90% subsidies for Internet connections in rural schools and libraries, many rural

communities recently received or will be receiving their first point of presence for Internet connectivity through the local school or library. Private users are prohibited from accessing these federally subsidized services. So, an individual who wishes to open a web-site for commerce or have an e-mail account from home must use ?1800 dial-up access? which costs between \$200.00 -\$400.00 per month for basic e-mail and minimal Web browsing.

The Denali Commission will evaluate the availability of Internet technologies and other advanced telecommunications in relation to the future of economic development, education, training, and health care in rural Alaska.



[\(back\)](#) [\(next\)](#)

Questions/comments:

webmaster@denali.gov

[[Home](#)] [[About Us](#)] [[News](#)] [[Links](#)] [[Contact Us](#)]

Alaska Statewide Telecommunications Survey
Scope of Work
1/12/00

Alaska has made many rapid advances in telecommunications, particularly with the recent completion of large-scale fiber optic projects. Urban Alaskans have cable television, high-speed modems and competition among Internet service providers. Few rural Alaskans have such services at affordable prices. Anecdotal information shows that various telephone services and advanced telecommunications in many rural communities lag far behind urban communities. Telecommunications providers emphasize market conditions do not make it profitable to furnish urban-type services to Alaska's rural villages. Rural Alaskans have complained about the problem. But policy makers lack detailed information about the services available in rural villages, what companies or non-profits are providing those services, and how much rural consumers pay for those services.

The Denali Commission, in cooperation with the State of Alaska, federal agencies and private industry, wishes to obtain a current and comprehensive inventory of the telecommunications services available to rural Alaskans and the price they pay for these services. This inventory will provide the basis for potential collaboration between state government, federal agencies, private sector and Native organizations for the future enhancement of telecommunications services in rural Alaska.

An outline of the goals of this survey are as follows:

1. **Comprehensive Assessment of Services Available** - The objective of this task is to research available sources within the state of Alaska to provide a comprehensive inventory of all telecommunications services currently available in 316 communities and villages in Alaska. (This portion of the survey will exclude Anchorage, Fairbanks, Juneau, Ketchikan and Sitka. These areas will only be assessed for basic comparison purposes in section 3 below)

Examples of sources of information include school districts, local governments, tribal governments, village corporations, health organizations, telecommunications providers and the Regulatory Commission of Alaska.

For each rural village or community the assessment will include information related to the availability and price of the following services:

- a. Basic telephone service, both local and long-distance
 - b. Pay-phone availability
 - c. Emergency telephone services (B911 & E911)
 - d. Wireless telephone services
 - e. Direct broadcasting satellite services for radio and television.
 - f. Cable broadcasting services for radio and television.
 - g. Any other satellite services that provide voice and data communications
 - h. Internet services
2. **Cost of Services** - A price will be provided for all available services (listed above) in each of the 316 communities and villages in Alaska. The price will be in a unit of value that can be compared to other communities in Alaska and outside Alaska ie; per minute rates, monthly charges, per use charges, etc.
 3. **Cost Comparison Information** - The survey's primary goal is to provide information on availability and cost of services in rural Alaska as compared to urban Alaskan communities and other urban areas in America. To accomplish this effort, the survey will provide a summary of the average price of services (listed above) in the following communities:

Anchorage, AK, Fairbanks, AK, Juneau, AK, Ketchikan, AK, Sitka, AK, Seattle, WA, Los Angeles, CA and Chicago, IL.

The cost comparison information on these communities will not be an in-depth analysis of all the services available or an identification of all of the companies that provide service for these communities. The survey will only list the average price of services for the communities listed above.

4. **Database Development** - A searchable database is to be developed so that the information is easily accessible to review the availability and cost of telecommunications services by community, region, telecommunications provider, service, price of service, etc. A companion hard-copy document is to be provided that includes a summary, by community, of all information obtained.
5. **Timelines** - A request for Professional Services will be released by the Denali Commission no later than February 15, 2000. After a qualified contractor is selected the Commission staff will enter into contract negotiations and obtain a price for the services needed to complete the survey. The contract will not be approved until the full Denali Commission approves funding. The first draft of the survey will be delivered to the Commission by no later than June 1, 2000.
6. **Selection of Contractor** -- The Denali Commission will be requesting proposals from a qualified person or team to assist the Commission in obtaining information regarding telecommunication services in the State of Alaska. The successful contractor will be a person or team with a proven track record in similar contracts. Experience involving the telecommunications industry will be preferred.

January 20, 2000

Contact:

David Morris, (907) 265-5396; dmorris@gci.com

Kathy Day, (907) 561-4488, kday@gci.net

DRAFT DRAFT DRAFT

**GALAXY XR SATELLITE SCHEDULED FOR JANUARY 24 LIFT-OFF
New Satellite To Double Capacity and
Improve Telecommunications in Rural Alaska**

ANCHORAGE – GCI (NASDAQ: GNCMA) announced today that Galaxy XR, the satellite that will provide primary telecommunication services for its customers in rural Alaska, is scheduled to be launched from Arianespace Space Center in Kourou, French Guiana on Monday, January 24. The satellite will double the company's satellite capacity and provide long-distance voice, fax, Internet and data traffic.

"This new satellite expands the capability of GCI's existing earth stations and will provide the highest C- and Ku-band performance ever available in Alaska," said Richard Dowling, GCI senior vice president for corporate development.

GCI will own six C- and one Ku-band transponders on Galaxy XR once it achieves in-orbit checkout. The seven transponders represent a \$50 million capital investment. Each transponder is capable of carrying a minimum of 1,800 simultaneous voice or data calls.

The Ku-band transponder will be used to carry high-speed Internet traffic to more than half of Alaska schools, as well as voice and data services to remote fishing, mining and logging operations. Voice/fax, Internet, telemedicine and distance education applications will be delivered over both C-band and Ku-band.

Galaxy XR is the replacement satellite for Galaxy X. The launch of Galaxy X failed shortly after takeoff from Cape Canaveral, Florida in August 1998.

Galaxy XR is a Hughes-built HS 601 HP model spacecraft and will be carried to geostationary orbit aboard an Ariane 4 launch vehicle using a 42L twin-booster configuration. The satellite has a total of 48 Ku- and C-band transponders and is owned and will be operated by PanAmSat, the world's leading commercial provider of satellite-based communications services. PanAmSat operates a global network of 20 satellites and seven technical ground facilities.

Other tenants aboard Galaxy XR include: Hughes Network Systems, the State of California, California State University and the University of Southern California. In addition to telecommunication services, the satellite will deliver television programming for Disney, TVN Entertainment, Viacom and other programmers across the United States.

The launch of Galaxy XR will be the 94th Ariane 4 launch and the 10th in the 42L configuration. The launch vehicle will power the spacecraft to 22,300 miles above the equator at 123 degrees west longitude. Ariane 4 is built by Arianespace, a venture of the European Space Agency and the world's first commercial space transportation company.

GCI is an Alaska-based and operated company that provides local, wireless, and long distance telephone, cable television, Internet and data communication services to more than 180,000 customers throughout Alaska. More information about the company can be found at www.gci.com.

#

THE IMPORTANCE OF GALAXY XR TO ALASKA CONSUMERS

FACT SHEET

Satellite communication is used for telecommunication services in rural Alaska because most of the state's communities are off the road system, separated by great distances and populated rather sparsely. In telecommunication parlance this is called a "thin route." Satellite communication is the most cost efficient means of delivering a high quality telecommunication signal over a large area that is lightly populated. In contrast, "thick routes" may support other transmission technologies such as fiber optics or microwave. The trade-off to these technologies is that they cost more to construct and maintain, but costs can be spread among a larger user base.

-C-band will be used in village and regional centers for traditional voice, facsimile, Internet and data communication for residential and business users. Antenna diameters usually range between 3.6 meters to 13 meters.

-Ku-band is used in discreet locations where bandwidth requirements are not as intense as C-band. Those using Ku-band for voice and data applications will include fishing lodges; logging or mining located far from established communities; private data/voice line applications for businesses; and, dedicated high-speed Internet access to more than half of Alaska's schools. Antenna diameters are generally 1.8 meters.

The geographic coverage of Galaxy XR includes all of mainland Alaska, offering virtually uniform signals. This new satellite also will offer greatly enhanced coverage of the Aleutian chain and Southeast Alaska.

Galaxy XR represents half of GCI's long-term, high-bandwidth offering to Alaskans. Beginning in 1996, GCI invested heavily in a network of earth stations that the company built throughout rural Alaska. This rural telecommunications network offers digital, broadband capabilities for a variety of users. The earth stations, often referred to as Demand Assigned Multiple Access (DAMA) sites, allow callers in rural villages to share satellite transponder bandwidth on an "as needed" basis - instead of using a continual established and expensive link with the satellite.

Until GCI brought competition and new technology to rural Alaska, phone calls outside of or between villages had to move between the earth station, to a satellite, then to another earth station, then to a satellite and finally to the receiver's earth station. This created a "double hop" between a caller and a village. DAMA uses only one "hop" between a caller in the village, the satellite and the person receiving the call. This represents a significant cost savings and improves the quality of the call.

GCI's Alaska United Fiber Optic Cable carries much of GCI's traffic between Anchorage, Fairbanks, Juneau and the Lower 48. The fiber optic cable is freeing up space on satellites like Galaxy XR, that will allow the company to offer a wider range of, and more advanced services to rural Alaska.

###

RealEstate.com
The way it's meant to be.



News

LEARNING ONLINE

News
Business
Sports
Local
Health
Technology
Living + Travel

Documentary tackles digital divide



Laura Saponara / Independent Television Service

A "Tech Grrls" computer club at the Fulmore Middle School in Austin, Tex., aims to narrow the digital divide in two ways, reaching girls and the elderly.

MSNBC

Video



PBS

Select your connection speed

28.8 56.6 71

Free Windows Media Player

Watch a trailer prepared by the producers of "Digital Divide"

Jan. 24 — The term "digital divide" has entered the mainstream, but where are we as a society? A new documentary airing on PBS explores where the divide is widening as well as examples across the country of where educators and others have found ways to narrow it in their communities.

● COMPLETE STORY →

ADVERTISING ON MSNBC



GET ANY OF THESE SERVICES ONLINE...

Checking Accounts

Go



MSNBC Live Vote

Do you feel there's a digital divide that's widening?

- ☐ Yes, and society must intervene
- ☐ No, access is getting cheaper, narrowing the divide
- ☐ Can't decide

VOTE**MSNBC INTERACTIVE**

Vote to see results

THE TWO-PART series airs nationally starting later this month and includes a companion Web site that looks at the divide by schools, gender, race, and the workplace.

Each category includes interviews, related links and an "interact" area. The latter is made up of three interactive quizzes and a timeline.

The Web site includes an outreach program aimed at getting teachers and community leaders to act after seeing the series.

Coincidentally, President Bill Clinton plans to recognize that divide in his annual State of the Union speech on Thursday.

And White House officials say Clinton is planning to call for spending as much as \$100 million to provide computers and Internet access in perhaps as many as 9 million households.

Late last year, Clinton set a national goal of connecting all Americans to the Internet, not only in schools and libraries but also in homes, small businesses and community centers. The administration is working with the computer industry, private foundations, nonprofit organizations and civil rights groups to make the Internet more accessible.

A Commerce Department report last July documented a wide digital divide in America. It found that black and Hispanic households are only two-fifths as likely to have Internet access as white families. Households with incomes of \$75,000 and above in urban areas are more than 20 times as likely to have Internet access as households at the lowest income levels.

The administration says more than 50 percent of America's schools and over 80 percent of its classrooms are wired for the Internet. The goal is to have all schools connected by the end of this year.

The Digital Divide Web site is at www.pbs.org/digitaldivide.

For broadcast times, the Independent Television Service has a database at www.itvs.org that can be searched by state or station.

The Associated Press contributed to this report.

YAHOO! SHOPPING [Shopping Home](#) - [Yahoo!](#) - [Help](#)

Welcome, guest

[View Cart/Check Out](#) - [Order Status](#) - [Edit Acct](#) - [Sign In](#)**Search Result:** Found 3024 products in 231 stores for 'alaska'[Shopping Home](#)**Merchants:** 3 matching 'alaska':

- [The Alaska Store](#): Ski trips and gear, native crafts, seafood, gifts, and free stuff.
- [Sandra's Gold ~ Valdez, Alaska](#): Gifts & gold nugget jewelry from **Alaska**.
- [Alaska Native Language Center Books in Print \[CC\]](#): Books about **Alaska's** 20 native languages.

Categories: 1 matching 'alaska':

- [Books > Travel > North America > United States > States > Alaska](#)

Products: Found 3024 products in 231 stores matching 'alaska'. Showing stores 1 - 20:(Or, Show Me Products in this Price Range: [\\$1-\\$10](#) [353], [\\$10-\\$50](#) [696], [\\$50-\\$200](#) [210], [\\$200-\\$950](#) [59], [\\$1000-\\$51000](#) [15])sort listing by: [relevance](#) | [increasing price](#) | [decreasing price](#)**Alaska (1996)** by Fraser C. Hestonfrom Yahoo! Video Shopping -
(First of [95 matches](#))**\$9.54 - 14.95****Synopsis:** Two youngsters set out with a newly-rescued polar bear cub to find their pilot father, whose plane went down while flying medical supplies to remote settlements in **Alaska's** vast wilderness....**Actors:** Thora Birch; Charlton Heston; Vincent Kartheiser; Dirk Benedict; Duncan Fraser...**Facts:** Available Format - Laserdisc VHS - 1 hr. 49 min. - PG (MPAA)**Alaska** by Compass America Stafffrom Yahoo! Books Shopping -
(First of [2037 matches](#))**\$14.56-19.95****Publisher:** Fodor's Travel Publications, Incorporated**Publication Date:** 02/01/1999**Available Format:** Paperback**Alaska** by Tropical Panamafrom Yahoo! Music Shopping -
(First of [85 matches](#))**Song List:** Quisiera Ser; El Suicidio; En Cada Cancion; Hagamos De Nuevo El Amor; Arena Mojada;...**Facts:** Available Formats: CD, Cassette; Original Release Date: 06/03/1997; Label: Disa; Stereo;**ALASKA**

from 2Catstudio - (1 match)

\$98.00**ALASKA** This original design celebrates the State of **Alaska**. It is entirely hand embroidered on a light tea-color cotton cover that buttons off for cleaning. Accented with black velvet piping - it measures 19 inch x 19 inch square. Polyfill form included. [Click Here for Enlargement](#)

Alaska

Alaska Alaska is the magazine for people who are stimulated by the wild beauty and exciting thrills of America's 49th state. Each issue canvasses the travel, adventure, lifestyles, and environment of the Alaskan region. 2662

from enews.com - (First of **2 matches**)**\$18.00****ALASKA****ALASKA** One Sheet (27 x 40) Y67

from Graphic Expectations - (1 match)

\$16.00**Alaska****Alaska sak35hf**from American Flags & Banner Co. -
(1 match)**\$9.95****Alaska**

Alaska If he enjoys the outdoors this is a wonderful arrangement. Done in conjunction with the Denver IMAX Movie Theatre, we create arrangements with IMAX's movie selections. **Alaska** - currently playing until Oct. 1999 This basket includes: A white stuffed Polar Bear, 150 pg. book on **Alaska**, gourmet...

from Male-A-Basket - (1 match)

\$45.00**Alaska on Foot**

Alaska on Foot A practical guide for safe travel in **Alaska** and northwestern Canada Also covers map and compass skills Author: Molvar Paperback, 222 pages, including maps and photos Specification Description None None 632565

from REI - (First of **7 matches**)**\$15.00****Koronis Alaska Anchorage Hockey Jersey**

Koronis **Alaska** Anchorage Hockey Jersey Made by Koronis - the same company that makes many official college hockey jerseys, this **Alaska** Anchorage jersey features a tackle-twill logo sewn on the front and shoulders. Jersey is made of high quality 150 denier polyester mesh fabric - just like the real...

from Fogdog Sports - (First of **22 matches**)**\$113.95****Sea Harbour Alaska 32**

Sea Harbour **Alaska** 32 All Sea Harbour Luggage is designed and crafted with durability, style, and function in mind. It features P.V.C. backed 600 Denier polyester, extra sturdy coil zippers and pull tabs, and has heavy duty webbing, riveting and other high duty materials to create water resistant...

TOP from Ezflyfish.com - (1 match)

\$99.95**Sleeping Bag: Ferrino ALASKA Plus Long @ \$139 + Fr...**

Sleeping Bag: Ferrino **ALASKA** Plus Long @ \$139 + Free UPS 90x33x22", 3 lbs 10 oz -- otherwise similar to standard Plus model. Select FREE SHIPPING at order! [Usually ships the next business day.] [fb-akpxl.vs]

TOP from Arkatents Outdoor Gear /
501-394-7893 / Tents, Backpacks, Sleeping
Bags,... - (First of **3 matches**)**\$139.00****The Alaska Wilderness Guide**TOP from CSP Outdoors -
(First of **3 matches**)**\$13.50**



The **Alaska Wilderness Guide 7TH EDITION** The **Alaska Wilderness Guide**, 500 pages, a great guide to adventure travel in **Alaska**, giving you detailed information on natural wonders and wildlife viewing; camping, sportfishing, sea kayaking, river running, hiking and other activities; bush and Native...

Alaska Freight Set (Lionel)

TOP SERVICE from hectorshardware.com -
(1 match)

\$199.96



Alaska Freight Set (Lionel) Our deluxe diesel freight train set, complete and ready-to-run! This colorful freight set offers modern era styling and operating headlights. You can even blast the horn! What a great way to start your railroad or add on to your existing layout. The Features: Steam...

SOHIO/BP Trans Alaska Pipeline Bond Certificate

TOP SERVICE from Scripophily.net -
(First of **3 matches**)

\$16.95



SOHIO/BP Trans Alaska Pipeline Bond Certificate We are offering this historic and beautifully engraved Bond Certificate issued by the **SOHIO/BP Trans Alaska Pipeline Finance Company** in the 1975 - 1979. This historic document has an ornate border around it with a beautiful vignette of a woman waling...

Northwest Orient Airlines Stratocruiser Alaska Bro...

TOP SERVICE from Singular Selections -
(First of **3 matches**)

\$14.00



Northwest Orient Airlines Stratocruiser Alaska Brochure This Northwest Orient Airlines **Alaska Brochure**, circa early 1950's, not only features multiple photographs and a map of **Alaska** destinations, but also prominently features Northwest's Boeing B-377 Stratocruiser service as "Fast.. Frequent...."

Supplement Alaska

TOP SERVICE from planestuff -
(First of **4 matches**)

\$4.90



Supplement Alaska **Supplement Alaska** is civil/military flight information publication issued by NOAA every 56 days. It is a single volume designed for use with the Enroute Charts, **Alaska Terminal Area Chart**, World Aeronautical Charts and Sectional Aeronautical Charts. The **Supplement Alaska** contains...

SIMCharts Terminal Package - Canada & Alaska

TOP SERVICE from Flight Sim Central -
(First of **3 matches**)

\$19.95

SIMCharts Terminal Package - Canada & Alaska SC-CAN

Planet Plush "Ice" the Alaska Bear

TOP SERVICE from The Collector Store -
(1 match)

\$9.95



Planet Plush "Ice" the Alaska Bear Part of the City/State Series designed by Sally Winey, Serial Numbered out of 36,000. ice-pp

Orthodox Alaska: A Theology of Mission

TOP SERVICE from Kingdomroad.com -
(1 match)

\$8.96



Orthodox Alaska: A Theology of Mission December 1993, Paperback, 252 pages Michael J. Oleksa [Usually ships in 5-7 business days.] 0881410926

Next 20 Matches

Search Auctions

Search Yellow Pages

Sandra's Gold ~ Valdez, Alaska

Who we are

Alaskan Food Items

Gifts for men

Alaskan Gold Nuggets

Alaskan Medallions

Gold Nugget Jewelry

Show Order

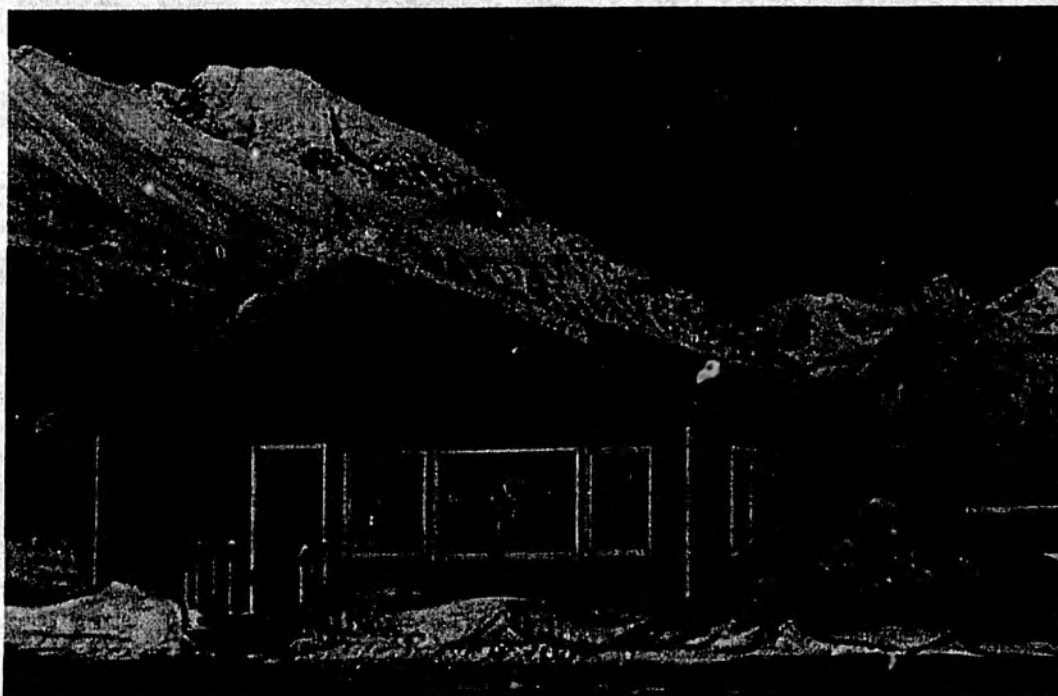
Info

Help

Search

Index

Y! SHOPPING

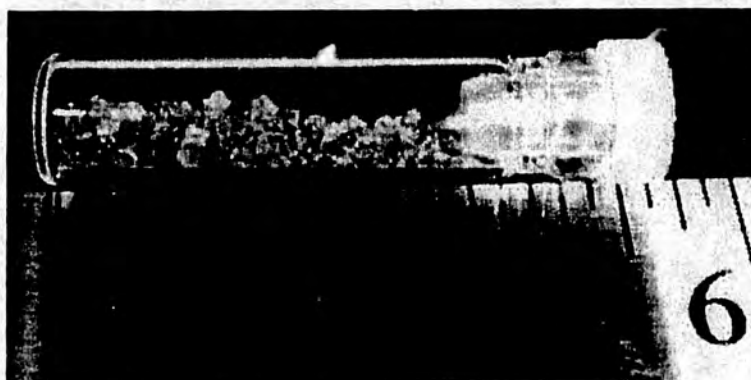


Welcome To Sandra's Gold & Silversmith's Online Store

For More Info on any item please E-Mail

info@sandrasgold.com

We are located in Valdez, Alaska at the head of Prince William Sound



- Alaskan Arts and Crafts
- Alaskan Business
- Alaskan Entertainment
- Alaskan Fishing Charters
- Alaskan Museums
- Alaskan Real Estate
- Alaskan Sea Food
- Shop Alaska!
- Ski Snowboarding Ice Climbing
- Auctions
- WWW.WESC.COM

- Show Order
- Info
- Help
- Search
- Index
- Y! SHOPPING**



Welcome to the Alaska Store! You can now order great Alaskan products online or download free screensavers with a click of the mouse. The Alaska Store by alaskacybershop.com

The time is now to gear up for winter sports. Check out the new ski bibs and shells from H2O Heli Gear. This gear was

designed for the Alaskan conditions by the guides who know - Dean Cummings Valdez H2O heli guides.

Or try our Vert's Climbing Snowshoe! If you climb peaks, you need these tools - other snowshoes don't even come close.

Thanks for shopping with The Alaska Store.



Valdez-U-Drive Car Rentals



The Star Valdez Newspaper



Spa and Facial Products Gift Basket
\$176.00



Howling Wolf Coffee
\$12.40



Canon GL1 Pro Digital Camera
\$3,699.00

Shot Glass
Regular price: \$4.50
Sale price: **\$3.00**



Valdez 2000 Baseball Cap
Regular price: \$17.95
Sale price: **\$14.50**



Polaris Indy 500 Trail Deluxe
\$3,350.00

For additional information please check out www.alaskagold.com or email shop@alaskacybershop.com

Home
Alaskan Arts and Crafts
Alaskan Entertainment
Alaskan Fishing Charters
Alaskan Museums
Alaskan Real Estate/Business
Alaskan Sea Food
Shop Alaska!
Ski Snowboarding Ice Climbing
Auctions
WWW.WESC.COM
Y2K HELP for ALASKA

Show Order
Info
Help
Search
Index
Y! SHOPPING

**Internet**

Welcome to the online information page of the Alaska Store.

The Alaska Store by Alaskacybershop.com is based in Valdez, Alaska. We are proud to bring the best Alaskan products to the web audience. Online shopping has never been more easy or secure. Yahoo provides the latest technology in security and shopping navigation. Please take a moment to browse our helpful online information.

Harbor Landing, Suite 210
PO 2571
Valdez, AK
99686

(907) 835-4854 -The Virtual Valdez Office
(907) 835-4477 - Jarrett Computers and the alaskacybershop.com hotline
cybershop@alaskacybershop.com

How to Order

Buying from The Alaska Store by alaskacybershop.com is easy and secure. You don't have to fill out a registration form or download software to shop here. And when you place an order, you can feel confident that your credit card information is protected by our secure server (administered by Yahoo! Store).

The order button next to each item adds the item to your shopping basket. Putting something in your shopping basket does not commit you to buying it. After you put something in your shopping basket, you can choose to place the order immediately, or continue shopping.

You can put as many items as you want in your shopping basket. When you're finished and want to place the order, you can get back to your shopping basket by clicking on the Show Order button.

Problems Ordering?

If you click on the Order button and get no response, it is probably because you can't connect securely to our server.

As a test, try going to <https://www.microsoft.com>. If you can't connect securely to Microsoft either, then:

- You have a very, very old browser, in which case you should upgrade.
- Or you are behind a corporate firewall that won't allow secure connections. Ask your network administrator to fix it, or order from home.

Return Policy

IMPORTANT: A full credit for unopened products will be given if products are returned within 30 days of invoice date. Opened products may only be exchanged for other products, and may be subject to a 25% restocking fee. No products may be returned after 30 days of invoice date. No returns will be made without an enclosed photocopy of the original invoice, and completion of appropriate forms.

Payment Methods

We accept Visa, MasterCard, and money orders. No personal checks will be accepted. Your online payment information is automatically encrypted to ensure maximum protection. Thank you for taking the time to read our information page and visiting our site.





Alaska Online

- tourism
- shopping
- anchorage
- business
- activities
- search

Welcome to **Alaska**

Sit back,
and **experience**
the Last Frontier
as you never have...
right from your desktop.

Enjoy your stay!

POWERED BY COMET

Brought to you by **ALASKA** Interactive

TOURISM SHOPPING ANCHORAGE BUSINESS ACTIVITIES

APPLIED MICROSYSTEMS, INC.



Oiviut Handknits

from the downy soft under-wool of the Arctic Musk Ox

COMPREHENSIVE LISTING

CookWave - Food For The Heart And Soul

Tony Dawson's Photography - Fine art limited edition nature photography

Alaska Sausage & Seafood - Well known for our processed game meats and fish native to Alaska.



SEE ALASKA | TOURISM | SHOPPING | ANCHORAGE | BUSINESS | ACTIVITIES

Created By:

APPLIED MICROSYSTEMS, INC.

Copyright © 1996 Applied Microsystems, Inc. All rights reserved.

www.alaskanet.com