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FIAR U O 2001
Juneau Ranger
District

Juneau & Vicinity Building and Construction Trades Council, Inc.

124 Front St.
Juneau, AK 99801
Phone (907) 586-3050
Fax (907) 586-9614

MEMBERS: BRICKLAYERS LOCAL 1, CARPENTERS LOCAL 2247, ELECTRICAL WORKERS (IBEW) LOCAL 1547,
HEAT/FROST INSULATORS & ASBESTOS WORKERS LOCAL 97, IRONWORKERS LOCAL 751,
LABORERS LOCAL 942, OPERATING ENGINEERS LOCAL 302, PAINTERS LOCAL 1140,
PLUMBERS & PIPEFITTERS LOCAL 262, SHEETMETAL WORKERS LOCAL 23, TEAMSTERS LOCAL 959

Mr. Steve Hobensee, SEIS Team Leader
Tongass Minerals Group
USDA Forest Service
8465 Old Dairy Road
Juneau, AK 99801

March 1, 2001

Dear Mr. Hobensee,

We here at the Juneau and Vicinity Building Trades Council would like to go on the record in support of the Kensington Gold Project and specifically the selection of Alternative B as the preferred alternative for the Draft Supplemental Environmental Impact Statement. We believe Alternative B is not only the most economical, but also the most environmentally safe for both the Project and the citizens of our area of Alaska.

As you may have gathered we are a Council made up of eleven construction labor unions representing near 1000 members throughout our region of northern Southeast Alaska, and are always striving to have employment opportunities created that pay a living wage and stimulate the economy here, which as you are probably aware is not in the best of health at the present time. If Alternative B is adopted Cocur will be able to create around 325 good paying jobs and utilizing local hire measures that money will re-circulate within our local economy, and that is only during the construction phase. Additionally the greater than 180 full-time mining related jobs during the life of the mine will also go a good distance toward the maintenance of a vibrant local economic picture for at least 10 years into the future.

From an environmental standpoint we also like that Alternative B reduces wetland disturbance, is not going to be visible from either Lynn Canal or Berners Bay except for the dock facility, and eliminates the need for cyclone processing which eliminates acid rock drainage on the footprint of the mine site. We believe that Cocur and the Kensington Gold Project have proven to be and will be environmentally responsible in their endeavor there, and that they have a full and committed understanding of the habitat where they will be operating.

For the above mentioned reasons we urge you to adopt Alternative B. Thank you for your consideration.

Sincerely,



Mike Nolan
President - Juneau Building Trades Council
Assistant Business Manager - International Brotherhood of Electrical Workers (IBEW) Local 1547



Juneau Economic Development Council

March 3, 2004

Mr. Steve Hohensee
SEIS Team Leader
Tongass Minerals Group
USDA Forest Service
8465 Old Dairy Road
Juneau, AK 99801

RE: Support of the Kensington Mine Project and DEIS Alternative B

Dear Mr. Hohensee,

The Juneau Economic Development Council Board of Directors supports selection of Alternative B of the Kensington DEIS by the U.S. Forest Service and Cooperating Agencies as the environmentally preferred and most practicable alternative.

The Juneau Economic Development Council (JEDC) was created in 1987 as a private non-profit corporation with assistance from the City and Borough of Juneau (CBJ) and the Juneau Chamber of Commerce. JEDC is an economic development agency that provides direct benefits to Juneau and the Southeast Alaska region. Our mission as a public/private partnership is to foster a healthy and sustainable economic climate in the City and Borough of Juneau and in Southeast Alaska. The Council is pro-active and undertakes a number of specific efforts to maintain, expand, and create industries in Juneau and Southeast. The Council collaborates with existing local and regional organizations to diversify and stabilize the economy, while protecting our unique Alaskan character and quality of life. Our board is comprised of representatives from government, local businesses, labor, fisheries, higher education, and environmental entities.

As compared to the already permitted dry tailings facility (Alternative A), Alternative B would:

- Meet applicable water quality standards.
- Result in the smallest amount of land disturbances, including delineated wetlands.
- Provide a geotechnically sound dam design that does not require construction of a major structural berm around the facility due to long-term stability concerns.

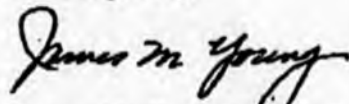
Letter to Steve Hohensee
March 3, 2004
Page 2 of 2

- Offer the best long-term reclamation proposal, involving creation of 56 acres of enhanced fisheries and wildlife habitat.
- Eliminate any long-term acid rock drainage (ARD) potential, and care and maintenance issues related to major surface water diversions.
- Improve transportation safety.
- Relocate the decking area from the important Lynn Canal commercial fishery.
- Lower operating costs than the previously permitted dry tailings facility (\$2.74/ton vs. \$0.10/ton).
- Create a significant tax base for the City & Borough of Juneau.

The commitment that Coeur d'Alene Mines Corporation has made to local hire in their job placement of approximately 325 positions during construction and 225 positions at full operation, their commitment to upholding high environmental protection standards as acknowledged by their receipt of 19 major national and international environmental awards since 1987, in addition to the above bulleted advantages of Alternative B, support our recommendation for this choice.

Please do not hesitate to call me with questions regarding this letter at (907) 586-8001 or Lance Miller at (907) 463-3662. I invite you to find out more about our organization by looking at our website at www.iedc.org.

Best regards,



James M. (Jamey) Young
Board Chair



Lance Miller
Executive Director

/jmy

Cc: File, Southeast Caucus, Senator Lisa Murkowski, Senator Ted Stevens,
Representative Don Young, Coeur Alaska

Mar. 11. 2004 10:04AM

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James J. Mackey
- Enclosed

Steve Robinson
P.E. Team Leader
Kingsmen Minerals Group
UNDA Forest Services
6465 Old Derby Road
Fairbanks, AK 99701

The Jackson Branch of the Alaska Miners Association would like to express their support for the selection of Alternative B in the Kensington Gold Project (KSGP). The AMA has always been a staunch supporter of responsible mineral resource development and Alternative B will best allow Coeur Alaska to develop the project in a safe, environmentally friendly, and economically sound manner.

Relative to the other alternatives, Alternative B provides the best plan for:

- Meeting all applicable water quality standards.
- Reducing overall wetlands disturbance and crossing enhanced fisheries and wildlife habitat of the sand of the EIA.
- Reducing energy requirements and minimizing air emissions.
- Minimizing potential conflicts with other users of Barnes Bay through non-buyout of the viewshed in Lyne's Canal and Barnes Bay and creation of a separate dock area at Cascade Point.

Alternative B also provides the best plan for Coeur Alaska to contribute to a healthy, well-rounded economy in Southeast Alaska. This alternative is much more economically sound than the other alternatives, and, when approved, will allow Coeur to develop and construct the project in a timely fashion.

The following results in:

- Creation of over 100 additional indirect jobs, and result in \$7.5 million in direct local purchases during construction.
- An estimated payroll of \$16 million and 22.5 full-time jobs through the producing mine life.

The Jackson Branch of the Alaska Miners Association has supported the Kensington Gold Project from its inception and throughout in various permitting hurdles. We strongly urge the Forest Service to select Alternative B and allow Coeur to become an integral part of our local economy.

James J. Mackey

James J. Mackey
Kingsmen Minerals Group
Alaska Miners Association
1000 Hill Ave
Fairbanks, AK 99701
(907) 789-5761

**Juneau Resource Alliance; Juneau Chamber of Commerce
Resource Alliance 7 am Breakfast meetings, Wednesdays at the Prospector
John Sandor, Chair; PO Box 21135, Juneau, AK 99801; 586-2497; jsander@ptialaska.net**

February 13, 2004

**Mr. Steve Hohensee, SEIS Team Leader
Tongass Minerals Group - USDA Forest Service
8465 Old Dairy Road
Juneau, AK 99801 Fax: (907) 790-7464**

Dear Mr. Hohensee:

During the Juneau Resource Alliance's fifteen years of existence, we have closely followed various resource development projects in Southeast Alaska and other parts of Alaska. I want to particularly commend the Forest Service's SEIS Team and cooperating agencies in the preparation and issuance of the Draft Supplemental Environmental Impact Statement (DSEIS) for the Kensington Gold Project. This Draft SEIS is very well prepared.

The description and evaluation of the various Alternatives in this DSEIS are well defined. We would like to comment on the Corporation leading this venture; the location of the Kensington Gold Project and the Alternative which appears most favorable from both an economic and environmental protection standpoint.

Coeur Alaska, Inc. is a strong, well-established Corporation which can be expected to fully meet its commitments as this property is developed and managed throughout the life of the project. The Kensington and Jualia properties date back to the late 1800's and early 1900's and are described in substantial detail in David and Brenda Stone's book "*Hard Rock Gold - The Story of the Great Mines that were the Heartbeat of Juneau, Alaska*". Thus both the mining properties and Coeur Alaska, Inc. are proven entities that give confidence to the future success of the Kensington Gold Project.

Finally, we support Coeur Alaska's assessment that Alternative B would be the most economical and environmentally acceptable alternative in the development of the Final Supplemental Environmental Impact Statement and Record of Decision. Alternative B meets water quality standards during the construction, operation and reclamation phases of the project and disturbs less land and wetlands. The use of a dock at Cascade Point would also reduce potential impacts with recreation users. Additionally, Alternative B is most favorable from an economic standpoint.

Thank you for the opportunity to comment.


**John A. Sandor, Chair
Juneau Resource Alliance**

Southeast Conference

P.O. Box 21967 Juneau Alaska 99802-1967 Tel. (907) 463-3445 Fax (907) 463-5678 www.seconf.org

February 27, 2004

Steve Hohensee
SEIS Team Leader
Tongass Minerals Group
USDA Forest Service
8465 Old Dairy Road
Juneau, AK 99801

RE: Support of the Kensington Mine Project and DEIS Alternative B

Dear Mr. Hohensee,

The Southeast Conference Board of Directors supports selection of Alternative B of the Kensington DEIS by the U.S. Forest Service and Cooperating Agencies as the environmentally preferred and most practical alternative.

Southeast Conference is a regional membership organization focused on building a strong economy, healthy communities, and a quality environment in Southeast Alaska. Our more than 130 members consist of 30 communities (including every Southeast Alaska community with a population over 100); 10 Southeast Alaska chambers of commerce; 12 Alaska Native organizations; many businesses; non-profits; visitor's bureaus; and individuals interested in the economic and social well being of the residents of the region. Southeast Conference began 46 years ago as a regional citizens group that wished to unite in order to achieve goals shared by all Southeast Alaska communities. Southeast Conference is now the State designated Alaska Regional Development Organization (ARDOR), the Federally designated Economic Development District (EDD), and the Federally designated Resource Conservation and Development Council (RC&D) for Southeast Alaska.

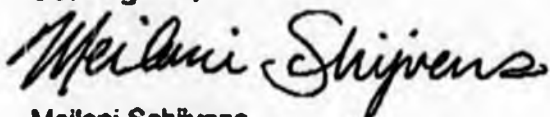
As compared to the already permitted dry tailings facility (Alternative A), Alternative B would:

- Meet applicable water quality standards.
- Result in the smallest amount of land disturbances, including delineated wetlands.
- Provide a geotechnically sound dam design that does not require construction of a major structural berm around the facility due to long-term stability concerns.
- Offer the best long-term reclamation proposal, involving creation of 56 acres of enhanced fisheries and wildlife habitat.
- Eliminate any long-term acid rock drainage (ARD) potential, and care and maintenance issues related to major surface water diversions.
- Improve transportation safety.
- Relocate the docking area from the important Lynn Canal commercial fishery.
- Lower operating costs than the previously permitted dry tailings facility (\$2.74/ton vs. \$0.10/ton).

The Kensington gold mine would likely employ 325 people, predominantly Alaskans, during construction, and 225 during operation. Over 180 indirect job opportunities would also result. These are high paying, year-round jobs. The annual estimated operating payroll is \$16 million, and the project would generate over \$1 million annually in taxes. Coeur has made it clear that the mine development and operations will continue to remain subject to stringent federal and state environmental protection requirements. Coeur d'Alene Mines Corporation is an environmentally responsible operator, having been acknowledged by 19 major national and international environmental awards since 1987.

Simply put, this is a very good opportunity for Southeast Alaska. The economy of Southeast Alaska has been in decline for the past decade. Real per capita income fell 4% overall in Southeast and 8% outside of Juneau in the last 10 years. With our timber and fishing industries in decline, Southeast Alaska needs healthy industries such as mining to help support our economy. Although tourism jobs are on the rise, one mining job earns the same in wages and benefits as seven tourism jobs. Coeur has proven itself to be an excellent organization that accounts for the needs of the communities in its management decisions. Southeast Alaska needs family wage jobs and Southeast Conference fully supports Coeur in its Kensington project. Please do not hesitate to call me with questions regarding this letter at (907) 463-3445 and I invite you to find out more about our organization by looking at our website at www.seconference.org.

Best regards,



Meilani Schijvens
Administrative Director

Cc: Southeast Caucus, Coeur Alaska ✓



3100 Commercial Drive, Suite 300 • Juneau AK 99801 • (907) 463-3488 • Fax (907) 463-3489
E-mail: ownersofconveyance@comcast.net • www.ownersofconveyance.com • Web site: <http://www.ownersofconveyance.com>

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February 12, 2004

Steve Robinson
SEMI Team Leader
Tongass Minerals Group
USDA Forest Service
9465 Old Daley Road
Juneau, AK 99801

Dear Mr. Robinson:

Subject: Support of Kensington Gold Project Alternative B, Lower State Lake Tailings Management and Canada Pit Project


The Juneau Chamber of Commerce Board of Directors, representing over 300 businesses, is submitting this letter strongly supporting the selection of Alternative B, as the best environmental alternative for construction of the Kensington Gold Project (KGP).

After an oral consultation and deliberation, we believe the alternative should be identified as the "selected alternative" by the Forest Service in the Final Supplemental Environmental Impact Statement (SEIS). This selection should also ultimately be reflected in the Record of Decision.

Our recommendation is based on the following rationale:

- Alternative B drastically significantly less land area and wetlands; it also actually increases the size and improves the productivity of Lower State Lake's salmon fishery, and associated wildlife habitat at final closure.
 - Alternative B meets water quality standards during the construction, operational and reclamation phases, during closure, the alternative does not require significant long-term care and maintenance needs related to extensive erosion prevention and tailings rock capping (the DTF also requires construction of three large rockweirs/quarries).
 - The alternative would create 325 high-paying construction jobs, and a permanent operational work force of 130 ranging up to 225 at peak operation - known desperately needs these jobs and the \$16 million annual payroll.
 - Alternative B would utilize a dock at Canada Point; this is the best location and would not create new conflicts and major dredging requirements inside the busy recreational sea area at Bobs Cove.
- Finally, and of major importance, Lower Alaska officials have shown a commitment to Juneau, and have named as their Alternative B is the most "practicable" alternative, from an economic standpoint. It has the lowest capital and operating costs, and is not subject to fluctuating gold prices. It represents at least a 10-year value stream, with a high potential to find more ore and extend the project well beyond year 2015.

We urge you to select Alternative B. The Chamber also appreciates the level of evaluation and work effort demonstrated by the Forest Service and their consultant in the DEIS/EI.

Very truly yours,

Mike Berry
President, Juneau Chamber of Commerce

- Board Members:
Mike Berry
President
- Bill Bergstrom
- David Brennan
- President-elect
- Alvin Engstrom
- Jim Hahley
- President/Secretary
- Ken Disher
- Chairman/Finance
- Kevin Johnson
- Mayor of Alaska
- Loren Fisher
- ACTS
- 201 Puma
- Alaska DEIA PCU
- Luck Thomas
- Alaska Brewing Co.
- Tom Williams
- Head Project Director
- Henry Vukob
- Wash. University & Development
- Bob Swanson
- Development Inc.
- Tom Swanson
- State Ferry Authority
- Thomas Knud
- Richard Baker
- Bob Bibe
- Lower Right
- Mayor Dier
- Barri/Franking & Harding
- Developer Members
- ACTS
- James English
- Production Activities
- AVT/EP
- Alaska Airlines
- Alaska Motor Lines
- Alaska Pacific Bank
- Alaska USA/PCU
- Alaska Shipping Company
- Alton Baker/Toni
- Richard Berglund/Elizabeth
- EP
- CSI
- Capital Chronicle
- Coast Alaska, Inc.
- Coastal Communities
- Tronco Mill
- Final National Bank of Alaska
- OCI
- Glenn Cook/Kelting
- Key Bank of Alaska
- Ther Oll Miller
- Trust Bank PCU
- DAS
- Wilda Ferry Bank of Alaska



August 4, 2004

ATTN: John C. Leeds
Department of the Army
U.S. Army Corps of Engineers
Juneau Field Office, Suite 106
8800 Glacier Highway
Juneau, Alaska 99801-8079

Re: POA-1990-592-M, Lynn Canal 31

Sealaska Corporation is the Native region corporation for Southeast Alaska and has over 17,000 shareholders. Many of our shareholders reside in Juneau and depend on the project area for recreation and subsistence use. Our shareholders are also potential employees who will benefit from the development of the proposed project. Our support of the project is contingent upon strong environmental protection and economic opportunities for our community and shareholders. We have reviewed the proposed project and associated mitigation measures and believe the best possible balance has been achieved.

Sealaska supports having the above referenced project proceed to mine development in a manner that will protect the environment for the life of the project while benefiting the economy of the greater Juneau area. This mine project has received substantial permit scrutiny from State and Federal agencies regarding environmental permits and authorizations related to air quality, and consistency of federal water quality requirements with state regulations. The process has carefully evaluated Coeur's proposal. Permits with appropriate conditions should now be issued based on data and information included in the application and public notice.

The Corps 404 permit, which is required for mining activities at Kensington involving the dredging or placement of fill in waters of the U.S., including wetlands, should be issued for the following reasons:

- The Lower Slate Lake TSF is environmentally sound and the only economically feasible alternative. The fact that it incorporates a lake restoration and habitat enhancement proposal which would create 36 new acres of improved fisheries and wildlife habitat is a distinct benefit to the environment when the mine is closed.
- The Lower Slate Lake alternative minimizes long-term care and maintenance needs. After closure the reclaimed lake will provide a bio-diverse habitat that is shallow enough to support aquatic plants. This plant community will provide habitat and food for invertebrates, fish, and wildlife.

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- Under this plan, cultural resources are protected.
- Coeur's tailings management proposal provides a net benefit for fish and wildlife values. In addition it has been designed to meet all tailings management needs for the reasonably foreseeable future.
- The proposed tailings area is not visible from Berners Bay or Lynn Canal. In addition, the plan carefully minimizes effects on the view shed, especially as seen from the mouth of Echo Cove and much of Berners Bay.
- The TSF has significantly less energy needs, as compared to the dry tailings stack.
- Planned buffer zones will be around all active streams and rivers to limit erosion, siltation, and will maintain natural streambank cover.
- The Slate Creek Cove dock facility should limit quantities of fill, armour rock and riprap, and reduce the size of the disturbance footprint.
- There will be a spill contingency and emergency response plan for the dock facilities. In addition, the construction schedule, response equipment and best management practices (BMP's) program will limit siltation and other water quality impacts.

Considering that the exhaustive studies show that adverse impacts on the environment will be minimized, Sealaska urges the Corps to issue the 404 permit for the Lower Slate Lake TSF and Slate Creek dock, and make the finding that Coeur's proposal is the least environmentally damaging practicable alternative.

Sincerely,

SEALASKA CORPORATION



Richard P. Harris
Executive Vice President



Goldbelt

8007 Glacier Hwy, Suite 262, Juneau, Alaska 99801 (907) 790-4900 Fax (907) 790-4999

August 3, 2004

John C. Leeds, Manager
Department of the Army
U.S. Army Corps of Engineers
Juneau Field Office, Suite 106
8800 Glacier Highway
Juneau, Alaska 99801-8079

Re: Kensington Gold Project
Slate Creek Cove Dock Facility

Dear Mr. Leeds,

Introduction

My name is David Goade, Executive Vice President for Goldbelt, Incorporated. I am writing to convey my strong support for the Kensington Gold Project and to urge the Army Corps to find that the current Slate Creek Cove dock facility proposal:

- Is an environmentally responsible design.
- Is the least environmentally damaging practicable alternative.

The Kensington Mine Project is vitally important to Juneau and to Southeast Alaska. That is, 325 high-paying construction jobs, 225 high-paying mining jobs, and an additional several hundred indirect jobs. In concert with the mine developer's commitment to local hire, this adds up to a major boost to our economy. Not only will the mine broaden Juneau's economic diversification, it will provide meaningful, long-term employment opportunities for many families living in the Southeast Alaska region.

Background

Before discussing the Slate Creek Cove dock facility proposal, I will provide a brief historical perspective on Goldbelt's long-standing, deep-seated interest in the Berners Bay area and in the long-term success of the Kensington Gold Project.

- Goldbelt is an Urban corporation formed pursuant to the Alaska Native Claims Settlement Act of 1971. Its primary areas of business operations include tourism, land development, and real estate investment. It is headquartered in Juneau and has approximately 3,400 Alaska Native shareholders.
- Goldbelt owns 1,382 acres of land located at Echo Cove, which is at the northern terminus of Glacier Highway and approximately 10 miles from the Kensington Mine

John Leeds
Slate Creek Cove Dock
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area. We received ownership of this land in 1981 from the Bureau of Land Management. Echo Cove is the gateway to Berners Bay and northern Lynn Canal.

- Goldbelt completed the Echo Cove Master Plan in 1996. Among its many features the plan identified a site (Cascade Point) just outside Echo Cove, but within Berners Bay, as a place of significant economic opportunities. They are, commercial fisheries support, tourism, marine transportation (ferry terminal), and mining support services.
- On December 22, 1998, Goldbelt received a Record of Decision from the U.S. Forest Service authorizing the construction of a 2.5-mile extension of the Glacier Highway to Cascade Point. This action marked the successful conclusion of an Environmental Impact Statement process that spanned a period of two years.
- On March 9, 2000, Goldbelt received a U.S. Army Corps permit authorizing the construction of a 2.5-mile extension of the Glacier Highway to Cascade Point. This action marked the successful conclusion of a one-year long permit review process.

Discussion

Slate Creek Cove Dock Facility. The dock facility represents an evolutionary improvement above and beyond the previously approved mine employee transportation and housing plan. That is, transporting employees to the mine site via helicopter and housing them in on-site camp facilities. The construction and operation of the proposed marine dock paired with a similar facility at Cascade Point eliminates the need for daily helicopter transportation and housing workers in on-site camp facilities. A daily ferryboat operation would operate from Cascade Point to Slate Creek Cove, a one-way distance of approximately five miles. The dock operations not only reduce environmental and other noise and land use impacts, they also improve mine economics by eliminating relatively expensive helicopter use and on site housing.

The currently proposed design has reduced the size of the disturbance footprint by limiting quantities of fill, riprap and armor rock. This serves to minimize to the fullest extent practicable the dock's physical and operational environmental impacts. The adherence to a best management practices program for all dock operations, including fuel handling, will further minimize the potential for adverse environmental impacts.

Summary

Coeur has proposed an environmentally responsible design and operating plan for the Slate Creek Cove dock facility. This dock and the similarly proposed facility at Cascade Point will work together to safely and efficiently transport workers to and from the Kensington Mine Project. The docks eliminate the on-going need for the more expensive and higher impact daily helicopter flights and on-site housing facilities.

John Leeds
Slate Creek Cove Dock
404 Comments
Page 3

For the above reasons I urge the U.S. Army Corps to find that the proposed Slate Creek Cove dock facility is an environmentally responsible design and is the least environmentally damaging practicable alternative. Therefore, the 404 permit should be issued.

Thank you for the opportunity to comment on this matter and to give my whole hearted support to the vitally important Kensington Mine Project.

Sincerely,
GOLDBELT, INC.



David D. Goade
Executive Vice President
(907) 790-1430
dave.goade@goldbelt.com



University of Alaska Southeast
Juneau • Ketchikan • Sitka

Office of the Chancellor
Juneau Campus

02 August 2004

Department of the Army
U.S. Army Corps of Engineers
ATTN: John C. Leeds
Juneau Field Office, Suite 106
8800 Glacier Highway
Juneau, Alaska 99801-8079
Fax: (907) 790-4499

Dear Mr. Leeds:

On behalf of the University of Alaska Southeast, I am writing in support of Coeur Alaska.

Over the years Coeur has been one of the most environmentally responsible mining companies currently operating in the United States. UAS and Coeur Alaska have worked together in the past on research-based solutions to mine tailings disposal. We look forward to continuing to work together to develop ecologically sound mining practices that will protect the environment while allowing for the reasonable development of Alaska's natural mineral resources.

Coeur further demonstrated it's corporate commitment to ecologically sound mining practices by not only supporting the establishment of an Environmental Science degree program at UAS, but by establishing the *Coeur Environmental Leadership Scholarship* program. This \$22,000 endowed scholarship fund provides annual scholarship support to full-time UAS students majoring in the areas of Environmental Science or Marine Biology.

Based on UAS' positive interaction with Coeur Alaska over the years, I have every reason to believe that, if opened, they would be committed to using environmentally sound mining practices at the Kensington Mine. Furthermore, I believe they would be good corporate citizens and an asset to the Juneau community.

Thank you for providing the opportunity for public comment on the proposed Kensington Gold Project.

Sincerely,

Karen Schmitt
Dean School of Business & Career Education

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Alaska District Corps of Engineers

KAKE TRIBAL CORPORATION

P.O. Box 263 Kake, AK 99830 (907) 785-3221 FAX (907) 785-6407

July 30, 2004

John C. Leeds
Department of the Army
U.S. Army Corps of Engineers
Juneau Field Office, Suite 106
8800 Glacier Hwy
Juneau, AK 99801

RE: Support for Coeur Alaska's Alternative B mine proposal Corps' 404 dredge and fill permit

Dear Mr. Leeds,

I would like to take the time to inform you that Kake Tribal Corporation fully supports the development and operation of the Coeur Alaska's Alternative B proposal for the design, construction, and operation of their Kensington mine. We specifically ask you to quickly approve the 404 permit for the Cascade Point dock, Slate Creek Cove dock and the Lower slate lake tailings storage facility.

Our company is deeply concerned with any development in Southeast Alaska that could alter or negatively affect the environment we exist and live in. Therefore, we have reviewed the Coeur Alternative B proposal with a critical eye. As a result we find Alternative B unquestionably congruent with our premise that "any" development in "our" rainforest be environmentally sound and promote positive environmental stewardship. The public and the Environmental Protection Agency should congratulate the management at Coeur Alaska for accomplishing such a daunting task of extracting minerals in such an environmentally friendly manner. The lower slate lake mine tailings proposal is the least environmentally damaging practicable alternative.

Our company represents over 700 Native American shareholders who understand the environment. After all, it is "our" Native American environmental principles that environmental organizations attempt to emulate. Our shareholders represent a people who have inhabited Southeast Alaska for over 10,000 years. We do not lightly recommend or support any development without thoroughly investigating the environmental impact that the development will create. As a people who have been environmental stewards as our first calling to our subsistence and existence, we recommend the Kensington Alternative B as the economically and environmentally sound proposal.

The Kensington Alternative B proposal dramatically reduces the tailings of the Kensington mine over Alternative A. The mine tailing are natural and inert containing no chemicals or additives that will affect the water quality. Coeur's proposal to use the 20 acre non-productive, non fish bearing Slate lake and at its closure will create a 56 Acre highly productive fisheries and wildlife habitat is a welcome and substantial benefit to

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the Lynn Canal region. As Juneau expands, more and more wetlands are decreased. This new 56 acre lake is on a major flyway and will be heavily used by migratory waterfowl.

The Goldbelt design for the Cascade point dock utilizes special provisions for fish passage through the breakwater, and enhancement of current and tidal flushing in the intertidal zone.

The Slate Creek Cove dock is in rocky area and will not disturb the Dungeness or the seasonal herring and hooligan habitat since these species are not prolific in the specific dock area.

Coeur has also created buffer zones in an around all active streams and rivers to limit erosion and siltation to maintain natural stream bank cover.

Compared to the other alternative, this proposal is simple, innovative and clean on the environment and water quality.

This alternative has less energy needs and there will be less fuel stored on the property.

The Slate Lake tailings storage facility diverts water from the upper slate lake around lower slate creek to minimize operational impacts to the downstream aquatic environment. Coeur's plans also includes a contingency plan which provides additional safeguards as a back up plan, in the event of a dam overflow, a massive water runoff due to rain storms and any other unforeseen event. We feel Coeur has intelligently dealt with this critical environmental quality issues with insight and dedication to mitigating any known and unknown hazard.

Our corporation is depending on the jobs this mine will create. However, that does not mean we will ignore environmental concerns. We have analyzed the mine tailings issue in detail and feel that Coeur Alaska has presented the best tailings alternative by depositing inert tailings into lower Slate Lake.

We look forward to working with Coeur Alaska in the future where we will work with Coeur to ensure that they meet and exceed environmental concerns. The increase in wetlands, and the gradually sloping bottom of the tailings storage facility after closure will provide productive fish and wildlife habitat after closure.

We urge you to issue the Army Corp 404 permit for the authorization to construct the Lower State tailings facility, the dock at Slate Creek Cove and Cascade point dock in a quick and timely manner.

Sincerely,



Duff W. Mitchell
Chief Operating Officer



July 26, 2004

ATTN: John C. Leeds
 Department of the Army
 U.S. Army Corps of Engineers
 Junction Field Office, Suite 105
 8800 Glacier Highway
 Juneau, Alaska 99801-8079

Re: 907-766-4499
 E-Mail: john.c.leeds@poack2.usace.army.mil

Subject: Corps 404 Permit for Lower Slate Lake Tailings Storage Facility and State
 Crook Cove Dock - Kensington Mine Project

Dear Mr. Leeds:

My name is Thomas L. Crowder and I am the President of Klukwan, Inc. I moved to Alaska in 1969 and accept for school and a three year job assignment, I have lived in the state since then. I have no plans to leave Alaska.

Please issue the Kensington permits for the following reasons:

1. The tailings storage facility (TSF) is a temporary use situation, i.e., for the operating life of mine. At closure, the lake will be restored. It will be more productive, have improved access and use, and provide enhanced fisheries and wildlife habitat. It will meet all water quality standards. It will also be rigorously monitored and reported on a daily, weekly and monthly basis. Temporarily "borrowing" the 20-acre lake is the best environmental alternative.
2. Coeur's proposal for Lower Slate Lake is very site-specific. The environmental design is tailored to local natural conditions. In order to use the lake, Coeur must meet very stringent environmental criteria. These are described in detail in the EPA Water Discharge (NPDES), Corps Dredge and Fill, and all the various state

Klukwan, Inc.

425 Sawmill Road / PO Box 208 • Haines, AK 99827
 907-766-2211 Phone • 907-766-2070 Fax

permits. Coeur has demonstrated themselves as a responsible operator, they can and will meet all related permit conditions.

3. The increased use of Berners Bay for worker transport will be on a regularly scheduled basis, using an agreed upon routing. There will be 3-5 round trips by passenger boat daily across the bay, Monday through Friday, which would involve a total of about two hours on the water. Saturday and Sunday trips will be reduced to 2-3 in number. Docks will use low level lighting controlled by time clocks and photo cells. There will be no lighting of the main access road. Boats will avoid encounters where they are unavoidable. Coeur has worked with National Marine Fisheries Service, U.S. Fish & Wildlife Service and Alaska Department of Fish & Game to design a comprehensive monitoring plan for determining baseline environmental conditions in Berners Bay in terms of water quality, fisheries, marine mammals, background hydrocarbon levels as a yardstick for measuring environmental compliance by the operation. This clearly demonstrates their responsibility to protecting Berners Bay.
4. This limited boat use provides new jobs (about 200 during operation) and economic benefits (related to the \$16 million annual payroll) and at the same time essentially maintains Berners Bay as a roadless area.
5. Coeur does not intend to "industrialize" Berners Bay, sharing the Bay is a responsible manner for the ~~benefit~~ of all the community is acceptable.

Please issue all the permits as soon as possible.

Thank you,



Thomas L. Cromhall
President

Klukwan, Inc.

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HCR

13

ALASKA STATE LEGISLATURE HOUSE RESOURCES COMMITTEE

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FAX

Please deliver the following pages to: Jack Chenoweth

Fm: Staff, Resources Committee

Fax #: 2029

Total number of pages including cover: 1

Date: 5/2/05 5:13 PM

Re: HCR 13 24-LS0943\Y

Please amend the above referenced resolution and final as a Resources CS

Page 1, Line 6 Delete "100" Insert "35"

Page 1, Line 8 Delete "to 15"

Page 1, Line 9 Delete "reserves" Insert "resources"

Page 2 line 8 & 9

Following: "Andex Resources," insert so it reads "LLC, Usihelli Energy, LLC, Arctic Slope Regional Corp, and ENSTAR Natural gas Company who have worked together, and ENSTAR has secured partial....

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Thank you

Representative Jay Ramras
Co-Chair, House Resources
V-Chair, Economic Develop.
Tourism & Trade
House State Affairs
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Alaska State Legislature



While in Session
State Capitol, Room 104
Juneau, Alaska 99801-1182
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House District 10

House of Representatives

Sponsor Statement

HCR 13

“Expressing the legislature’s support for the construction of a natural gas spur pipeline between Fairbanks and the Nenana Basin and Southcentral Alaska, commending the interest and initiative of the sponsors of that project, and encouraging the appropriate state resource agencies to lend support to those efforts.”

HCR 13 acknowledges that the majority of the state’s efforts for a gas pipeline are being directed at the 100 trillion cubic feet of natural gas stranded on the North Slope. There is, however other areas of stranded gas in the state that offers an excellent opportunity for lower cost fuel along the railbelt.

From the Nenana basin there is potentially 10 trillion cubic feet of natural gas. Several companies are exploring that area today and could be ready to bring gas on-line by 2008, if there is a line to bring it too.

Creating of a spur line between Fairbanks and Southcentral offers an opportunity for Alaskans to enjoy the benefits of natural gas without the volatile price fluctuations created by demand in the Lower 48.

A spur gas line will serve a large portion of the population of the state. The potential for conversion from diesel to propane in rural areas of the interior and the potential of lower cost fuel against growing demand is a consideration that we should ask the administration to seriously consider.

FISCAL NOTE

STATE OF ALASKA
2005 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HCR 13
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Legislature
 Title "Expressing the legislature's support for BRU Legislative Council
the construction of a natural gas spur pipeline between..." Component: Council and Subcommittees
 Sponsor House Resources
 Requestor House Resources Component No. 783

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0
Contractual	0.0	0.0	0.0	0.0	0.0	0.0
Supplies	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	0.0	0.0	0.0	0.0	0.0	0.0
CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2004) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2005 budget proposal:

POSITIONS

Full-time					
Part-time					
Temporary					

ANALYSIS: (Attach a separate page if necessary)

This legislation has zero fiscal impact on the Legislative Affairs Agency.

Prepared by: Karia Schofield, Deputy Director Phone 465-6626
 Division Administrative Services Date/Time 5/2/05 8:56 AM
 Approved by: Pamela Varni, Executive Director Date 5/2/2005
 Agency Legislative Affairs Agency

HOUSE COMMITTEE REPORT

(9)

Date Referred to Committee: April 28, 2005

FURTHER REFERRALS:

Date of Committee Action: 5/2/05

The RESOURCES Committee considered:

HCR 13

HOUSE CONCURRENT RESOLUTION NO. 13

NATURAL GAS SPUR LINE CONSTRUCTION

Expressing the legislature's support for the construction of a natural gas spur pipeline between Fairbanks and the Nenana Basin and Southcentral Alaska, commending the interest and initiative of the sponsors of that project, and encouraging the appropriate state resource agencies to lend support to those efforts.

Recommends it be replaced with [] HCS or [] CS for HCR 13 (RES)
 For Senate Bills with new title: [] Technical Title [] New Title: HCR _____ [] Same Title [] New Title

- [] attach amendments
- [] add new referral to _____ Committee
- [] Letter of Intent _____ Committee

List of Abbrev for Depts.:
 ADM
 CED
 COR
 CRT
 EED
 DEC
 DFG
 GOV
 HSS
 LEG
 LAW
 LWF
 MVA
 DNR
 DPS
 REV
 DOT
 UA

NEW FISCAL NOTES				
*Assigned by Chief Clerk's Office				
List by Dept(s):	*FN#	Fiscal	Indet.	Zero
LEG				<input checked="" type="checkbox"/>

PREVIOUS FISCAL NOTES				
List by Dept(s):	FN#	Fiscal	Indet.	Zero

Signing with recommendations		Printed Last Name	DP	DNP	NR	AM
		OLSON			<input checked="" type="checkbox"/>	
		Gatto			<input checked="" type="checkbox"/>	
		ELKINS	<input checked="" type="checkbox"/>			
		McDOUT			<input checked="" type="checkbox"/>	
		CRAWFORD	<input checked="" type="checkbox"/>			
Chair:		SAMUEL			<input checked="" type="checkbox"/>	
Chair:		RAMRAS	<input checked="" type="checkbox"/>			



North America's Source for Oil and Gas News
March 2005

Vol. 10, No. 10

Week of March 06, 2005

Nenana wildcat gets green light

First gas to Fairbanks, but Andex sees Anchorage, North America as potential markets for Interior Alaska gas

Steve Sutherlin

Petroleum News Associate Editor

Proximity to market is gold in the natural gas business. The proximity of Fairbanks and other Interior Alaska communities has encouraged Andex Resources to issue a green light for drilling in its Nenana basin gas project in early 2006. The company wants to be selling natural gas in Fairbanks by 2008.

Just 35 miles away from the Nenana project, the Fairbanks gas market has been underserved for years. Costly fuel oil and coal-fired electricity bills drain the pockets of Fairbanks consumers every winter. A Nenana gas find would be especially sweet because plentiful natural gas in the winter-kissed Interior would likely be a very popular product.

As sweet as the local market may be, Andex believes it has more than just a localized gas field. Gas from a find at Nenana could end up in Anchorage, or at the Chicago hub of a future pipeline from Alaska's North Slope, according to Bob Mason, Andex vice president of exploration for the northern region.

"The Nenana basin is a very uniquely situated exploration opportunity," Mason said.

"The lynchpin that made Andex decide to go forward on this project was the presence of transportation infrastructure that comes up right along the east side of this basin."

NENANA BASIN STORY

Currently, Fairbanks natural gas customers are served by a system that uses LNG trucked from Cook Inlet.

"This is a very, very large reserve potential project, it's a gas-prone basin," Mason said. "It will have a lot of gas and could possibly have associated liquids; it's very strategically located in the state; it could serve not only the energy needs of the Alaska Interior where the project is located, but could also become a very important new source of gas reserves for the greater Anchorage area."

Based on its analysis to date, the company is hopeful that its Nenana project will be large enough to serve the Alaska market, with gas left over for consumers in the Midwestern United States.

"If it's of sufficient reserve size, we could also be selling gas to the pipeline coming down from the North Slope," Mason said. "As a matter of fact, the reserve size potential we've got here could possibly impact and help in the decision to build that pipeline."

Considering thermogenic hydrocarbons alone, the company's analysis of the data indicated the most likely recoverable gas reserves are 3 trillion cubic feet, but the company believes the actual reserves could be as high as 10 tcf, Mason said.

"That number was based on some very, very conservative inputs," he said. Biogenic gas is a wild card — not included in the projections, but the biogenic component could be a significant add-on to thermogenic reserves.

"We know that there's biogenic gas in this basin," Mason said.

Mason said he wants to drill the initial wells to depths of at least 10,000 feet, and if seismic indicates, to 12,000 feet, regardless of what is discovered on the way down. Eventually the company may drill shallower wells, but it wants to go deep enough initially to understand sediment depths in the basin, measuring 20,000 feet or more.

"I want to take a look at structures that preserve a very thick layer for my initial well," he said. "We are evaluating structures deeper in the basin where we don't have to worry about flushing, we don't have to worry about section missing — that sort of thing."

Fast track

The company has four years remaining on the primary term of its initial exploration license, with an option to convert the license to leases with an additional seven-year term. It has a \$2.5 million work commitment associated with the license.

Andex isn't sitting still; it is spending the money on additional seismic data.

"PGS Onshore is in the field acquiring proprietary 2D seismic, infilling the ARCO and Shell seismic grid, and pursuing a number of structural leads identified on the grids," Mason said, adding that data is anticipated to be in hand before the end of March.

Andex and its partners, Usibelli Energy, an affiliate of Usibelli Coal Mine of Healy, Alaska, Fairbanks-based Doyon Ltd. and Barrow-based Arctic Slope Regional Corp. are pushing a tight timeline to drill for gas in the Nenana basin.

"Our intention is to have that data processed and interpreted such that we'll be able to define drill sites so that we can be drilling our first wildcats next drilling season, in early 2006," Mason said. "With success, we could be moving into the development phase based on our initial wells, as early as late 2006, or 2007, and depending on the results we see from this drilling, we could be in the process of negotiating, and then finally building a pipeline into Fairbanks, such that we could have first gas sales in 2008.

"It's a very, very high-risk exploration project but it contains a very high quality, unique dataset that defines the opportunity," Mason said, referring to two early wells drilled in the basin, and existing seismic the company has studied.

"Andex purchased the ARCO and Shell seismic; we reprocessed it, and incorporated that seismic into the subsurface data and actually into the outcrop data," Mason said. "If this kind of data set had existed anywhere in the Lower 48 states, the critical wells to evaluate this basin would have been drilled years ago."

The data clearly says the basin needs more wells, Mason said. In 2008, with a line in place to Fairbanks, and if reserves prove large enough, the next logical step is a line to Anchorage, Mason said. Once Andex has a spur line already built to Anchorage from Fairbanks, it would be easy to join Anchorage with the North Slope natural gas pipeline — but it may not be necessary.

"The knee jerk reaction is that you're going to get this huge quantity of gas coming down from the North Slope and they'll be able to flood the Fairbanks market with cheap gas," Mason said. "If that's the case then this is the only commodity I've ever seen that somebody has the opportunity to sell for five bucks in Chicago, but they'll be happy to drop it off in Fairbanks for two."

With a pipeline to amortize, North Slope gas won't be cheap, and once it's in the line the sellers would just as rather sell it in Chicago, Mason said, adding that North Slope gas is liquids-rich, and it would need to be processed to burner tip quality for businesses and homes in Fairbanks. Fairbanks doesn't need gas liquids, so the liquids would have to be handled and re-shipped — very inefficient.

Conversely, Alberta needs gas liquids to feed its underused liquids processing capacity, so it is eager to get the North Slope gas. The North Slope reserves are, he said, some of the few that are large enough to supply the infrastructure that

already exists in Canada.

Nenana vs. Cook Inlet

Nenana basin and Cook Inlet are like fraternal twins. Both basins were formed in a similar fashion — there are similarities, but there are some vital differences. Andex has reason to be optimistic, based on known geological similarities to Cook Inlet, Mason said. Because of a few key differences, however, Nenana may in fact be better than Cook Inlet.

The Nenana basin is part of a series of Interior basins that have been developed as a result of extension, associated with movement along right-lateral faults that are present in the state, Mason said.

“This is one of the richest most widespread source rock packages I’ve ever worked with in 30-some odd years of exploration, predominately down in the Rockies,” he said. People who are familiar with Cook Inlet know that the best reservoirs are at the top of the section, and that reservoir quality and thickness deteriorates as you go down, Mason said.

“That is not the case with the Usibelli group,” he said. “You have very thick widespread reservoirs all through the section and the reason is that you’re much closer to a regional tertiary source for a higher percentage of proximal reservoir quality rock.”

In the Cook Inlet oil and gas fields, cumulative production has been just over 5 trillion cubic feet of gas and about 1.2 billion barrels of oil, leaving remaining reserves on the order of between 3 tcf and 3.5 tcf of gas, Mason said. All Cook Inlet oil and gas comes from tertiary, non-marine sediments that range in age from Eocene to Pliocene, he said.

“In the Kenai group you’ve got thermogenic hydrocarbons — oil and thermogenic gas — from the lower part of the section and predominately biogenic gas from the upper part of the section — in particular, the Sterling formation, which contains most of the economic reservoirs in the basin,” Mason said. “Cook Inlet is an asymmetric basin — very steep east side, tertiary depocenter just to the north of the village of Kenai. The tertiary is in excess of 20,000 feet thick and it’s got a very gentle west side.”

At Nenana, he said, the depocenter is also hugging the steep east side, while the west side has a gentle slope.

Regional structural noses and closures — both simple anticlinal four-ways, faults and anticlines form all of the major oil and gas accumulation in the Cook Inlet, Mason said. Like Cook Inlet, the Nenana basin is infilled with a very thick, non-marine coal-bearing tertiary section, Mason said. The Usibelli group, like the Kenai group ranges in age from Eocene to Pliocene.

"When you take a look at the outcrops, the Usibelli group not only contains potential reservoirs that are very thick and very widely distributed, it also has interformational seals, (like Cook Inlet.)" Mason said.

In addition to the interformational seals, there are regional seals at Nenana — a promising difference between Nenana and Cook Inlet, Mason said. It seems Nenana has all of the prospectivity of Cook Inlet, buttressed nicely by chances for bigger, deeper, higher quality reservoirs.

"You've got both an intercrop regional seal, and a regional seal that sits on top of all of the coal-bearing sediment in the Nenana basin," Mason said. "That's something you don't have in the Cook Inlet."

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R I B E**

South Central Alaska Spur Pipeline - Scope of Work

2/18/05

Phase 1 & Phase 2

Timer Period June 1, 2005 – September 30, 2006 15 months total
Budget \$3.0 Million Dollars

Introduction

The objective of the South Central Alaska Spur Line Project is to select the best route for the installation of a natural gas pipeline between the Interior to South Central Alaska. Cook Inlet Tribal Council (CITC) and NORSTAR Pipeline Company, a sister company of Enstar Natural Gas, have entered into a Memorandum of Understanding ("MOU") to study the feasibility of constructing a natural gas pipeline that would connect North Slope gas and other gas discoveries to the existing Cook Inlet gas pipeline infrastructure.

Phase 1 will consider the two primary possible routes, Fairbanks to Wasilla and Delta Junction to Palmer. The work activity will include preliminary permitting, engineering, project estimating, right of way, public outreach, and social/economic impact of the project on adjacent communities. This study is in conjunction with the South-Central Alaska Natural Gas Study prepared in June 2004 for the US Department of Energy. That report documented the declining proven reserves in Cook Inlet and the need of either additional gas discoveries or the construction of a spur line to move North Slope natural gas to South Central. The outcome of Phase 1 will determine the best route to transport Natural Gas from the Interior to South Central

Phase 2 will expand upon Phase 1 activities focusing upon the specific engineering, economic, environmental, and right-of-way issues of the selected route. Phase 2 activities will commence the process of securing the necessary Federal, State, and local government permits necessary for the construction of the natural gas line. Phase 2 activities will clarify remaining gaps, particularly permitting, and environmental issues, that will need to be resolved to ensure construction approval by respective government agencies.

When Constructed the South Central Alaska spur line will bring to market gas reserves from the North Slope, and in addition potential finds in the Nenanna or the Copper River Basins. Depending upon the route, additional exploration and production activities will become economically attractive in the railbelt areas.

Time & Cost Considerations

This study is necessary due to the rapidly declining proven gas reserves of the Cook Inlet region. Proven reserves in Cook Inlet are forecasted to meet demand until 2012, the Agrium fertilizer plant is expected to shut down in 2005 due to lack of adequate affordable gas supplies and LNG export is expected to end when the export license expires in 2009.¹ This study will enable for the timely construction of a well-researched

¹ South Central Alaska Natural Gas Study, June 2004, pg 3

South Central Alaska Spur Pipeline - Scope of Work

1/18/05

route prior to the projected Cook Inlet gas shortage. The costs of not performing this study include higher energy prices for South Central Alaska, loss of existing value added industry, the inability to attract new industry to South Central, and higher engineering and construction costs due to an expedited schedule.

Regulatory Framework

Natural gas transmission pipelines constructed in the United States are regulated by the US Department of Transportation, Research and Special Programs Administrations' Office of Pipeline Safety ("OPS"). OPS ensures that pipelines are built and operated in a safe manner through the enforcement of comprehensive regulations: regulations CFR Parts 190, 191, 192, and 199. The South Central Alaska Spur Line will be designed, engineered, constructed, maintained and operated in strict compliance with the OPS regulations and utilizing Best Available Technology.

Additional permitting will be required by various State and Federal agencies depending upon the route selected. These include Corps of Engineers, US Fish & Wildlife, Department of Natural Resources, Department Fish & Game, Department of Transportation, & State Pipeline Coordinator's Office and other agencies.

Project Timetable

The project period for Phase 1 & Phase 2 activities will be a 15 month time frame beginning in June 2005 and ending in September 2006.

Project Objectives

Pipeline Route

The study will consider two routes for the South Central Spurline. The first route, the Parks Highway Spurline, extends directly from Fairbanks along the Parks Highway terminating in Wasilla, a distance of approximately 325 miles. The second route, The Glenn Highway Spurline, begins in Delta Junction and proceeds to Glennallen ending near Palmer, a distance of approximately 290 miles. Each route has various alternatives that need to be identified during the analysis, including using existing utility right-of-ways. Specific factors in selecting one route over the other will include careful consideration of the environmental permitting issues, ease of construction, long-term right-of-way rental rates, construction costs, access to future gas development, and cumulating into which route will have the greater benefit to Alaskan communities.

The Parks Highway Spurline has three existing transportation corridors; the Alaska Railroad, the Electric Power Intertie, and the Parks Highway. Particular attention will be focused upon construction within Denali State Park & Mount McKinley National Park, as well as the challenges presented in crossing the Alaska Range and numerous river and canyon crossings.

South Central Alaska Spur Pipeline - Scope of Work

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The Parks Highway Spurline traverses a 325-mile wilderness expanse with three previously disturbed transportation corridors, namely, the Alaska Railroad, the Electric Power Intertie, and the Parks Highway. Each corridor will be carefully considered in developing the most cost effective and environmentally desirable route. It is anticipated that to best satisfy environmental, engineering and project costing constraints, all three corridors will likely be utilized for portions of the pipeline. When selecting rights-of-way for the Parks Highway route, special attention will be devoted to construction within Mount McKinley National Park and the Denali State Park, hard rock installation in the Alaska Range, numerous river and canyon crossings, and protection of wetland areas. In every instance, the availability and cost of temporary construction permits, long-term right-of-way rental or acquisition costs and environmental impact will be carefully factored into route selection. Finally, thought will be given to locating the Parks Highway route within reasonable proximity to existing and future gas exploration and production fields with the aim to make additional gas reserves available for use by future generations of Alaskans.

The Glenn Highway Spurline will, for the most part, utilize the transportation corridors that have been created by the Richardson and Glenn Highways. However, geophysical, environmental and other considerations may make departure from these Highways desirable. For example, a cross-country course in the vicinity of Lake Louise would shorten the length of the Delta Junction Spur by nearly 15 miles. Bypassed communities such as Glennallen could be served with smaller diameter, less expensive distribution pipe. Departure from the Glenn Highway may also be called for at the head of the Matanuska River Valley to avoid expensive construction through hard rock formations.

The study will provide a construction cost estimate for each route, and conclude with a recommendation for the preferred route.

Demand Projections/Pipeline Sizing.

Current and future demand for natural gas in South Central Alaska is the primary consideration for determining the size of the South Central Spur Pipeline. The CITC/NORSTAR Study will start with current gas consumption data in South Central Alaska and consider reasonable growth assumptions. NORSTAR will meet with existing industry leaders, including electric power generators, the Marathon/ConocoPhillips liquefied natural gas facility and the Agrium ammonia/urea plant to better estimate continuing demand by these important natural gas consumers. An economist will be commissioned to report on the likelihood of additional industry being attracted to South Central Alaska by the promise of an abundant and stable priced natural gas supply.

Pipeline sizing will also require a decision whether the use of gas storage facilities would be cost effective. Because of Alaska's severe climate, gas usage varies significantly between winter and summer. One scenario is to build the South Central Spur Pipeline with a larger diameter and vary its flow as demand increases or decreases. Larger pipe would cost more. The price of gas might also increase if a peaking component is added.

South Central Alaska Spur Pipeline - Scope of Work

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The other alternative is to design and build a smaller diameter pipeline that would have a constant gas flow throughout the year. Winter peaking requirements would be met by converting depleted Cook Inlet gas fields into gas storage facilities. The lower construction cost of smaller diameter pipe would be offset by the cost to create the needed storage facilities and charge them with natural gas. NORSTAR will employ an expert in the field of gas storage to assess the viability and cost of using gas storage in conjunction with the South Central Spur Pipeline.

With numbers for projected demand and a determination whether gas storage facilities make economic sense, the NORSTAR Study will discuss options for the diameter of the South Central Spur Pipeline.

Permitting

A key consideration for the construction of the South Central Alaska Spur Pipeline is whether an environmental assessment ("EA") or a more involved environmental impact statement ("EIS") will be required for the project. An EA is relatively inexpensive and can be completed in as few as 12 months. An EA is appropriate for projects that have minimal environmental impact and do not traverse extensive areas of federal property. An EIS, on the other hand, requires an in-depth study of environmental and social impact of a project. Preparation of an EIS can take as long as 24 months and cost significantly more than an EA. The CITC/NORSTAR Study will carefully examine this issue. If possible, the study will develop a route for both the Parks Highway and Glenn Highway that take advantage of the less stringent requirements associated with an EA.

The CITC/NORSTAR Study will also become deeply involved in preliminary permitting for the project. Each permitting agency, including the US Army Corps of Engineers, the Alaska Department of Natural Resources, Alaska Department of Transportation and Public Facilities, Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, and the US Environmental Protection Agency will be identified and consulted. With those agencies input and advice, permitting problems will be minimized, and the most favorable route for each Pipeline Spur can be chosen. Particular areas of concern to the various agencies include wetland delineations, impact to wild life particularly endangered species, fish habitat, and archeological sites.

Pipeline Compression.

The CITC/NORSTAR Study will recommend an optimum level of pipeline compression. Gas quantity throughput can be dramatically increased with compressors, enabling the use of smaller diameter pipe. Offsetting that savings is the cost of compressor facilities and the expense associated with required environmental permits.

South Central Alaska Spur Pipeline - Scope of Work

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Conceptual Pipeline Design and Engineering.

Completion of the CITC/NORSTAR Study will require preliminary design and engineering of both the Fairbanks and Delta Junction Spurs. Pipeline sizing must be correlated with such factors as compression, delivery pressure, flow rates and potential storage utilization. In addition, NORSTAR's engineers will identify geophysical obstacles such as rivers, canyons, earthquake faults, and wet lands along each Spur route, and develop solutions to these specific challenges. All such work will be completed in strict compliance with applicable national codes and standards, including the regulations of the US Department of Transportation, Office of Pipeline Safety, found in 49 CFR Parts 191 and 192.

Construction Cost Estimates

As discussed above, the CITC/NORSTAR Study will recommend a specific pipeline size, establish a route for both the Parks Highway Spurline and Glenn Highway Spurline and perform preliminary engineering and design work for both potential pipeline routes. With this information, NORSTAR, will be able to accurately estimate the cost to construct both Spur Pipelines. The construction cost numbers will be pivotal in selecting a preferred route for the South Central Spur Pipeline. Construction cost will also be an important factor in the final price for delivered North Slope gas to Alaska's Railbelt.

Operating Costs

The cost to operate and maintain the South Central Spur Pipeline will be an important component of the delivered price of natural gas in South Central Alaska. ENSTAR owns, operates and maintains over 400 miles of natural gas transmission and 2,500 miles of distribution pipelines in South Central Alaska. NORSTAR has a long-term contract to operate and maintain the Kenai - Kachemak Pipeline that was constructed in 2003 & 2004 on the Kenai Peninsula. That combined experience will facilitate an accurate prediction of operation and maintenance ("O&M") costs for the South Central Alaska Spur Pipeline. In developing projected O&M costs not only will the NORSTAR Study calculate traditional O&M costs (e.g., cathodic protection, U.S. Department of Transportation regulation compliance, aerial and leak surveys, and the like), but will also include a detailed study of Borough property taxes, gas compression expenses and right-of-way rental charges.

Gas Pricing for South Central Alaska

We anticipate that Regulatory Commission of Alaska ("RCA") will regulate the South Central Spur Pipeline as common carrier gas transportation pipeline under AS 42.06 *et seq.* The RCA must issue a certificate of public convenience and necessity for the Pipeline, and determine that the owner is "willing, fit and able" to provide service. In addition, the RCA will approve the terms and conditions of service, as well as rates and rate structure. The RCA uses traditional ratemaking methodology to develop rates that

South Central Alaska Spur Pipeline - Scope of Work

2/18/05

allow for recovery of operating and maintenance costs, financing and insurance expense, and a rate of return to compensate the owner for its investment. Again, because of their combined experience with Alaskan regulatory agencies, ENSTAR and NORSTAR are uniquely qualified to forecast the expected tariff rate and terms of service for the pipeline in question.

The estimated tariff rate for gas transportation through the South Central Spur Pipeline will be added to the expected price of North Slope gas, which will include an estimate of the transportation cost from the North Slope to the South Central Spur Pipeline. Additional pipeline tariff charges for gas transportation through ENSTAR's transmission and distribution system will likewise be factored in. The combined total of these expenses will determine the delivered cost of North Slope gas in South Central Alaska. This number will allow comparison to current prices for natural gas in this region of the state and make possible a meaningful cost/benefit analysis of the South Central Spur Pipeline project.

Pipeline Ownership

The CITC/NORSTAR Study will contain a discussion that addresses potential ownership of the South Central Spur Pipeline. It is anticipated that a single owner of the facility is unlikely because of market uncertainties and the very significant capital investment that will be required. A more likely ownership scenario is for a consortium of interested parties to finance, construct and own the Pipeline. Possible stakeholders include large industrial energy consumers on the Kenai Peninsula and elsewhere in South Central Alaska, the power generation industry, ENSTAR Natural Gas Company, and possibly owners of gas discoveries along the selected route. With the potential for a long-term, low cost gas supply to Cook Inlet region of Alaska, additional stakeholders may come forward.

Public Education

The CITC/NORSTAR Study will commence identifying key stakeholders along the route to identify public issues and concerns associated with the construction and long term operations of a natural gas pipeline. Identifying such issues early in the process is crucial to the engineering and permitting process. Once a route is designated additional public education will be necessary to successfully permit the pipeline. CITC and NORSTAR have the experience necessary to hold public meetings in the various communities along the route and will work with those communities to identify concerns unique to each area.

South Central Alaska Spur Pipeline - Scope of Work

2/13/05

Socio/Economic Impact Analysis

The CITC/NORSTAR Study will conduct an analysis of the economic benefits that the project and operations of a line will have upon both South Central Alaska and the communities along the route. Particular attention will be paid to the benefits of the project to Alaska Native populations along the route. Primarily Alaska Natives along the two routes belong to the Alaska Native Corporations of CIRI, AHTNA, or DOYON. CITC has particular expertise in working with Alaska Natives through job training programs and other activities that will benefit from this project.

Conceptual Study Team

CITC will manage the overall funding by the Department of Energy for the South Central Alaska Spur Pipeline. CITC will focus upon the Public Education and Socio/Economic issues of the project. NORSTAR will lead the engineering, right-of way, permitting activities of the study. NORSTAR spearheaded the permitting and engineering, and served as the construction manager of the Kenai - Kachemak Pipeline. Currently NORSTAR is leading the right of way activity on the ANGDA spur line project for the State of Alaska.

Augmenting CITC & NORSTAR's experts will be a number of specialists who will address such questions as market demand, gas storage analysis, tariff structure determination, environmental permitting, and pipeline design and engineering.

Grant Administration

The grant funding the CITC/NORSTAR South Central Alaska Spur Pipeline study will be administered by CITC. Cook Inlet Tribal Council provides social, educational and employment services to Alaska Natives and Native Americans living in the Cook Inlet region. Established in 1983 a Native nonprofit tribal organization, CITC administers over 30 programs designed to provide culturally appropriate services for Native peoples to achieve self-determination through individual, family and community development.

Steering Committee

Oversight of the CITC/NORSTAR study will occur through the implantation of Steering Committee composed of industry, Alaska Native and public sector leaders. The Steering Committee will meet regularly to ensure the CITC/NORSTAR study is meeting its stated objectives. A list of proposed members will be developed prior to commencement of the effort.

Natural Gas Spur Line

Load Analysis

Parks Highway Route

September 30, 2004
ENSTAR Natural Gas Company

LOAD ANALYSIS

**Natural Gas Spur Line
Load Analysis – Parks Highway Route**

Executive Summary

In the Department of Energy South-central Alaska demand study, the authors introduced a natural gas spur line from Fairbanks to Anchorage via the Parks Highway as an alternative solution to the supply problem facing South-central Alaska's major users. Broadly, a route selection for a natural gas line to South-central Alaska from the Alaska Natural Gas Pipeline (Alaska Highway Route) could originate from either of two main points:

- Fairbanks or
- Delta Junction.

The analysis in this paper looks at a spur line routed from Fairbanks to the south-central region via the Parks Highway. Initial review of the total convertible load (in Mcfs) along the Parks Highway indicates a maximum possible consumption of 27.2 Bcf. The breakdown of that load by customer class and location is listed in the following table¹:

Total Market Available

Count	Population	Residential	Small Commercial	Large Commercial	Industrial/ Power	Total
Fairbanks NSB	45,418	18,605	2,100	300	5	21,610
Yukon Koy	402	171	15	2	-	188
Denali	1,364	610	24	11	2	647
Mat-Su	3,816	1,422	16	-	-	1,438
Total	51,000	20,808	2,155	313	7	23,283

Mcf/Unit		235	571	6250		
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Lead (Mcf)	Population	Residential	Small Commercial	Large Commercial	Industrial/ Power	Total
Fairbanks NSB	-	4,180,885	1,199,100	1,375,000	12,727,008	19,981,993
Yukon Koy	-	40,185	8,565	12,500	-	61,250
Denali	-	167,085	15,417	68,750	6,596,157	6,847,409
Mat-Su	-	366,894	14,280	2,076	-	383,250
Total	-	4,755,049	1,237,362	1,958,326	19,323,165	27,273,902

Notes:

- These tables indicate the total potential conversion customers by location and class (customer count and approximate Mcf load). However, ENSTAR's Business Development Department anticipates that the rate of customer conversions to natural gas in communities along this route to be similar to those of the Matanuska-Susitna Valley and Soldotna/Kenai areas.
- Consumer sensitivity to natural gas pricing will impact the conversion rate to natural gas. Price sensitivity and its effect on upon conversion is not a part of this analysis. The cost of gas is unknown at this point since the Alaska Natural Gas Pipeline is more than 10 year away.

¹ Data above was extracted from a variety of sources including: US Census Bureau, prior ENSTAR Marketing surveys of FNSB commercial marketplace, power consumption data collected from Military Energy RFPs, and the Alaska Natural Gas In-State Demand Study (2001).

**Natural Gas Spur Line
Load Analysis – Parks Highway Route**

Role of Power

The largest potential target market for natural gas consumption is electric and “cogeneration” power plants. The following table represents what ENSTAR Business Development believes is the total available load at 100% conversion.

Load (Mcf)	Count	Energy Source	Consumption	Unit Consumption	Btus/Unit	Unit Measure	Lbs/Ton	Btus	Mcf
Elelson AFB	1	Coal	183,000	Tons	6,900	lbs	2,240	2,828,448,000,000	2,828,448
North Pole	1	Diesel/Oil	28,000,000	Gallons	141,000	Gallon		3,948,000,000,000	3,948,000
Ft Wainwright	1	Coal	195,000	Tons	6,900	lbs	2,240	3,013,920,000,000	3,013,920
Fairbanks	1	Coal	130,000	Tons	6,900	lbs	2,240	2,009,280,000,000	2,009,280
College/UAF	1	Coal/Oil	60,000	Tons	6,900	lbs	2,240	927,360,000,000	927,360
Clear AFS	1	Coal	61,770	Tons	6,900	lbs	2,240	954,717,120,000	954,717
Healy, GVEA	1	Coal	170,000	Tons	6,900	lbs	2,240	2,627,520,000,000	2,627,520
Healy, Clean Coal	1	Coal	195,000	Tons	6,900	lbs	2,240	3,013,920,000,000	3,013,920
Total								19,323,165,120,000	19,323,165

We believe that the greatest load potential along the Parks Highway route will come from the partial or full conversion of existing power plants (listed above at estimated total Mcf load). The Alaska Natural Gas In-State Demand Study of 2001 for the Department of Natural Resources (Division of Oil and Gas) did not include the Clear AFS and the Healy Clean Coal power plants.

We further postulate that if full adoption of natural gas takes place at the military and civilian (Golden Valley Electric Association (GVEA) and University of Alaska Fairbanks (UAF)) power plants it would be difficult for Usibelli to maintain a viable domestic market for their coal. However, the Alaska Natural Gas In-State Demand Study³ indicates that power plant managers would look only at partial use of natural gas for plant operations (possibly to improve btu efficiency of plants). Emissions at these power plants are high in particulates even though CO2 and NO emissions meet regulatory approval.

² Combined Data from a) David E. Dismukes, Ph.D., Report Prepared by the Collaboration of: Econ One Research, Inc. Los Angeles, California and Acadian Consulting Group Baton Rouge, Louisiana January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 20011000-2650), pgs 112 & b) Military Solicitation SP060002-R-0007, Defense Energy Support Center, November 30, 2001, pgs. 3, 7, 11

³ David E. Dismukes, Ph.D., January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 20011000-2650), pg 110

Natural Gas Spur Line
Load Analysis – Parks Highway Route

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Natural Gas Pipeline Load Analysis – Parks Highway Route

Introduction: In the Department of Energy South-central Alaska demand study, the authors introduce a spur line from Fairbanks to Anchorage via the Parks Highway as a alternative solution to the supply issue (long-term shortage) facing the south-central region's major wholesale users of natural gas.

South Central Demand Requirements: "Currently, the total industrial demand is 130 Bcf/yr and commercial and residential demand is about 70 Bcf/yr."⁴ Utility base demand (power and distribution) would be the primary demand driving the economics of a natural gas spur line.

Spur Line Capacity & Cost: "A spur gas pipeline from a North Slope pipeline with a takeoff point at Fairbanks to the Anchorage area is estimated to cost \$500 million for 330 million cubic feet per day capacity (120 billion cubic feet/year, Bcf/yr) and may allow North Slope gas to be delivered to South-central Alaska at a price advantage of \$1.00/Mcf below Lower 48 prices."⁵ This cost is viewed as competitive when compared to exploration and development costs associated with new field development in the Cook Inlet.

Interior Demand: The Fairbanks North Star Borough (FNSB) represents one of the greatest potential natural gas markets for a Local Distribution Company (LDC) in Alaska. The FNSB represents a likely location for a major regulation station associated with the Alaska Natural Gas Pipeline because of its proximity to the pipeline's route. Natural gas deliveries would be to an LDC (residential, commercial and power delivery) and possible new industrial customers, principally petrochemicals.

- **Residential/Commercial Demand:** There exists a multitude of residential, small and large commercial customers all looking for a clean, reliable and competitively priced energy supply for space and hot water heating.
- **Power/Industrial Demand:** The Interior represents the highest potential for electric and cogeneration power plant conversion to natural gas in Alaska.



⁴ Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 3

⁵ Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 3

⁶ <http://146.63.75.50/research/cgin/cenmaps/statemap.htm>

Natural Gas Pipeline
Load Analysis – Parks Highway Route

The Parks Highway Route: The Parks Highway 7 is the main transportation corridor between interior and South-central Alaska and holds the greatest potential for growth compared to other routes under consideration.



Estimated Consumption by Customer Class for the FNSB (Mcf/year): The Interior experiences much colder winters than South-central Alaska. The consumption allocation by customer class is higher than ENSTAR's average natural gas consumption for similar rate class groups.

The following table represents the average annual consumption by consumer class for the Fairbanks North Star Borough (FNSB). These consumption loads were used for the FNSB, Yukon Koyukuk Borough, & Denali Borough:

	Residential	Small Commercial	Large Commercial
Mcf/Unit	235	571	6250 ⁸

“Average temperatures in the greater FNSB range from –22 degrees Fahrenheit during winter to 72 degrees Fahrenheit during summer. Seasonal extremes can far exceed these temperate ranges. According to the Stone and Webster *Railbelt Intertie Reconnaissance Study* (1989, Intertie Study), heating degree-days in the Fairbanks area are approximately 40 percent greater than Anchorage. The average occupied household would consume approximately 235 Mcf of natural gas per year.”⁹ For areas south of the Alaska range, ENSTAR's average annual consumption levels were applied by customer class.

Consumption Loads Used for Matanuska-Susitna Borough:

	Residential	Small Commercial	Large Commercial
Mcf/Unit	187	420	2076 ¹⁰

Adoption Rates: For the purpose of this study, natural gas conversion rates were structured based on principle used in the Alaska Natural Gas In-State Demand Study (2002). A key factor in energy mode switch is recovery of upfront investment cost of heating system conversion to the alternate fuel.

- “The rule-of-thumb for gas utilities' market planning is that if a customer can recoup their cost of conversion within three years then the penetration rate will be over 95

⁷ <http://alaskaoutdoorjournal.com/maps/parkshwaymap.html>

⁸ David Webb ENSTAR Marketing survey estimate from 2000 Fairbanks Market Survey & 83% based on Stone and Webster Engineering Corporation. *Railbelt Intertie Reconnaissance Study*. 1989

⁹ David E. Dismukes, Ph.D., January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 20011000-2650), pg 80-81

¹⁰ ENSTAR Natural Gas Yearly Consumption Data

Natural Gas Pipeline
Load Analysis - Parks Highway Route

Scenario Analysis:

The following page provides three levels of consumer conversion to natural gas based on the possibility of unpredictable natural gas prices relative to close competitors. These may be viewed as low medium and high case adoption rates during the first 3 to 5 years of marketing natural gas main extensions in the FNSB and related areas along the Parks Highway.

25% Market Penetration - 95 to 100% likelihood within 3 to 5 years

50% Market Penetration - 75 to 95% likelihood within 3 to 5 years

75% Market Penetration - 50 to 75% likelihood within 3 to 5 years

Residential: Residential markets mainly consume home heating oil as the primary source of space heat and hot water heating. This conversion market is considered price sensitive to the commodity price of fuels.

Commercial: Commercial markets consume home heating oil as the primary source of space heat and hot water heating. This conversion market is considered the most price sensitive to the commodity price of fuels.

Power/Industrial (Base Load for LDCs): As noted earlier, the power plant managers may consider only partial conversion. In the analysis below, the number of power plants utilizing natural gas does not change, however the level of natural gas utilization changes (combined utilization of fuels by power plants) with each scenario.

The power plant load should be considered critical to the ability of an distribution or transmission company to penetrate communities along the Parks Highway route. Areas located away from central the population center of Fairbanks such as Eielson AFB, North Pole, Clear AFS, and Healy, require base load to make a local distribution system viable. By themselves, these locations are not considered viable for competitive conversion to natural gas without the power plants as a base load.

**Natural Gas Pipeline
Load Analysis – Parks Highway Route**

The following table represents three levels of possible natural gas adoption:

Adoption Scenarios

Customer Count

Low	25.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		4,651	525	75	5	5,256
Yukon Koy		43	4	1	-	47
Denali		153	6	3	2	163
Mat-Su		356	4	-	-	360
		5,202	539	78	7	5,826

Medium	50.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		9,303	1,050	150	5	10,508
Yukon Koy		86	8	1	-	94
Denali		305	12	6	2	325
Mat-Su		711	8	-	-	719
		10,404	1,078	157	7	11,645

High	75.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		13,954	1,575	225	5	15,759
Yukon Koy		128	11	2	-	141
Denali		458	18	8	2	486
Mat-Su		1,067	12	-	-	1,079
		15,606	1,616	235	7	17,464

Mcf Load Estimate

Low	25.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		1,093,044	299,775	468,750	3,181,752	5,043,321
Yukon Koy		10,046	2,141	3,125	-	15,313
Denali		35,838	3,426	17,188	1,864,131	1,920,582
Mat-Su		83,543	2,284	-	-	85,827
		1,222,470	307,626	489,063	5,045,883	7,065,042

Medium	50.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		2,186,088	599,550	937,500	6,363,504	10,086,642
Yukon Koy		20,093	4,283	6,250	-	30,625
Denali		71,675	6,852	34,375	3,728,263	3,841,165
Mat-Su		167,085	4,568	-	-	171,653
		2,444,940	615,253	978,125	10,091,767	14,130,084

High	75.00%	Residential	Small	Large	Industrial/	Total
			Commercial	Commercial	Power	
Fairbanks NSB		3,279,131	899,325	1,406,250	9,545,256	15,129,962
Yukon Koy		30,139	6,424	9,375	-	45,938
Denali		107,513	10,278	51,563	5,592,394	5,761,747
Mat-Su		250,828	6,852	-	-	257,480
		3,867,410	922,879	1,467,188	15,137,650	21,195,126

Natural Gas Pipeline Load Analysis – Parks Highway Route

Power Markets:

Table 8.7: Fairbanks North Star Borough Electric Power Survey

	Coal					Fuel Oil				
			Rate of Gas Consumption After Conversion					Rate of Gas Consumption After Conversion		
	Average Price Paid	Max Price for Conversion to Gas	Average	Seasonal Peak	Seasonal Low	Average Price Paid	Max Price for Conversion to Gas	Average	Seasonal Peak	Seasonal Low
	\$/Ton	\$/MmBtu	Mmcf/d	Mmcf/d	Mmcf/d	\$/Gallon	\$/MmBtu	Mmcf/d	Mmcf/d	Mmcf/d
FMUS ¹	\$44	\$2.50	5	5	5	\$0.71	\$2.50	0.1	n/a	n/a
GVEA	\$23.40	\$1.50	7	7	7	\$0.45	\$2.50	12	14	10
FT Wainwright	\$46.22	\$3.00	7.8	11.6	3.6	n/a	n/a	n/a	n/a	n/a
Eielson AFB	n/a	\$3.60	6.4	12.8	5.01	n/a	n/a	n/a	n/a	n/a
UAF	\$44	\$2.82	2.5	3.2	0.5	\$0.89	\$6.34	0.14	1	0

¹The Fairbanks Municipal Utility System assets were acquired by GVEA and Aurora Power in 1998

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Total Electric/Cogeneration Power Plant Market:

Load (Mcf)	Count	Energy Source	Consumption	Unit	Consumption	Unit	Measure	Lbs/Ton	Btus	Mcf
Eielson AFB	1	Coal	183,000	Tons	6,900	lbs	2,240	2,828,448,000,000	2,828,448	
North Pole	1	Diesel/Oil	28,000,000	Gallons	141,000	Gallon		3,948,000,000,000	3,948,000	
Ft Wainwright	1	Coal	195,000	Tons	6,900	lbs	2,240	3,013,920,000,000	3,013,920	
Fairbanks	1	Coal	130,000	Tons	6,900	lbs	2,240	2,009,280,000,000	2,009,280	
College/UAF	1	Coal/Oil	60,000	Tons	6,900	lbs	2,240	927,360,000,000	927,360	
Clear AFS	1	Coal	61,770	Tons	6,900	lbs	2,240	954,717,120,000	954,717	
Healy, GVEA	1	Coal	170,000	Tons	6,900	lbs	2,240	2,627,520,000,000	2,627,520	
Healy, Clean Coal	1	Coal	195,000	Tons	6,900	lbs	2,240	3,013,920,000,000	3,013,920	
Total								19,323,166,120,000	19,323,166	

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- “All generating units in the state were examined to identify facilities that could potentially shift their primary fuel to natural gas. Fuel oil and diesel facilities were the most attractive candidates. The highest concentrations of these facilities were located in the Interior section of the state. There are approximately 200 MWs of capacity in this region that could shift from fuel oil to natural gas. Annual natural gas usage would be about 15 Bcf per year if all of the eligible facilities were to switch fuels. (Chapter 8, Tables 8.1 and 8.4)”
- There is a supply side efficiency opportunity for new central station gas fired generation. The economics of a 250 MW combined cycle facility stack up favorably with the marginal costs of existing generating units. This new generation could account for about 12.5 Bcf of natural gas usage per year. However, prior studies of power markets performed on behalf of the Regulatory Commission of Alaska, have noted that Alaska does not have a potential capacity need until the year 2014. If a new generating unit were to be added prior to that time, older generation could be displaced.”¹⁵

¹¹ David E. Dismukes, Ph.D., January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 2001-1000-2650), pg 111

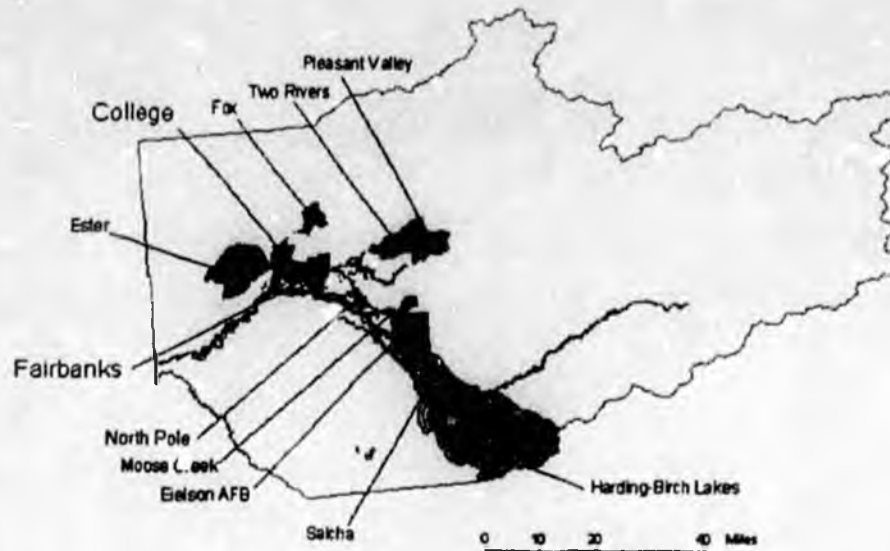
¹⁴ Combined Data from a) David E. Dismukes, Ph.D., Report Prepared by the Collaboration of: Econ One Research, Inc. Los Angeles, California and Acadian Consulting Group Baton Rouge, Louisiana January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 2001-1000-2650), pgs 112 & b) Military Solicitation SP0600-02-R-0007, Defense Energy Support Center, November 30, 2001, pgs 3, 7, 11

¹⁵ David E. Dismukes, Ph.D., January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 2001-1000-2650), pg xiv

Natural Gas Pipeline
Load Analysis – Parks Highway Route



Fairbanks North Star Borough



Source: Alaska Department of Labor and Workforce Development, Research and Analysis and US Census Bureau, 2000 Tigris file

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Fairbanks Area Market: The Fairbanks North Star Borough is located in the heart of Interior Alaska. It is the second most populated region in the state. The City of Fairbanks lies at the confluence of the Richardson, George Parks, Steese, and Elliot highways, with road access to Anchorage, Canada, and the lower 48 states. The Alaska Railroad links the city to Anchorage, while air carriers provide passenger service to Seattle, Canada, and Alaska destinations. In addition to serving as the region's transportation hub, Fairbanks is the economic, medical, educational, and cultural center of Interior Alaska. Originally founded as a trading post, Fairbanks soon became a gold mining community, a distinction it retains with the Fort Knox mine. The region's history, dramatized in the novels of Jack London, now attracts large numbers of tourists.

- Two local refineries process North Slope crude oil.
- Uniformed personnel at Eielson Air Force Station and Fort Wainwright play an important role, generating enough civilian jobs to make the Department of Defense the borough's second largest employer.
- The University of Alaska Fairbanks, with a distinguished faculty and excellent programs, attracts students from across the nation. It is also the borough's largest employer.
- The native people of the region are served by Tanana Chiefs Conference, Inc., which is based in Fairbanks and provides health and social services as well as employment and training.

¹⁶ <http://www.labor.state.ak.us/research/cgin/cenmaps/cas/fbks.htm>

Natural Gas Pipeline
Load Analysis – Parks Highway Route

Basic Data:

Population Statistics:

Fairbanks North Star Borough 2003 82,214

Conversion Statistics:

Count	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Elison AFB					1	1
Moose Creek	542	280				280
North Pole	1,570	653			1	654
Ft Wainwright					1	1
Fairbanks	30,224	12,357	2,100	300	1	14,758
College	11,402	4,501			1	4,502
Ester	1,680	814				814
Total	45,418	18,605	2,100	300	5	21,010

Mcf/Unit 235 571 6250

Load (Mcf)	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Elison AFB		-	-	-	2,828,448	2,828,448
Moose Creek		65,800	-	-	-	65,800
North Pole		153,455	-	-	3,948,000	4,101,455
Ft Wainwright		-	-	-	3,013,920	3,013,920
Fairbanks		2,903,895	1,199,100	1,875,000	2,009,280	7,987,275
College		1,057,735	-	-	927,360	1,985,095
Ester		191,290	-	-	-	191,290
Total	-	4,180,885	1,199,100	1,875,000	12,727,008	20,173,283

Note: The population statistics for these areas do not reflect the non-incorporated areas of the Fairbanks North Star Borough.

Note: The "Fairbanks statistic includes Ft Wainwright's housing and commercial.

Assumption: Conversion statistics represent a possible full conversion for the most likely customer base located up to 10 miles from the core areas listed. Conversion would occur over a 3 to 5 year period for the core areas and a 5 to 10 year period for areas located as far as 10 miles away from the core. Each of the core areas listed have a major power plant operating which would be viewed as potential base load from which natural gas distribution systems can be built to serve residential and commercial customers.

Natural Gas Pipeline
Load Analysis – Parks Highway Route

Table 6.12: Fairbanks North Star Borough Population and Housing Characteristics, 2000-2001

Item	Population			Housing Units			Average Household Size ²		
	In Occ HHs	In Group Qs	Total	Occupied	Vacant			Total	
				(d)	Total	Seasonal		(g)	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)		
1	College	10,651	751	11,402	4,104	397	54	4,501	2.60
2	Ester	1,600	80	1,680	727	87	22	814	2.20
3	Fairbanks ¹	28,325	1,899	30,224	11,075	1,282	121	12,357	2.56
4	Fox	300	-	300	119	40	2	159	2.52
5	Harding Lake	216	-	216	98	391	371	489	2.20
6	Moose Creek	541	1	542	223	57	-	280	2.43
7	North Pole	1,561	9	1,570	605	48	1	653	2.58
8	Pleasant Valley	623	-	623	219	27	13	246	2.84
9	Saicha	854	-	854	317	71	36	388	2.69
10	Two Rivers	482	-	482	177	15	7	192	2.72
11	Subtotal	45,153	2,740	47,893	17,664	2,415	627	20,079	2.56
12	Eielson AFB	5,090	310	5,400	1,448	83	-	1,531	3.52
13	Subtotal	50,243	3,050	53,293	19,112	2,498	627	21,610	2.63
14	Unincorporated	29,517	30	29,547	10,665	1,018	366	11,681	2.77
15	Fairbanks NSB	79,760	3,080	82,840	29,777	3,514	993	33,291	2.68
16	Fairbanks NSB (1990)	74,139	3,581	77,720	26,693	5,130	-na-	31,823	2.70

¹ Includes Fort Wainwright.

² Equal to ratio of population in occupied households (a) to occupied housing units (d)

17

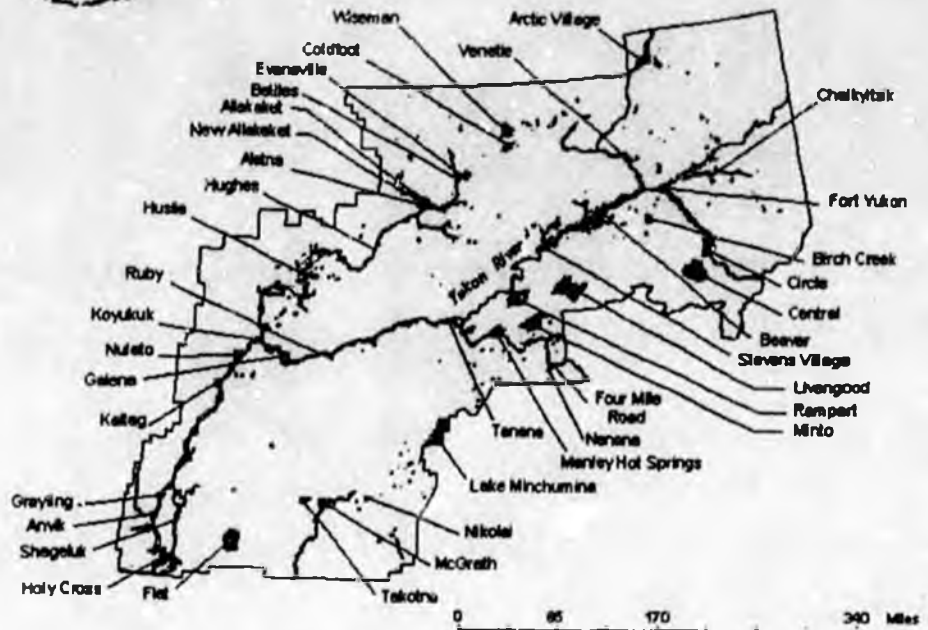
Note: Unincorporated areas include areas such as Farmer's Loop road, Chena Ridge/Pump, Blaine Road/College Sub-division, etc. where natural gas distribution lines could be successfully run (opinion of ENSTAR Business Development).

¹⁷ David E. Dismukes, Ph.D., January 23, 2002 Alaska Natural Gas In-State Demand Study (ASP 2001-1000-2650), pg 82

Natural Gas Pipeline
Load Analysis – Parks Highway Route



Yukon-Koyukuk Census Area



Source: Alaska Department of Labor and Workforce Development, Research and Analysis and US Census Bureau, 2000 Tigraine Soc.

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Count	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Nenana	402	171	15	2	-	188
Total	402	171	15	2	-	188
McGrath		235	571	6250		
Load (Mcf)	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Nenana		40,185	8,565	12,500	-	61,250
Total	-	40,185	8,565	12,500	-	61,250

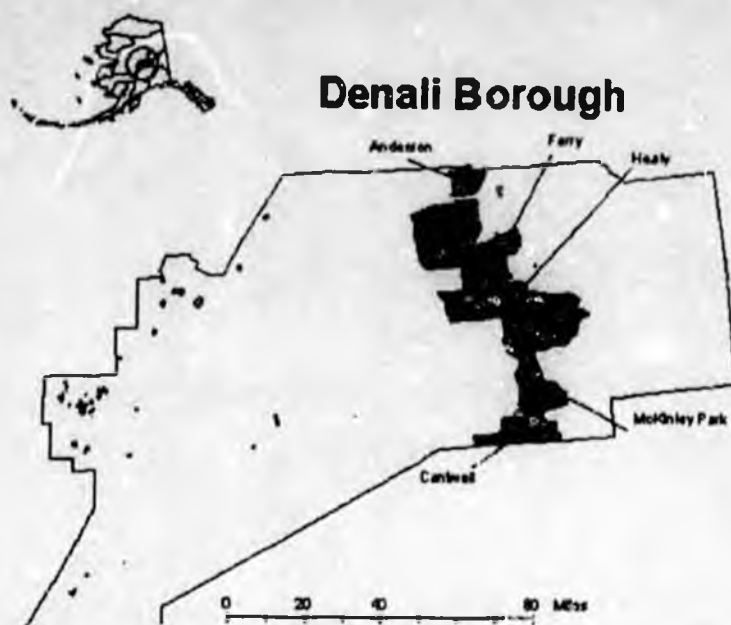
Nenana

“Nenana Alaska is located at mile 305 of the Parks Highway. This historic community / Athabascan Native Village is 56 miles from Fairbanks and 75 miles north of Denali National Park. Nenana has all services needed for the highway, river, railroad or small aircraft traveler. The population now is about 460, with additional 600 or so residents in the surrounding area.”¹⁹

¹⁸ <http://www.labor.state.ak.us/research/cgin/cenmaps/cas/yuk.htm>

¹⁹ <http://www.nenanahomepage.com/Nenana/chamber.html>

Natural Gas Pipeline Load Analysis – Parks Highway Route



Source: Alaska Department of Labor And Workforce Development, Research and Analysis and US Census Bureau, 2000 Tigerline files.

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The Denali Borough covers more than 12,000 square miles of the Alaska Interior. The west side of the region is home to Denali National Park and Preserve, which contains the nation's highest peak. The park attracted 364,000 visitors in 2000, and much of the borough's economy is based on tourism. During the summer months, seasonal non-resident workers triple the population. Most seasonal non-resident workers are employed by hotels and other enterprises related to the tourism industry (service sector jobs).

Nearly all the area's residents live along a 70-mile stretch of the Parks Highway. Anderson, Cantwell, Ferry, Healy, and McKinley Park, the five identified communities in the borough, are all located on this route. Healy, with a population of 1,000, is the largest. The commercial and transportation needs of the borough are primarily served by businesses in Fairbanks. The federal government plays a major role in the region's economy. In addition to the National Park Service, the Department of Defense employs significant numbers of civilian workers at Clear Air Force Station. The base is a radar surveillance site designed to detect and track intercontinental ballistic missile movement.

Although the Usibelli mine has experienced some cutbacks, the Healy coalfields continue to provide year round employment for over 100 workers. If problems with the 50-megawatt power generating complex at Healy can be resolved, the local demand for coal may soon increase.

²⁰ <http://www.labor.state.ak.us/research/cgin/cenmaps/cas/den.htm>

Natural Gas Pipeline
Load Analysis - Parks Highway Route

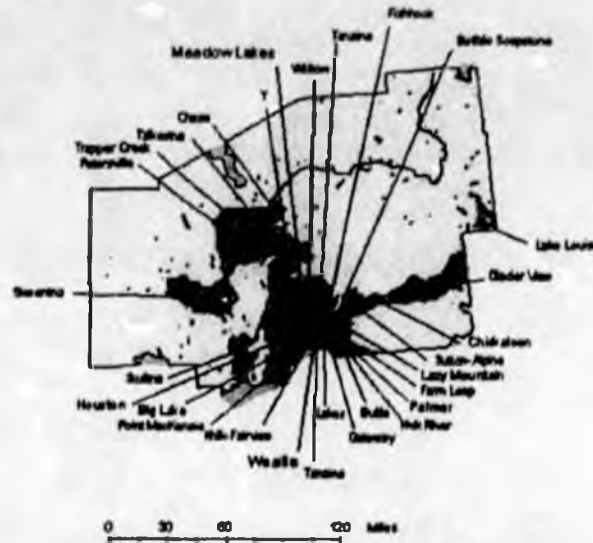
Cogeneration Plant (Coal) Equal to 954,000 Mcf/year.



Natural Gas Pipeline
Load Analysis - Parks Highway Route



**Matanuska-Susitna
Borough**



Source: Alaska Department of Labor and Workforce Development, Research and Analysis and US Census Bureau, 2000 Tigrisville files

21

Count	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Trapper Creek	423	182	3			185
Talkeetna	772	358	15	1		374
Y	956	412	3			415
Willow	1658	654	8			662
Nancy Lake						-
Houston	1202	356	5	0		361
Total	3,816	1,422	16	-	-	1,438
Mcf/Unit		187	420	2076		
Load (Mcf)	Population	Residential	Small Commercial	Large Commercial	Industrial/Power	Total
Trapper Creek		34,034	1,260	-	-	35,294
Talkeetna		66,946	6,300	2,076	-	75,322
Y		77,044	1,260	-	-	78,304
Willow		122,298	3,360	-	-	125,658
Nancy Lake						-
Houston		66,572	2,100	-	-	68,672
Total	-	366,894	14,280	2,076	-	383,250

²¹ <http://www.labor.state.ak.us/research/cgin/cenmaps/cas/mat.htm>

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Bibliography

David Webb ENSTAR Marketing survey estimate from 2000 Fairbanks Market Survey

David E. Dismukes, Ph.D., Report Prepared by the Collaboration of: Econ One Research, Inc. Los Angeles, California and Acadian Consulting Group Baton Rouge, Louisiana January 23, 2002 "Alaska Natural Gas In-State Demand Study" (ASP 2001-1000-2650)

Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, Contract DE-AM26-99FT40575, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY"

Military Solicitation SP0600-02-R-0007, Defense Energy Support Center, November 30, 2001

<http://www.labor.state.ak.us/research/cgin/cenmaps/cas/mat.htm>

Natural Gas Pipeline Appendix

Environmental Scan of Fairbanks Market:

Fairbanks/Tanana Valley Market

Figure 1

Barriers to Entry:

- ENSTAR does not have the concession for the Fairbanks market
- Access to competitive gas supply is currently regionally distant/expensive
- Market currently has little physical infrastructure
- Home heating oil has an advantage because of the cost of conversion
- Coal powered power plants may be an obstacle for energy conversion (competitive/political pressures)

Government Action:

- Privatization of military energy sector
 - Ft. Wainwright/Eielson AFB/Clear AFS
- Refitting of Clean Coal Power plant
 - Opportunity to convert facility to gas
 - Conversion to gas relatively cost effective/pipeline is critical cost
- State of Alaska will push for NG pipeline through interior
- Need for access to pipeline by other producers of gas

Power of Suppliers:

- Few suppliers in the market
 - High level of price control
- Market
 - Gas pipeline (Southern (ALCAN) Route)
 - Andex/Doyon, Ltd. agreement
 - Seismic in 2005/2006
 - Drilling 2007
 - Development 2007/2008
 - Fairbanks growth rate slow but steady
 - Gas pipeline may mean value added processing in Fairbanks to a company involved in petrochemicals
 - Coal supplier generally has the ability to control cost of coal to market.
 - Usibelli has no real competition at the moment.

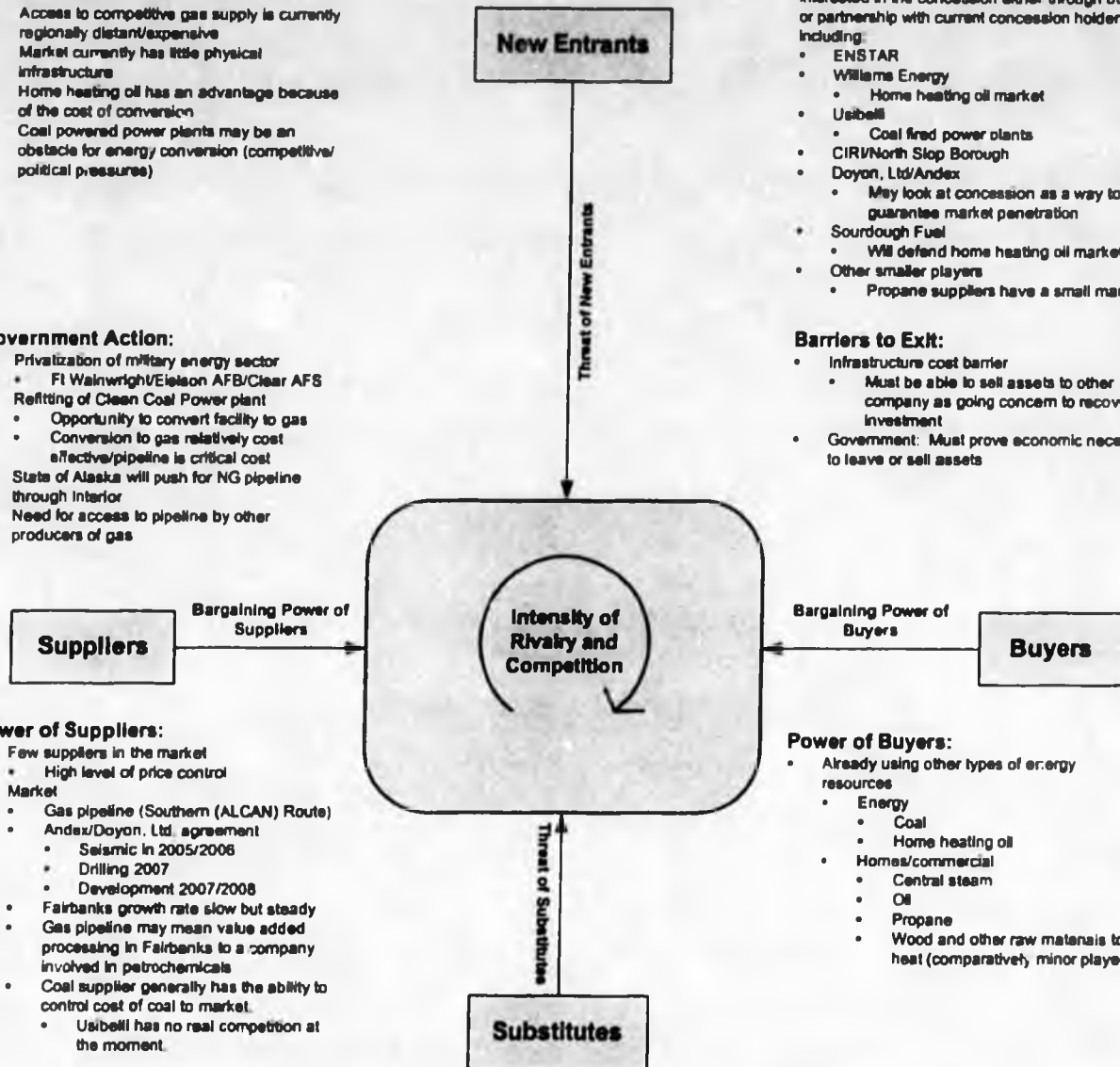
Rivalry Among Competitors:

There are a number of competitors who may be interested in the concession either through buyout or partnership with current concession holders, including:

- ENSTAR
- Williams Energy
 - Home heating oil market
- Usibelli
 - Coal fired power plants
- CIR/North Slope Borough
- Doyon, Ltd/Andex
 - May look at concession as a way to guarantee market penetration
- Sourdough Fuel
 - Will defend home heating oil market
- Other smaller players
 - Propane suppliers have a small market

Barriers to Exit:

- Infrastructure cost barrier
 - Must be able to sell assets to other company as going concern to recover investment
- Government: Must prove economic necessity to leave or sell assets



Availability of Substitutes:

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> • Energy <ul style="list-style-type: none"> • Coal (plentiful but poor quality on mmbtu basis) • Oil • Commercial <ul style="list-style-type: none"> • Steam heat • Heating oil • Propane | <ul style="list-style-type: none"> • Home Heating <ul style="list-style-type: none"> • Home heating oil • Steam heat • Electricity • Propane |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Significance of Complementors:

- Knock-out facilities may provide avenue for additional revenue sources
 - Propane and other knock-out raw materials may provide reach into housing and areas not reachable through gas main extensions
- Co-generation opportunities at compression stations in "smaller" communities along pipeline
 - Take advantage of waste heat in the system

Source: Adapted from Michael E. Porter, *Competitive Advantage*, New York: The Free Press 1985

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Strategic Issues:

- **Exploration in Cook Inlet:** "A potential downside to a spur pipeline, from an exploration and production company point-of-view, is that a large supply of gas from the North Slope at a structural price below the Lower 48 prices may establish a price cap for new Cook Inlet reserves in the 10- to 15-year time frame. This could have a dampening effect on exploration and development for new gas reserves in the Cook Inlet. Hence, it is urgent that decisions such as the date and timing for a North Slope pipeline be made soon so that all options for south-central Alaska region can be determined in a timely manner so that high-cost reactive solutions are not required to meet critical needs."²²
 - The authors of this report did not have the benefit of knowledge of the UNOCAL contract terms. It is ENSTAR's belief that this issue is mitigated by the UNOCAL contract being a template for additional contracts in the Cook Inlet should UNCOAL fail to fill future undesignated demand.

- **Demand Side Management:** "Part of the solution to the supply-demand problem would be to curtail demand by stopping or reducing industrial use but this only delays the problem and will have negative economic impact on Alaska and especially on the Kenai Peninsula Borough. Future demand can also be reduced by:
 - (a) conservation by consumers;
 - (b) more efficient electric generation through investment in more efficient equipment by the utilities (Anchorage Municipal Light and Power (ML&P) and Chugach Electric Association);
 - (c) power generation from alternative sources such as coal, wind, or hydropower, which would also require major investments; and
 - (d) gas storage in depleted or near-depleted oil or gas fields for short-term and peaking needs.The impact and cost of these options are not analyzed in this study. More efficient electricity generating equipment and alternatives such as wind, coal, and additional hydropower are being studied by the utilities. Gas storage has occurred in the past in the Swanson River field and is expected to continue; however, storage capacity and deliverability are likely to be more critical in the future to meet peaking demands, if the supply-demand margin continues to decrease."²³

- **LNG – Supply Side Option:** "A final option would be to import LNG from foreign sources through existing LNG export facilities at Nikiski, Alaska. This would require facilities to re-gasify the LNG and increase the pressure to levels necessary to input gas to the ENSTAR gas pipeline system. Importing natural gas into Alaska would have negative impact on the region and state through lost revenue from royalty gas and taxes and the economic drain of capital from the region to pay for imports. It would also make Alaska part of the worldwide LNG market and subject to worldwide LNG prices for gas to serve local markets. These prices could turn out to be higher or lower than gas can be found and developed in the Cook Inlet basin or delivered from the North Slope."²⁴

²² Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 6

²³ Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 10

²⁴ Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 10

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4.5.1.5 North Slope natural gas pipeline and spur to south-central Alaska

It is assumed that natural gas from a North Slope gas pipeline through Fairbanks will be available in to connect to the south-central Alaska distribution system at Wasilla, Alaska. The timing for a North Slope pipeline remains uncertain with a range of 2011 to 2013 (Mid-America, 2004; ConocoPhillips, BP, ExxonMobil, 2004). Pipeline operations for the North Slope and spur pipelines are modeled as a common carrier charging a regulatory tariff structure for capital and cost recovery. The assumptions used are: annual O&M costs are 2.5% of the installed capital investment, gas consumption is 1.1% of the throughput volumes, and the regulatory cost of capital is 9.97%.

North Slope Pipeline--Capital costs are based on a North Slope gas pipeline to the Yukon border using the Mid-American proposal for cost estimates.²⁶ This 745-mile, 48-inch pipeline is estimated to cost a total of \$8.72 billion (2003\$), all a tangible investment: \$4.72 billion for the pipeline, compression facilities at \$1.6 billion, and \$2.4 billion for a gas conditioning facility on the North Slope with a gas throughput of 4.5 Bcf/day. The estimated average tariff charges for the first 10 years are \$0.99 per Mcf to the Yukon border. The tariff, pro-rated for the 530 miles from the North Slope to Fairbanks, is \$0.704/Mcf.

Spur Pipeline--Preliminary capital costs, basic operating parameters, and gas flow rates at different levels of compression were provided by ENSTAR to estimate tariffs. The pipeline capital cost is estimated at \$300/foot for a 24-inch line (\$12.50 per diameter inchfoot) and would be approximately 300 miles long, although the actual distance will depend on the exact route chosen. At the takeoff from the North Slope pipeline, a measurement and pressure reduction station would be required for a cost of \$2 million. Throughput on the line without compression would be 330 MMscf/d assuming 1,400 psi in and 800 psi out. Increased throughput with one compressor station at 1.75 compression ratio (discharge pressure/inlet pressure) would be 465 MMscf/d and with two compressor stations at 1.75 compression ratio would be 670 MMscf/d. Each compression station would require two compressors at \$10 million each (primary and backup) and for the 670 MMscf/d case would require two active compressors at each station (2 stations required) and one backup compressor. Installed compressor capital costs are estimated at \$10 million for 6,000 horsepower.

The tariff calculation allows for capital recovery at the regulatory rate of return plus cost recovery for operating cost, ad valorem taxes, depreciation, a dismantlement charge, and state and federal income taxes. The tariff charge per Mcf is thus dependent on the transported volumes of gas, with larger volumes resulting in lower tariffs, as shown in Table 4.11. Due to the nature of the tariff calculation, capital cost overruns scale almost directly; i.e., a 25% overage results in a 25% increase in the tariff.

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Table 4.11. Spur pipeline tariff at different throughput rates.

Case	Capital Investment, then current \$	Average 10-year Tariff, \$/Mcf	25% Increase in Capital, Tariff, \$/Mcf	50% Increase in Capital, Tariff, \$/Mcf
330 MMcf/day	\$541.5 million	0.751	0.940	1.128
465 MMcf/day	\$577.4 million	0.563	0.695	0.829
670 MMcf/day	\$613.2 million	0.411	0.503	0.596

These results indicate the tariff for gas transported from the North Slope to south-central Alaska vary from \$1.12 to \$1.46/Mcf, depending on the volumes, with greater volumes having a lower tariff; i.e., tariff from North Slope to Fairbanks estimated at \$0.704/Mcf plus values from Table 4.11 ranging from \$0.411/Mcf for 670 MMcf/d to \$0.751/Mcf for 330 MMcf/d). The proposed delivery point for the North Slope gas pipeline is the Chicago city gate. Tariff estimates by the operator consortia for gas delivered from the North Slope to Chicago are \$2.25 to \$2.50/Mcf (ADN, 2004c). A \$2.50 tariff results in a net back to the well head \$2.50 less than Chicago city gate. The price differential between Chicago and Henry Hub varies and, for simplicity, we assume no Chicago – Henry Hub differential. The wellhead netback and a \$1.50 tariff from the North Slope to Anchorage provide approximately a \$1.00/Mcf market advantage over Henry Hub prices. This analysis implicitly assumes static gas markets. Any differential between Chicago and Henry Hub reduces this cost advantage between Anchorage and Henry Hub.

The potential for a price advantage over Henry Hub prices provides an opportunity to encourage large industrial users to relocate to Alaska. One major requirement for feasibility of a spur pipeline is large industrial demand, as even the lowest rate of 330 MMscf/day, equates to 120 Bcf/yr (the combined industrial demand for LNG and Agrium facilities at capacity is 130 Bcf/yr). This potential structural price advantage may be attractive to Gulf Coast industrial users looking for a price arbitrage opportunity. This price arbitrage potential warrants further investigation and analysis, but is beyond the scope of this static analysis.

The preceding analysis (Section 4.5.1.2) indicates that Cook Inlet reserves are sufficient with the assumed reserves growth for the power generation and utility needs to 2025; therefore, initially, the primary market to be served by a spur pipeline would be large industrial users. If the spur pipeline option is to maintain viability, it is necessary to either continue operations of one or both of the current industrial users or attract new, large users. For example, ConocoPhillips owns approximately 37% of the gas resources at Prudhoe Bay and the ability to use a portion of their Prudhoe Bay gas to continue operation of the Kenai LNG facility may have economic merit. However, there is a narrow time window for this to occur, as the export license expires at the end of the first quarter of 2009 and the earliest gas delivery from the North Slope is expected to be 2012 to 2015 (ConocoPhillips, BP, ExxonMobil, 2004). Economic, regulatory, and policy signals can encourage continued operation of this facility, as well as attract other industrial users to create value-added products with the natural gas.

If these tariff estimates are reasonable and Henry Hub prices remain at \$4/Mcf or above, the price advantage for North Slope gas to south-central Alaska does not appear likely to provide gas at a price low enough to meet Agrium's target of \$2/Mcf at the plant in Nikiski based on market

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forces alone. Policy decisions by the state would likely be required to provide special pricing of state royalty gas or other support options to meet this target.

This potential price advantage for the users of natural gas over Henry Hub prices has a possible downside. This structural price differential also applies to the sale of gas produced in the Cook Inlet basin and could be seen as a disincentive (all things being equal) for producers to continue to explore and develop new reserves, especially if there is major uncertainty on the timing of a North Slope pipeline and spur line in the long term. For example, if the North Slope netback wellhead value is \$2.00/Mcf, gas could be delivered for \$3.40/Mcf to \$3.08/Mcf, depending on the capacity of the spur pipeline. This delivered price would vary up or down depending on the North Slope netback wellhead price and throughput volumes. Even at the lowest throughput rate of 330 MMcf/day (120 Bcf/yr), these results suggest a spur pipeline could supply gas at a price less than a Henry Hub price basis, thus discouraging Cook Inlet exploration and development. However, the demand for this additional gas must exist from continued or expanded industrial use, new industrial users or both, the economics of which are yet to be determined and require additional study.

4.5.2 Gas Cost – Supply Relationship

Development of new reserves or building a spur pipeline will require prices for natural gas that are adequate to encourage large investments. Table 4.12 shows the cost-supply data for three time period, 2004, 2010, and 2015, in then-current dollars for the contract prices (see Table 4.3) and the forecast production for all fields except the fields dedicated to industrial use. The reserves growth from the reserves growth scenario is included because without reserves growth or successful exploration, demand would be higher than supply in 2010 without gas from the fields dedicated to industrial use and before a spur pipeline can be built. The utility and power generation demand is included in Table 4.12 for reference. These data are shown graphically in Figure 4.15 and illustrate the variation in supply with the existing contract prices and the increase in gas prices that have occurred to date with the recent Unocal/ENSTAR contract on a Henry Hub price basis.

If a spur pipeline is built and a Henry Hub price basis is used, the structural cost advantage to the south-central Alaska region is estimated to be about \$1.00/Mcf as discussed in Section 4.5.1.5. This price advantage over Henry Hub is likely to remain as prices escalate due to inflation but the amount is dependent on timing, final costs of pipelines, and world LNG and gas prices. Thus, a spur pipeline has the potential to moderate gas prices in the south-central Alaska region. Additionally, if all of the current industrial demand can be preserved, delivery volumes of 330 MMscf/day (120 Bcf/yr) would be insufficient to meet all the demand requirements, requiring the additional compression to increase volumes to the next increment of 465 MMscf/day (170 Bcf/yr), providing additional price advantage over Henry Hub prices in the region (see Table 4.11).²⁵

²⁵ Charles P. Thomas, Tom C. Doughty, David D. Faulder, David M. Hite, Prepared for the U.S. Department of Energy, National Energy Technology Laboratory, Arctic Energy Office, "SOUTH-CENTRAL ALASKA NATURAL GAS STUDY", Page 180-184

HCR

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Alaska State Legislature
REPRESENTATIVE REGGIE JOULE

SPONSOR STATEMENT

"Creating an Alaska Climate Impact Assessment Commission."

House Concurrent Resolution 30 identifies and addresses many of the issues impacting Alaska that are the result of recent and ongoing changes in the climate. Climate change affects 184 coastal and river communities, or 86 percent of Alaska communities, in both rural and urban areas of the state. The impacts that confront Alaska include: erosion, flooding, ice jams, glacial melts, rising sea level, changing river patterns, heavy rainfall, and the thawing of vital permafrost. Recent weather patterns have created warming trends that have jeopardized the health and well-being of Alaskans. Fish and wildlife habitats, resources many depend on, have been impacted by these changes. There is also a serious impact to current and future infrastructure and natural resources development in affected areas, which may negatively impact the revenue that the area produces for the state. These are all issues that need further analysis and preventative action.

HCR 30 sets the groundwork to help Alaska cope with continuing climate change. HCR 30 provides the State of Alaska with a commission of qualified persons that will research, consult, and advise the legislature on ways to plan and react to climate change emergencies and prevent or at least minimize future impacts. Senator Ted Stevens is also introducing legislation to the U.S. Congress that addresses similar issues. The Alaska Climate Impact Assessment Commission will develop a comprehensive, preventative plan to address these issues that will help save lives, protect public health, preserve economic and resource development, and protect valuable infrastructure.

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HCR30CS(RES)-DNR-DGGS-03-20-0
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Natural Resources
 Title: AK Climate Impact Assessment Commission RDU: Resource Development
 Component: Geological Development
 Sponsor: Reps. Joule, Berkowitz, Kertula, Samuels, Ramras
 Requester: House Finance Component No.: 1031

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	*** INDETERMINATE***					

CAPITAL EXPENDITURES						
-----------------------------	--	--	--	--	--	--

CHANGE IN REVENUES ()						
-------------------------------	--	--	--	--	--	--

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	*** INDETERMINATE***					

Estimate of any current year (FY2006) cost: 0.0
 Check this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)
 HCR30CS(RES) would create the Alaska Climate Impact Assessment Commission composed of 15 members including one member from the Department of Natural Resources. The Commission's tasks include: assessing the current and potential effects of climate warming trends on state citizens and natural resources including any adverse impacts to natural resource development; identifying specific circumstances of flooding and erosion that affect life, property, and economic and resource development in the state; examining the feasibility of alternatives to prevent and mitigate the effects of flooding and erosion; investigating and assessing issues involving permafrost and damage caused by permafrost; and recommending land use regulations, including area standards for designation of land prone to flooding and erosion.
 (continued on next page)

Prepared by: Robert Swenson, Acting Director Phone 451-5000
 Division: Geological and Geophysical Surveys Date/Time 3/28/2006
 Approved by: Michael Menge, Commissioner Date 3/29/2006
 Agency: Natural Resources

FISCAL NOTE

**STATE OF ALASKA
2006 LEGISLATIVE SESSION**

BILL NO. HCR30CS(RES)-DNR-DGGS-03-29-0

ANALYSIS CONTINUATION

*** The fiscal impact of this resolution is **Indeterminate** at this time. Properly identifying specific circumstances of flooding, erosion, and changes to the permafrost due to climate changes could take some in-depth research on existing data and possibly field work and site visits. This work could also entail the purchase of remote sensing data and analysis of such data depending on the depth of the Commission's intended assessment and recommendations. Alternatively, the Commission could merely make recommendations to the Legislature for future research and assessment needs in which case the fiscal note could be -0-.

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: _____
Bill Version: WD 24-LS1605F
() Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Legislature
Title Creating an Alaska Climate Impact BRU Legislative Council
Assessment Commission Component: Council and Subcommittees
Sponsor Representatives Joule, Berkowitz, Kerttula
Requestor Representative Joule Component No. 783

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	73.0	68.0	0.0	0.0	0.0	0.0
Contractual	6.0	6.0	0.0	0.0	0.0	0.0
Supplies	1.0	1.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	80.0	75.0	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
-----------------------------	------------	------------	------------	------------	------------	------------

CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0
-------------------------------	------------	------------	------------	------------	------------	------------

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	80.0	75.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	80.0	75.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY2006) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

Workdraft 24-LS1605F establishes a fifteen member Alaska Climate Impact Assessment Commission made up of four Legislators and eleven public members appointed by the Presiding Officers. The House and Senate Resources Committees will assign committee staff to support the Commission. The Commission will conduct hearing around the state, four hearings in FY07, and four hearings in FY08. Costs for experts in the field to travel to address the Commission are included in this fiscal note. Travel costs for the Legislators and public members are included in this fiscal note. All other meetings will be by teleconference. The Commission will study the effects of climate change within Alaska and shall prepare a report offering recommendations and possible solutions and preventative measures that can be implemented by Alaska communities and the state and federal governments. The Commission will have contractual budget for phone, advertising and other expenses and a supply budget for the purchase of supplies and research materials. Teleconference costs and the costs for printing the reports will be absorbed within the Legislative Affairs Agency budget. The Commission will be terminated at the conclusion of the second session of the 25th Legislature.

Prepared by: Karla Schofield, Deputy Director Phone 465-6626
Division: Administrative Services Date/Time 3/24/06 4:10 PM
Approved by: Pamela Varni, Executive Director Date 3/24/2006
Agency: Legislative Affairs Agency

MEMORANDUM

DATE: March 24, 2006

SUBJECT: Work Draft for Committee Substitute on HCR 30

TO: Representative Jay Ramras,
Co-Chair of House Resources Committee

CC: Jim Pound, Aide to Representative Jay Ramras

FROM: Representative Reggie Joule

The following is an index to the portions of HCR 30 that are the language incorporated from SB 278.

Page 2

Line 5 – Provides change in language from the narrow focus of the impacts of the “thawing permafrost” to the impacts of the broader impacts of “climate change.”

Line 7 – Recognizes another impact of climate change. This addresses the “retreating sea ice” and its impacts.

Line 10 – Recognizes the scientific study of the Arctic Climate Impact Assessment and differentiates the Alaska Climate Impact Assessment Commission’s duties from that which has already been done in the ACIA.

Line 18 – Provides an increase in membership for the commission, from 13 to 15 individuals.

Line 23 (3) – Adjusts the number of public members to fit the 15-membership change, from 9 to 11 individuals.

Line 26-27 (B) – Defines the qualifications for the member from the University of Alaska.

Line 29 (D) – Delegates one of the 15 membership seats to a member of the Alaska Conservation Alliance.

Line 30 (E) – Provides a change in the language and membership qualification. Opens the membership qualifications up to any person knowledgeable in the engineering field, instead of restricting membership to the Department of Transportation.

Page 3

Line 4 (I) – Specifies that one member of the 15 person commission be an Alaskan youth selected by the member's peers in the Alaska Youth Environmental Action group.

Line 14 (1) – Expounds upon the duties and goals of the Commission.

Line 18 (2) – The Commission is charged with the additional duty of collecting information that can be used to estimate the economical costs of the impacts of climate change in Alaska.

Line 30 (8) – Provides language change to broaden the scope of the commission from the focus of permafrost to climate impacts.

Page 4

Line 6-7 – Additional FURTHER RESOLVED to specify the number of meetings of the commission and to spread the meetings around the state.

Line 8-10 – Clarifies the time line for the Commission to make reports to the legislature.

Line 11-12 – Demonstrates the Commissions willingness to work and provide the legislature with as much information as possible.

24-LS1605\F
Kane
3/24/06

CS FOR HOUSE CONCURRENT RESOLUTION NO. 30()
IN THE LEGISLATURE OF THE STATE OF ALASKA
TWENTY-FOURTH LEGISLATURE - SECOND SESSION

BY

Offered:

Referred:

Sponsor(s): REPRESENTATIVES JOULE, Berkowitz, Kerttula

A RESOLUTION

1 **Creating an Alaska Climate Impact Assessment Commission.**

2 **BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:**

3 **WHEREAS** recent weather patterns have created warming trends that have
4 jeopardized the health and well-being of residents of communities and the natural resources
5 on which they rely; and

6 **WHEREAS** flooding and erosion affects 184 coastal and river communities, or 86
7 percent of Alaska communities, in both rural and urban areas of the state; and

8 **WHEREAS** communities on the coast are affected by flooding and erosion from the
9 sea because of the delayed formation of protective shore ice in the fall; and

10 **WHEREAS** communities along riverbanks or in river deltas are susceptible to
11 flooding and erosion caused by ice jams, snow and glacial melts, rising sea levels, changing
12 river patterns, and heavy rainfall; and

13 **WHEREAS** permafrost is found beneath approximately 80 percent of the state; and

14 **WHEREAS**, in recent years, there has been widespread thawing of permafrost in
15 some areas, causing land to slump and erode and causing serious damage to infrastructure;
16 and

1 **WHEREAS** the thawing of the permafrost is likely to continue across the state and
2 will have an effect on future structures and development; and

3 **WHEREAS** fish and wildlife habitats are changing, affecting the accessibility and
4 viability of certain species; and

5 **WHEREAS** resource development and the revenue it generates are potentially
6 affected by the effects of climate change; and

7 **WHEREAS** the rapidly retreating sea ice affects polar route navigation and security
8 concerns; and

9 **WHEREAS** the state has only one employee working on these issues; and

10 **WHEREAS**, although the Arctic Climate Impact Assessment provides the necessary
11 scientific foundation in assessing current effects of climate change in the Arctic, it does not
12 address the economic effects on the State of Alaska; and

13 **WHEREAS** a comprehensive, preventative plan to address these issues will help save
14 lives, protect public health, preserve economic and resource development, and protect
15 valuable infrastructure;

16 **BE IT RESOLVED** by the Alaska State Legislature that there is created an Alaska
17 Climate Impact Assessment Commission; and be it

18 **FURTHER RESOLVED** that the commission shall consist of 15 members as
19 follows:

20 (1) two senators appointed by the president of the senate;

21 (2) two representatives appointed by the speaker of the house of
22 representatives; and

23 (3) 11 public members appointed jointly by the president of the senate and the
24 speaker of the house of representatives consisting of

25 (A) one member who represents the Denali Commission;

26 (B) one member from the University of Alaska with expertise in
27 climate impact effects;

28 (C) one member who represents the Alaska Federation of Natives;

29 (D) one member from the Alaska Conservation Alliance;

30 (E) one member knowledgeable in the engineering requirements for
31 public highway and facility construction and maintenance;

- 1 (F) two members who represent affected Alaska communities;
2 (G) two members who represent affected Alaska businesses;
3 (H) one member knowledgeable in the area of fish and game; and
4 (I) one member who represents Alaska youth, based on the
5 recommendation of the Alaska Youth for Environmental Action group; and be it

6 **FURTHER RESOLVED** that the public members of the commission may receive
7 compensation, per diem, or reimbursement for travel or other expenses incurred in serving on
8 the commission; and be it

9 **FURTHER RESOLVED** that the commission may meet during and between
10 legislative sessions; and be it

11 **FURTHER RESOLVED** that the House and Senate Resources Committees shall
12 assign committee staff to provide support services for the commission; and be it

13 **FURTHER RESOLVED** that the duties of the commission include the following:

14 (1) assess the current and potential effects of climate warming trends on the
15 citizens, natural resources, public health, and economy of the state, in particular the adverse
16 effects on natural resource development, forest safety, fish and game utilization, and
17 transportation and community infrastructures;

18 (2) estimate costs to the state and its citizens of adverse effects associated with
19 climate warming;

20 (3) identify specific circumstances of flooding and erosion that affect life,
21 property, and economic and resource development in the state;

22 (4) examine the feasibility of alternatives to prevent and mitigate the effects of
23 flooding and erosion;

24 (5) develop a policy to guide infrastructure investments in Alaska villages,
25 cities, and boroughs that are most affected by flooding and erosion;

26 (6) recommend land use regulations, including area standards for designation
27 of land prone to flooding and erosion;

28 (7) investigate and assess issues involving permafrost and damage caused by
29 permafrost;

30 (8) recommend policies to decrease the negative effects of climate change;

31 and

1 (9) identify and coordinate efforts of mutual concern with federal agencies;

2 and be it

3 **FURTHER RESOLVED** that the commission shall offer recommendations and
4 provide possible solutions and preventative measures that can be implemented by Alaska
5 communities and by the state and federal governments; and be it

6 **FURTHER RESOLVED** that the commission shall conduct eight hearings
7 throughout the state to fulfill its purpose; and be it

8 **FURTHER RESOLVED** that the commission shall deliver a preliminary report of its
9 findings to the legislature on March 1, 2007, and make a final report to the legislature on
10 January 10, 2008, together with legislative proposals for consideration; and be it

11 **FURTHER RESOLVED** that the commission shall be available for legislative
12 hearing on its recommendations; and be it

13 **FURTHER RESOLVED** that the commission shall be terminated at the conclusion
14 of the second regular session of the Twenty-Fifth Alaska State Legislature.

FISCAL NOTE

STATE OF ALASKA
2006 LEGISLATIVE SESSION

Fiscal Note Number: _____
 Bill Version: HCR 30
 () Publish Date: _____

Revision Date/Time (Note if correction): _____ Dept. Affected: Legislature
 Title Creating an Alaska Climate Impact BRU Legislative Council
 Assessment Commission Component: Council and Subcommittees
 Sponsor Representatives Joule, Barkowitz, Kerttula
 Requestor Representative Joule Component No. 783

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	40.0	40.0	0.0	0.0	0.0	0.0
Contractual	0.5	0.5	0.0	0.0	0.0	0.0
Supplies	1.0	1.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL OPERATING	41.5	41.5	0.0	0.0	0.0	0.0

CAPITAL EXPENDITURES	0.0	0.0	0.0	0.0	0.0	0.0
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CHANGE IN REVENUES ()	0.0	0.0	0.0	0.0	0.0	0.0
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FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	41.5	41.5	0.0	0.0	0.0	0.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	41.5	41.5	0.0	0.0	0.0	0.0

Estimate of any current year (FY2006) cost: 0.0

Check this box (X) if funding for this bill is included in the Governor's FY 2007 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: (Attach a separate page if necessary)

HCR 30 establishes a thirteen member Alaska Climate Impact Assessment Commission made up of four Legislators, and nine public members appointed by the Presiding Officers. The House and Senate Resources Committees will assign committee staff to support the Commission. The Commission will travel to meet four times in FY07, and four times in FY08. Costs for experts in the field to travel to address the Commission are included in this fiscal note. All other meetings will be by teleconference. Travel costs for the one DOTPF public member will be absorbed by DOTPF. Travel costs for the other public members are included in this fiscal note. The Commission will study the effects of climate change within Alaska and shall prepare a report offering recommendations and possible solutions and preventative measures that can be implemented by Alaska communities and the state and federal governments. The Commission will have a small contractual budget for phone and other expenses and a supply budget for the purchase of supplies and research materials. Teleconference costs and the costs for printing the report will be absorbed within the Legislative Affairs Agency budget. The Commission will be terminated at the conclusion of the second session of the 25th Legislature.

Prepared by: Karla Schofield, Deputy Director Phone 465-6626
 Division Administrative Services Date/Time 3/24/06 1:59 PM
 Approved by: Pamela Varni, Executive Director Date 3/24/2006
 Agency Legislative Affairs Agency

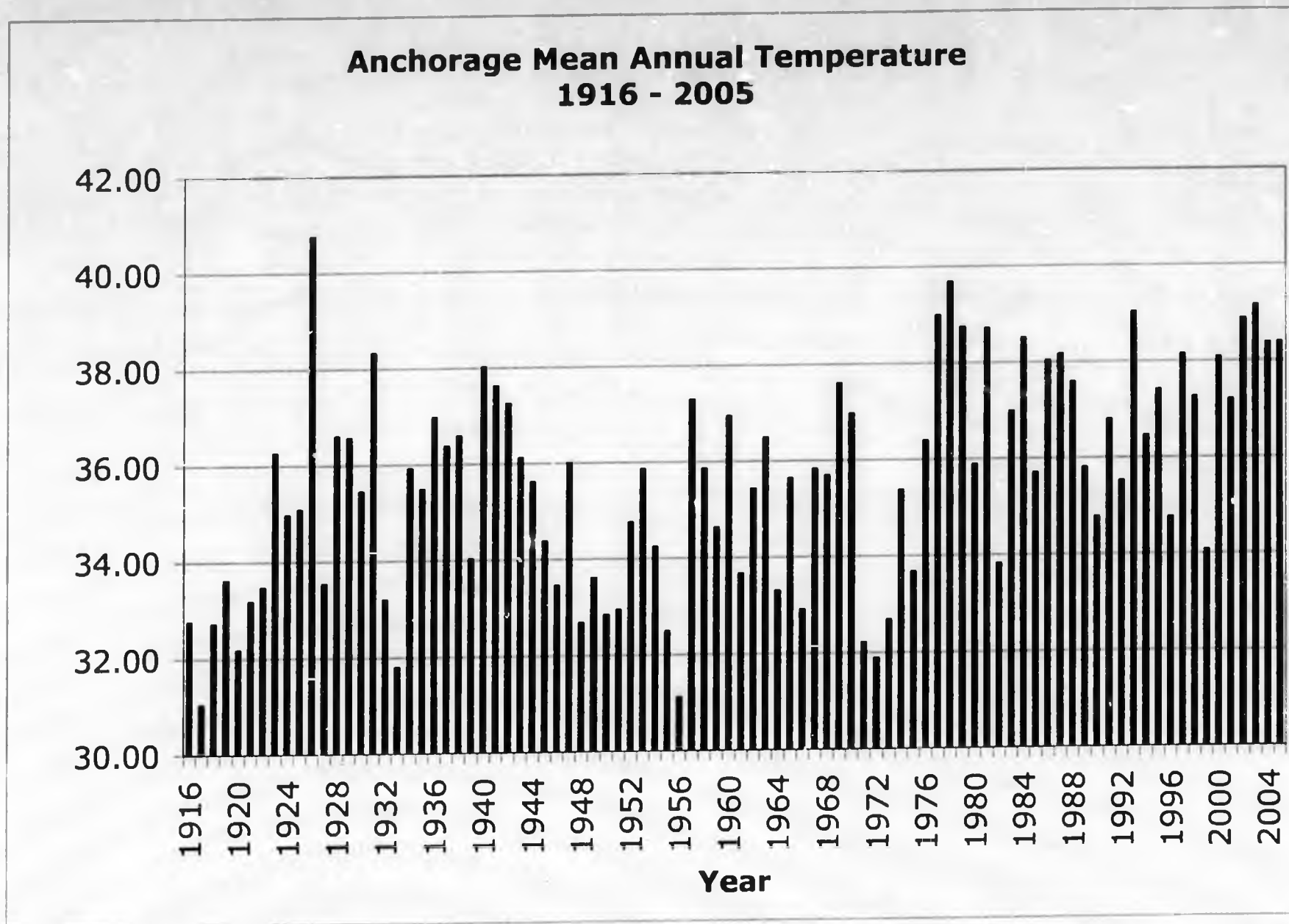
Evidence of Climate Warming in Alaska

**Testimony on HCR 30 to Alaska Legislature
27 March, 2006**

**Dr. Glenn Patrick Juday
4837 Palo Verde Ave.
Fairbanks, Alaska 99709**

**g.judav@uaf.edu
907 474-6717 (W)
907 479-3765 (H)**

1. Temperatures in southern Alaska have increased



2. Temperatures in central Alaska have increased

