ALASKA LEGISLATURE COMMITTEE FILES 1995-1996 8672
8771 HOUSE STATE AFFAIRS

HB

38

FISCAL NOTE

STATE OF ALASKA
1995 LEGISLATIVE SESSION

BILL NO. HB 38

Revision Date:
Dept. Affected: Corrections
Title: An Act relating to sentencing of serious felony offenders
BRU: all
Component: all
Sponsor: Rep. Bunde
Requester: Rep. Bunde
COMPONENT SERIAL NO.

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01
PERSONAL SERVICES	168.2	168.2				
TRAVEL	5.0					
CONTRACTUAL	4,848.0					
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS	206.2	412.5	618.7	824.9	1,031.1	1,237.4
TOTAL OPERATING	5,227.4	580.7	618.7	824.9	1,031.1	1,237.4
CAPITAL EXPENDITURES		27,472.0				
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF	5,422.6	28,052.7	618.7	824.9	1,031.1	1,237.4
1005 GF/Program Receipts						
1006 GF/MHTIA						
Other						
TOTAL	5,422.6	28,052.7	618.7	824.9	1,031.1	1,237.4

Estimate of any current year (FY95) cost: $ 0.0

POSITIONS

FULL-TIME	2	2				
PART-TIME						
TEMPORARY						

ANALYSIS: (Attach a separate page if necessary)

This bill would mandate a 99 year sentence for a conviction of an unclassified or Class A felony if the offender has been previously convicted of two or more separate "most serious" felonies. This would include attempt, conspiracy or solicitation regarding unclassified or Class A felonies, Assult II, Sexual Assault II, Sexual Abuse of a Minor II and Unlawful Exploitation of a Minor. Offenders sentenced to 99 years under this bill would not be eligible for parole or other forms of early or graduated release. They could apply for sentence reduction after serving one half of the 99 year sentence. The bill mandates consideration of convictions in all other jurisdictions when determining if an offender is subject to the "three strikes of this bill"

Analysis of the Departments prison population indicates 40% of the population of 2775 is incarcerated for a "most serious" felony (.4X2775 + 1110). Analysis further indicates that approximetely 20% of the population (.2X2775 = 555) have committed three or more felonies and , of these,10% have been convicted of three or more "most serious" felonies (.1X 555 = 55.5).

CONTINUED ON ATTACHED PAGES :

Prepared by: Jerry Shriner
Phone: 465-4640
Division: Comm. Office
Date: 1/25/95

Approved by Commissioner: /S/
Date: 1/25/95
Agency: Department of Corrections

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The 99 year sentence is assumed to be a "life" sentence. The estimated life span of a male, by the year 2000, is estimated to be 73.5 years, according to the United States Statistical Abstract. The estimated age at the time of conviction for a most serious felony is estimated to be 28 years, according to the Alaska Judicial Council. Thus, those sentenced under this bill would be incarcerated for 45.5 years, rounded up to 46 years. (Age for males is used, since the prison population is over 95% male.) If allowed to earn statutory good time on a 99 year sentence, the prisoner would still have to serve 66 years. Furlough eligibility would not occur until the prisoner had served 63 years, with good time, and sentence modification allowed under the bill would not occur until after serving 49.5 years. Since the average would be dead prior to meeting these requirements, the provisions governing good time, furlough, and sentence modification are assumed to be irrelevant.

The statewide average cost of incarceration in a state correctional center is $113 per day. This figure does not include CRC beds, since prisoners under this bill are prohibited from furlough, restitution center placement, etc. This figure includes the standard overhead for medical and administrative costs. This number should be considered to be conservative, since medical expenses for older prisoners doing life sentences are expected to be higher than average.

The average cost for construction of a medium security prison bed in Alaska is $160,000. It is assumed that prisoners sentenced to life will require high security housing. Capital expenses might be reduced if additional beds were purchased under contract, however there are no contract beds currently available in Alaska for prisoners with higher than minimum custody.

The correctional system cannot absorb any additional prisoners without additional resources. The system has been operating over emergency capacity throughout the past year. Even when all aspects of the department's current population management plan are achieved, only the current overcrowding will be addressed, no including any additional numbers of inmates caused by new legislation. In addition to posing safety hazards, operating over emergency capacity for prolonged periods may result in fines of up to several thousand dollars per day if the department is found in contempt of court for violating population caps.

The cost of maintaining this new population would rise to $1, 237,350 in the sixth year. Because a number of crime bills are pending before the legislature this year, it is difficult to predict the total number of beds by which the prison system may need to be increased, and therefore difficult to predict how and where such beds would be added through new facility construction, facility modification, or contracting. It is not possible to estimate the number of staff positions needed until specific expansion plans are made.

The table below presents the Department's best estimate of the effect of this bill on the number of additional prison beds that would be needed within the corrections system. Although the increases for various categories of offenses would result over varying periods of time, this method arrives at an aggregate increase in population in order to predict future needs for the prison system. The "% length increase column" in the chart below is the multiplier which reflects the difference between the current average sentence for offenders impacted by this bill and the sentence they would have received if they had been sentenced under this bill. Murder I, Murder II and Kidnapping are excluded since the current average sentence already exceed the expected life span.

Offense	Total in DOC on 6/30/93	10% (3rd repeaters)	Current Prisoner-days	% sent. length increase	Additional Prisoner-days
Unclassified Felonies					
SAM I	153	15.3	5,584.5	X 3.54	19,769.1
SA I	178	17.8	6,497		22,999.4
MICS I	9	.9	328.5		1,162.9
TOTAL UNCLASSIFIED					43,931.4
Class A Felonies					
Assault I	57	5.7	2,080.5	X 3.83	7,968.3
Manslaughter	28	2.8	1,022		3,914.3
Robbery I	101	10.1	3,686.5		14,119.3
Arson I	6	.6	219		838.7
Escape I	2	.2	73		279.6
MIW I	20	2	730		2,795.9
TOTAL A FELONIES					29,916.1
TOTAL ADDITIONAL PRISONER-DAYS					73,847.5

This suggest that the actual prison population would, over time, increase by 73,848 prisoner-days, or 202 prisoners as a result of the increased sentence lengths required by the bill.

73,848 prisoner-days X $113 per day = $ 8,344,824 operating expenses

202 beds X $160,000 per maximum bed = $ 32,320,000 capital expenses

TOTAL ADDITIONAL EXPENSE = $ 40,664,824

This figure does not include any inflation factor and does not assume any increase in the rate of convictions/incarceration. it does not account for increases in medical costs for a larger, aging population.

Offsetting this number, it would be expected that some savings might be expected in the Community Corrections component, since most of these prisoners would otherwise have been released and supervised on probation or parole under current law. However, the $6 average cost per day for this supervision is almost negligible compared to the $113 cost per day of incarceration, and would only be a factor for a relatively small portion of the total sentence.

Another offsetting factor might be the avoidance of costs of new crimes, probably violent, that these chronic types of offenders might be assumed to commit if they were released, under current law. These savings would be experience by other agencies and departments through avoidance of arrests, investigations, trials, etc.

The fiscal impact of this legislation can be viewed from two fundamentally different ways. One can assume that those sentenced under this bill would have been sentenced for some length of time in any case and therefore the effect of this bill would "kick in" only after that presumed sentence had been served. In the case of the offenders in question here that would be roughly thirteen years from now.

On the other hand one can view the effects as beginning on the day the inmate begins servicing the sentence. In the opinion of the department the latter approach yields the most reliable results in presenting the cost of operating. Further it is the only approach which provides for critical long range planning. Prisoners sentenced under this bill are essentially "lifers" and from the day they walk in the door with that status they are fundamentally different.

It is a more realistic reflection of the impact to state that the Department expects four to six new individuals per year under this bill. Disregarding increases in convictions and incarcerations on the one hand and a reduction of new crimes committed by these inmates on the other; the department expects the population will peak 200 to 250 in approximately 46 years when the first of the group is released or dies of old age while in prison. Thus five new prisoners per year increase the cost of operation of the Department of Corrections by $206,255 per year each year.

5 prisoners X $113 per day X 365 days per year = $206,225.00

The cost of maintaining this new population would rise to $1,237,350 in the sixth year.

Operating expenses are shown on page 1 as miscellaneous because more a detailed description of staffing and other operating expenses would be purely speculative with out first knowing the design of the facility. Further, it is assumed that site selection, facility design and and program design would require the time of several DOC staff at all levels. Two new full time positions would be necessary in order to meet the responsibilities of DOC to plan and facilitate the project. Therefore the salary of one facilities manager and one criminal justice planner has been included. Preliminary engineering and architectural services have been estimated at fifteen percent of the anticipated cost of the construction project. It is anticipated that this amount would transfered by RSA to DOT & PF.

CRIMESTRIKE
A Division of the National Rifle Association

NRA Institute for Legislative Action
11250 Waples Mill Road
Fairfax, VA 22030
(703) 267-1160
(703) 267-3992 FAX

MEMORANDUM IN SUPPORT

TO: The Honorable Jeannette James, Chair, House State Affairs Committee
The Honorable Con Bunde, Sponsor
The Honorable Members of the House State Affairs Committee

DATE: February 9, 1995

SUBJECT: House Bill 38, A BILL FOR AN ACT ENTITLED :
"An Act relating to criminal sentencing; relating to the availability for good time credit for offenders convicted of certain first degree murders; relating to mandatory life imprisonment..."

Violent criminals who willfully violate the law and prey on the public must be punished. And those who continue to commit violent crimes, even after a felony conviction, should not be given the opportunity to harm innocent citizens again.

It is with great hopes for its success in Alaska that NRA CrimeStrike and the NRA members announce our support for House Bill 38, a bill commonly referred to as "Three Strikes, You're Out." We applaud the sponsor, Representative Bunde, for addressing the serious issue of crime and punishment, and urge the State Affairs Committee to favorably report this bill.

The issue of crime has captured the national attention, and rightly so. Every 22 minutes a murder is committed; a rape every five minutes; and a robbery every 47 seconds.

Even Alaska is not immune. In Alaska, a woman is raped every 15 hours; someone is robbed every thirteen hours. In fact, a violent crime is committed in Alaska every two hours and fifteen minutes. Passage of "Three Strikes, You're Out" will help to alleviate the effects of crime on the citizens of Alaska by locking up incorrigible criminals for life.

House Bill 38 is part of a state legislative trend to protect society by incarcerating those most likely to victimize innocent citizens again. Washington State led the way with passage of "Three Strikes" in 1993; California, Georgia, and Virginia, and others passed versions in 1994; and Montana, Ohio, South Carolina, New York and other state legislatures will join Alaska in considering such legislation this year.

Representative Bunde's bill builds upon the foundation of the "Three Strikes" laws passed elsewhere, and includes some unique provisions like the "Old Age Safety Valve" found in sections 5 and 18. In HB 38, a criminal sentenced under the "Three Strikes" law may apply for, and the court may approve, a 50% reduction in sentence after half the time has been served. This provides the correctional department and the state the ability to release those prisoners who have served at least 49 years, and have most probably outlived their proclivity to commit crimes.

Repeat offenders are a serious threat to public safety. According to the National Center for Policy Analysis, the average criminal commits 187-287 crimes a year. With the passage of HB 38, the threat to the public is substantially reduced by taking these repeat offenders off the street.

Increased incarceration for violent crimals works to reduce crime, and will work in Alaska if given a chance. As the attached chart demonstrates, Alaska's violent crime rate has roller-coasted as incarceration has declined or increased. When Alaska jailed more criminals, the crime rate decreased. With "Three Strikes" assuring that repeat offenders remain behind bars, the crime rate will show decline.

California's decrease in its violent crime rate in the last year is due in part to its passage of "Three Strikes". California Attorney General Dan Lungren reported that commission of major crime in California dropped 7.7% in the first six months of 1994, with homicide down 11.4%, rape down 7.8% and robbery dropping 11.5%. Alaska can hope for similar results.

Though a fiscal commitment must be made to put a criminal in prison for life, in the long run, "Three Strikes" will save Alaska money. The National Center For Policy Analysis reports that it costs taxpayers about $25,000 a year to keep a criminal in prison. If that criminal is out on the street, committing the 187-287 crimes referenced above, the cost to society is approximately $2,300 per crime. Added together, one career criminal could cost Alaska $430,000 annually. California estimates that "Three Strikes" will save taxpayers $29.5 billion over five years, as the enclosed handout indicates.

Contrary to popular opinion, making the decision to put repeat violent offenders in jail for life is not an easy decision. It requires the political will to stand up against the nay-sayers who preach, despite the overwhelming evidence to the contrary, that increased jail time is not the answer. The introduction, and subsequent passage, of HB 38 proves that Alaska has that will. Again, we respectfully urge a favorable report.

Respectfully submitted,

Susan Baldyga Mirora
Manager, CrimeStrike State Legislative Affairs

Brian Judy
Alaska State Liaison

CRIMESTRIKE
A Division of the National Rifle Association

NRA Institute for Legislative Action
11250 Waples Mill Road
Fairfax, VA 22030
(703) 267-1160
(703) 267-3992 FAX

LOCKING THE REVOLVING DOOR ON CAREER CRIMINALS: 3 STRIKES AND YOU'RE OUT

WHAT IS "THREE STRIKES?" A Three Strikes and You're Out law requires criminals convicted of three separate, usually violent, felonies to serve life in prison without parole. The first was passed in Washington state in 1994, and NRA CrimeStrike "underwrote" the campaign. Today, Three Strikes is sweeping State legislatures, often tailored to meet the needs of individual States such as Georgia's new Two Strikes and You're Out law, and has been signed into Federal law. [Sources: USA Today, "NRA offers its muscle, money to Wash. effort," 3/8/94 and P.L.103-322, Title VII]

THREE STRIKES SAVES LIVES: Criminals released on parole commit additional crime. Within three years, 60% of State parolees are arrested for a felony or serious misdemeanor and overall, 56.6% are returned to prison for committing a new crime or other violation while still on parole. [Sources: U.S. Dept. of Justice, BJS, Recidivism of Prisoners Released in 1983 and National Corrections Reporting Program, 1991]

Failure Rates of State Prison Inmates on Parole

Type of Crime	Returned to Prison while on Parole	Successful Completion of Parole
Violent	50.9%	46.1%
Property	56.1%	41.5%
Drug	58.7%	42.0%

Note: Totals not 100% due to absconding, transfer, death, other. [Source: U.S. Dept. of Justice, National Corrections Reporting Program, 1991]

THREE STRIKES SAVES MONEY: It is cheaper to keep criminals in prison than to release them on parole: In 1990, BOTEC Analysis Corporation performed a cost-benefit analysis of the annual cost of incarceration versus cost of crime and found a savings of $134,000 per inmate per year of incarceration. A similar National Institute of Justice study found a savings of $405,000 per inmate per year of incarceration. [Sources: U.S. Dept. of Justice, The Case for More Incarceration, 1992, and National Institute of Justice, Research in Brief, Making Confinement Decisions, Edwin Zedlewski, July 1987] The California 3 Strikes and You're Out Committee estimates a net savings to California of $23 billion over five years, as follows:

Estimated Savings due to California Three Strikes

Year	Savings per Year	Costs per Year	Net Savings per Year
1995/96	$716 million	$383 million	$333 million
1996/97	$2.626 billion	$748 million	$1.878 billion
1997/98	$4.873 billion	$1.223 billion	$3.650 billion
1998/99	$8.437 billion	$1.777 billion	$6.660 billion
1999/2000	$12.816 billion	$2.331 billion	$10.485 billion

WILL THREE STRIKES RESULT IN AN ELDERLY PRISON POPULATION? Not if the State doesn't want it to. Increasingly, States are drafting Three Strikes statutes that permit but do not require the supervised or other release of inmates upon reaching a certain age, often age 65.

WILL THREE STRIKES PUT THIEVES IN JAIL FOR LIFE? Not if the State doesn't want it to. Statutes can easily be crafted so only violent felonies count as "strikes." Alternatively, some States choose to include "nonviolent" repeat offenders, citing two considerations: 1) "nonviolent" offenders may actually be violent, since 80-90% of all convictions are the result of plea bargains in which the defendant pleads guilty to a lesser, often nonviolent, charge in return for not forcing the State to prosecute the more serious, often violent, charge; and 2) "nonviolent" criminals frequently become violent, since within just three years of release, 19% of "nonviolent" prisoners are arrested for violent crime. [Sources: Criminal Justice?, Bidinotto, p.74; U.S. Dept. of Justice, Violent Crime in the United States, March 1991, p. 15]

3 STRIKES AND YOU'RE OUT
Saves Taxpayers Billions!

Five Year Projection

SAVINGS

	Inmates Added Under 3 Strikes	Savings Per Incarcerated Criminal Per Year	Total Savings Per Year
1995/96	3,580	$200,000	$ 716 Million
1996/97	13,128	$200,000	$ 2,626 Million
1997/98	24,364	$200,000	$ 4,873 Million
1998/99	42,186	$200,000	$ 8,437 Million
1999/00	64,079	$200,000	$12,816 Million
Five Year Totals	147,337		$29.5 Billion

COSTS

	Inmates Added Under 3 Strikes	Cost To Incarcerate 3 Strikes Prisoners Per Year	Capital Expenditures (Prison Construction)	Total Annual Costs
1995/96	3,580	$ 75 Million	$308 Million	$ 383 Million
1996/97	13,128	$ 310 Million	$438 Million	$ 748 Million
1997/98	24,364	$ 707 Million	$516 Million	$1,223 Million
1998/99	42,186	$1,181 Million	$596 Million	$1,777 Million
1999/00	64,079	$1,658 Million	$673 Million	$2,331 Million
Five Year Totals	147,337	$3,931 Million	$2,531 Million	$6.5 Billion

Five Year Savings.....$29.5 Billion
Five Year Costs.....$ 6.5 Billion

5 Year Net Benefit to California.....$23 Billion

Sources: California Department of Corrections and California Office of Planning and Research

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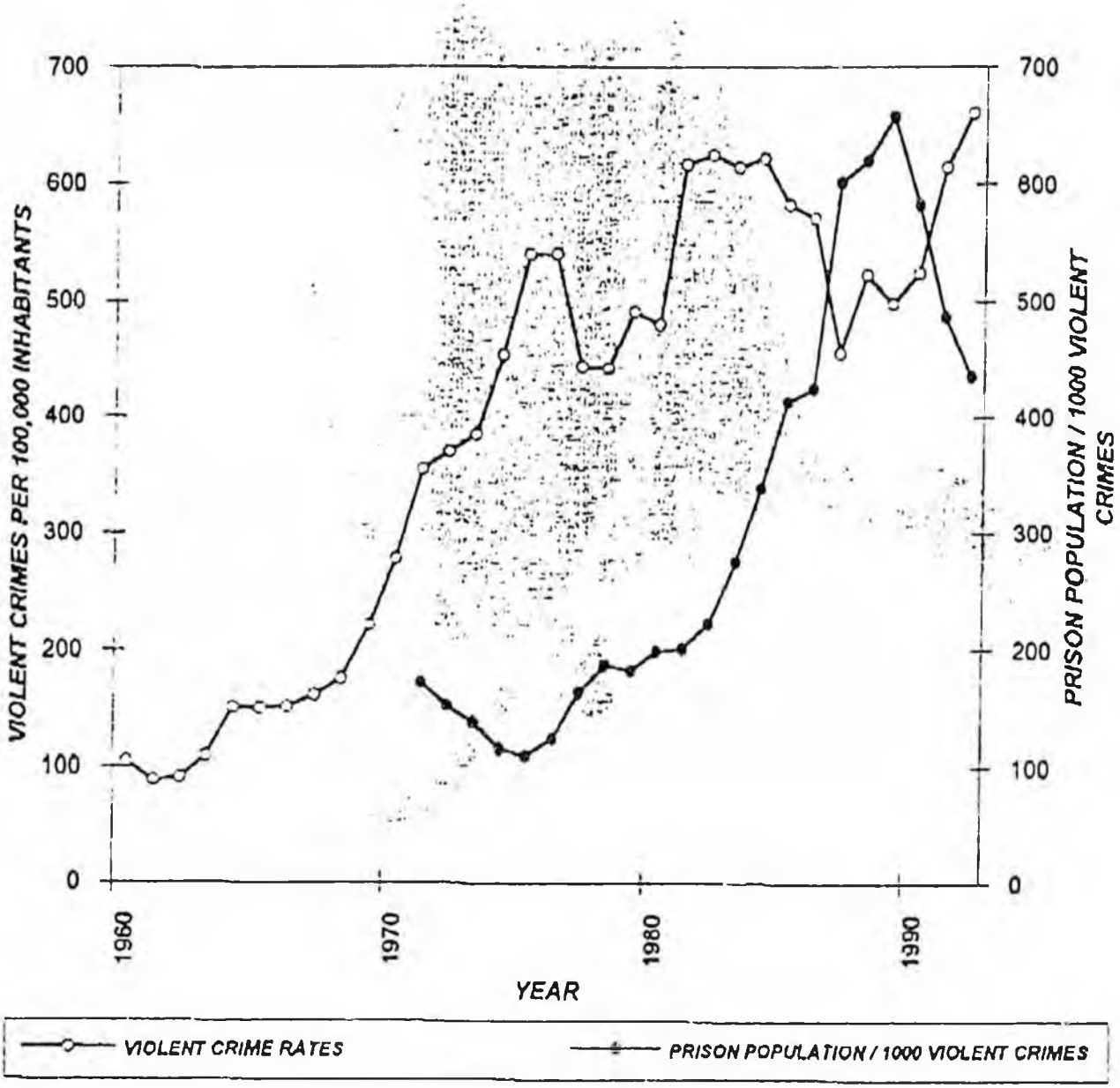
VIOLENT CRIME RATES VS. PRISON POPULATION PER 1000 VIOLENT CRIMES (1960 - 1992): ALASKA



Violent Crimes include murder, rape, robbery, and assault.

Compiled from Department of Justice Data by CrimeStrike.

HOUSE BILL NO. 38

IN THE LEGISLATURE OF THE STATE OF ALASKA

NINETEENTH LEGISLATURE - FIRST SESSION

BY REPRESENTATIVE BUNDE

Introduced:
Referred:

A BILL

FOR AN ACT ENTITLED

"An Act relating to criminal sentencing; relating to the availability for good time credit for offenders convicted of certain first degree murders; relating to mandatory life imprisonment, parole, good time credit, pardon, commutation of sentence, modification or reduction of sentence, reprieve, furlough, and service of sentence at a correctional restitution center for offenders with at least three serious felony convictions; and amending Alaska Rule of Criminal Procedure 35."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FINDINGS AND INTENT. (a) The legislature finds that

(1) community protection from persistent offenders is a priority for any civilized society;

(2) a large percentage of criminal offenders convicted in this state have prior criminal histories;

(3) punishments for criminal offenses should be proportionate to both the

seriousness of the crime and the prior criminal history of the offender;

(4) the legislature has a right and the responsibility to determine when to impose a life sentence.

(b) By sentencing three-time, most serious offenders to prison for life without the possibility of parole, the legislature intends to

(1) improve public safety by placing the most dangerous criminals in prison;

(2) reduce the number of serious, repeat offenders by tougher sentencing;

(3) set proper and simplified sentencing practices that both victims and persistent offenders can understand; and

(4) restore public trust in our criminal justice system.

* Sec. 2. AS 12.55.025(e) is amended to read:

(e) Except as provided in (g) and (h) of this section, if the defendant has been convicted of two or more crimes, sentences of imprisonment shall run consecutively. If the defendant is imprisoned upon a previous judgment of conviction for a crime, the judgment shall provide that the imprisonment commences at the expiration of the term imposed by the previous judgment. Nothing in AS 12.55.125(a) or (l) limits the court's ability to impose consecutive sentences.

* Sec. 3. AS 12.55.125(c) is amended to read:

(c) A defendant convicted of a class A felony may be sentenced to a definite term of imprisonment of not more than 20 years, and shall be sentenced to the following presumptive terms, subject to adjustment as provided in AS 12.55.155 - 12.55.175:

(1) if the offense is a first felony conviction and does not involve circumstances described in (2) of this subsection, five years;

(2) if the offense is a first felony conviction, other than for manslaughter, and the defendant possessed a firearm, used a dangerous instrument, or caused serious physical injury during the commission of the offense, or knowingly directed the conduct constituting the offense at a uniformed or otherwise clearly identified peace officer, fire fighter, correctional officer, emergency medical technician, paramedic, ambulance attendant, or other emergency responder who was engaged in the performance of official duties at the time of the offense, seven years;

(3) if the offense is a second felony conviction, 10 years ;

(4) if the offense is a third felony conviction and the defendant is not subject to sentencing under (l) of this section, 15 years.

* Sec. 4. AS 12.55.125(i) is amended to read:

(i) A defendant convicted of sexual assault in the first degree or sexual abuse of a minor in the first degree may be sentenced to a definite term of imprisonment of not more than 30 years, and shall be sentenced to the following presumptive terms, subject to adjustment as provided in AS 12.55.155 - 12.55.175:

(1) if the offense is a first felony conviction and does not involve circumstances described in (2) of this subsection, eight years;

(2) if the offense is a first felony conviction, and the defendant possessed a firearm, used a dangerous instrument, or caused serious physical injury during the commission of the offense, 10 years;

(3) if the offense is a second felony conviction, 15 years;

(4) if the offense is a third felony conviction and the defendant is not subject to sentencing under (l) of this section, 25 years.

* Sec. 5. AS 12.55.125(j) is amended to read:

(j) A defendant sentenced to a mandatory term of imprisonment of 99 years under (a) or (l) of this section may apply for a modification or reduction of sentence under the Alaska Rules of Criminal Procedure after serving one-half of the mandatory term without consideration of good time earned under AS 33.20.010.

* Sec. 6. AS 12.55.125 is amended by adding a new subsection to read:

(l) Notwithstanding any other provision of law, a defendant convicted of an unclassified or class A felony offense shall be sentenced to a mandatory term of imprisonment of 99 years when the defendant has been previously convicted of two or more most serious felonies and the prosecuting attorney has filed a notice of intent to seek a 99-year mandatory sentence. If a defendant is sentenced to a mandatory 99-year sentence under this section,

(1) imprisonment for the prescribed mandatory term may not be suspended under AS 12.55.080;

(2) imposition of sentence may not be suspended under AS 12.55.085;

(3) imprisonment for the prescribed mandatory term may not otherwise

be reduced.

* Sec. 7. AS 12.55.145(a) is amended to read:

(a) For purposes of considering prior convictions in imposing sentence under

(1) AS 12.55.125(c), (d)(1), (d)(2), (e)(1), (e)(2), or (i),

(A) [(1)] a prior conviction may not be considered if a period of 10 or more years has elapsed between the date of the defendant's unconditional discharge on the immediately preceding offense and commission of the present offense unless the prior conviction was for an unclassified or class A felony;

(B) [(2)] a conviction in this or another jurisdiction of an offense having elements similar to those of a felony defined as such under Alaska law at the time the offense was committed is considered a prior felony conviction;

(C) [(3)] two or more convictions arising out of a single, continuous criminal episode during which there was no substantial change in the nature of the criminal objective are considered a single conviction unless the defendant was sentenced to consecutive sentences for the crimes; offenses committed while attempting to escape or avoid detection or apprehension after the commission of another offense are not part of the same criminal episode or objective;

(2) AS 12.55.125(l),

(A) a conviction in this or another jurisdiction of an offense having elements similar to those of a most serious felony is considered a prior most serious felony conviction;

(B) of the two or more previous most serious felony convictions, at least one of the previous convictions must have occurred before the commission of any of the other most serious felony offenses and at least one of the other most serious felony convictions must have occurred prior to the commission of the present felony offense.

* Sec. 8. AS 12.55.145(c) is amended to read:

(c) The defendant shall file with the court and serve on the prosecuting attorney notice of denial, consisting of a concise statement of the grounds relied

upon and that may be supported by affidavit or other documentary evidence, no later than 10 days before the date set for the imposition of sentence if [IF] the defendant

(1) denies

(A) the authenticity of a prior judgment of conviction;

(B) [,] that the defendant is the person named in the judgment;

(C) [,] that the elements of a prior offense committed in this or another jurisdiction are similar [SUBSTANTIALLY IDENTICAL] to those of a

(i) felony defined as such under Alaska law;

(ii) most serious felony, defined as such under Alaska law;

(D) [, OR] that a prior conviction occurred within the period specified in (a)(1)(A) [(a)(1)] of this section; or

(E) that a previous conviction occurred in the order required under (a)(2)(B) of this section; or

(2) [IF THE DEFENDANT] alleges that two or more purportedly separate prior convictions should be considered a single conviction under (a)(1)(C) [(a)(3)] of this section [, THE DEFENDANT SHALL FILE WITH THE COURT AND SERVE ON THE PROSECUTING ATTORNEY NOTICE OF DENIAL NO LATER THAN 10 DAYS BEFORE THE DATE SET FOR IMPOSITION OF SENTENCE. THE NOTICE OF DENIAL MUST INCLUDE A CONCISE STATEMENT OF THE GROUNDS RELIED UPON AND MAY BE SUPPORTED BY AFFIDAVIT OR OTHER DOCUMENTARY EVIDENCE].

* Sec. 9. AS 12.55.145(d) is amended to read:

(d) Matters alleged in a notice of denial shall be heard by the court sitting without a jury. If the defendant introduces substantial evidence that the defendant is not the person named in a prior judgment of conviction, that the judgment is not authentic, that the conviction did not occur within the period specified in (a)(1)(A) [(a)(1)] of this section, [OR] that a conviction should not be considered a prior felony conviction under

(a)(1)(B) [(a)(2)] of this section or a prior most serious felony conviction under (a)(2)(A) of this section, or that a previous conviction did not occur in the order required under (a)(2)(B) of this section, then the burden is on the state to prove the contrary beyond a reasonable doubt. The burden of proof that two or more convictions should be considered a single conviction under (a)(1)(C) [(a)(3)] of this section is on the defendant by clear and convincing evidence.

* **Sec. 10.** AS 12.55.145 is amended by adding a new subsection to read:

(f) Under this section, a prior conviction has occurred when a defendant has entered a plea of guilty, guilty but mentally ill, or nolo contendere, or when a verdict of guilty or guilty but mentally ill has been returned by a jury or by the court.

* **Sec. 11.** AS 12.55.155(c)(20) is amended to read:

(20) the defendant was on furlough under AS 33.30 or on parole or probation for another felony charge or conviction that would be considered a prior felony conviction under AS 12.55.145(a)(1)(B) [AS 12.55.145(a)(2)];

* **Sec. 12.** AS 12.55.185 is amended by adding a new paragraph to read:

(14) "most serious felony" means any unclassified or class A felony prescribed under AS 11 or an attempt or conspiracy to commit, or criminal solicitation under AS 11.31.110 of, an unclassified or class A felony prescribed under AS 11.

* **Sec. 13.** AS 33.16.090(b) is amended to read:

(b) Except as provided in (e) of this section, a prisoner is not eligible for discretionary parole during the term of a presumptive sentence; however, a prisoner is eligible for discretionary parole during a term of sentence enhancement imposed under AS 12.55.155(a) or during the term of a consecutive or partially consecutive presumptive sentence imposed under AS 12.55.025(e) or (g). A prisoner sentenced to a mandatory 99-year term under AS 12.55.125(a) or (l) is not eligible for discretionary parole during the entire term.

* **Sec. 14.** AS 33.20.010(a) is amended to read:

(a) Except as provided in (b) of this section and notwithstanding AS 12.55.125(f)(3) and 12.55.125(g)(3), a prisoner convicted of an offense against the state or a political subdivision of the state and sentenced to a term of imprisonment that exceeds three days is entitled to a deduction of one-third of the term of imprisonment

rounded off to the nearest day if the prisoner follows the rules of the correctional facility in which the prisoner is confined. A prisoner is not eligible for a good time deduction if the prisoner has been sentenced to a mandatory 99-year term of imprisonment under

(1) AS 12.55.125(a) after the effective date of this Act; or

(2) AS 12.55.125(l).

* Sec. 15. AS 33.30.101 is amended by adding a new subsection to read:

(c) The regulations adopted under (a) of this section may not provide for the granting of a furlough of any type to a prisoner sentenced to a mandatory 99-year term of imprisonment under AS 12.55.125(l) unless the prisoner is at all times in the direct custody of a correctional officer while the prisoner is away from the correctional facility.

* Sec. 16. AS 33.30.161(b) is amended to read:

(b) To be eligible to serve time in a correctional restitution center, the prisoner

(1) must be employable or eligible to work on community service projects approved by the commissioner and agree to secure employment or participate in community service projects and obey the rules of the center;

(2) may not be serving a sentence for conviction of an offense

(A) involving violence or the use of force;

(B) under AS 11.41.320, 11.41.330, or AS 11.56.740;

(3) may not have been convicted of a felony offense, in the state or another jurisdiction, involving violence or the use of force; [AND]

(4) may not have been convicted of an offense under AS 11.41.410 - 11.41.470 or an offense in the state or another jurisdiction having elements substantially identical to an offense under AS 11.41.410 - 11.41.470; and

(5) may not have been sentenced to a mandatory 99-year term of imprisonment under AS 12.55.125(l).

* Sec. 17. APPLICABILITY. References to prior or previous convictions in this Act apply to all convictions occurring before, on, or after the effective date of this Act.

* Sec. 18. AS 12.55.125(j), amended by sec. 5 of this Act, has the effect of amending Alaska Rule of Criminal Procedure 35 by permitting a court to reduce or modify a mandatory sentence of imprisonment of 99 years imposed under AS 12.55.125(l) after the defendant has served one-

half of the mandatory term.

REPRESENTATIVE CON BUNDE
CO-CHAIR HEALTH, EDUCATION & SOCIAL SERVICES
VICE-CHAIR RULES

Alaska State Legislature
House of Representatives

DURING SESSION:
STATE CAPITOL, ROOM 108
JUNEAU, ALASKA 99801-1182
1 (907) 465-4843

DURING INTERIM:
716 WEST 4th AVENUE
ANCHORAGE, ALASKA 99501-2133
1 (907) 258-8168

DATE: January 31, 1995

TO: Rep.Jeanette James
Chair House State Affairs Committee

FROM: Representative Con Bunde
Co-Chair House HESS Committee

RE: request for a committee hearing

This memo is a request for a House State Affairs Committee hearing for HB 38.

HB 38, also known as 3-Strikes you're out, requires a mandatory 99-year sentence for an offender convicted of a third Class A or unclassified felony offense. The 99-year sentence will only be required if an offender has two separate prior class A or unclassified felony convictions.

The proposed legislation will help stop the revolving prison door. Additionally, this legislation will serve as a deterrent to many repeat offenders and may cause some to move to a state where their career of crime is not in danger of ending with a 99 year sentence.

DIVISION OF LEGAL SERVICES
LEGISLATIVE AFFAIRS AGENCY
STATE OF ALASKA

(907) 465-3867 or 465-2450
FAX (907) 465-2029
Mail Stop 3101

130 Seward Street, Suite 409
Juneau, Alaska 99801-2105

MEMORANDUM January 17, 1995

SUBJECT: Sectional Summary HB 38 (Work Order No. 9-LS0187\A)

TO: Representative Con Bunde
Attn. Pattie Swenson

FROM: Jerry Luckhaupt
Legislative Counsel

You have a requested a sectional summary of the above-described bill, please be advised that a sectional summary is not an authoritative statement of a bill and what it does - the bill is the best statement of its contents.

Section 1 of the bill provides findings and intent.

Section 2 of the bill amends AS 12.55.025(e) by clarifying that mandatory 99-year terms for certain three time felony offenders, added by sec. 6 of the bill, do not affect the court's ability to impose consecutive sentences.

Section 3 of the bill amends AS 12.55.125(c) by providing a conforming change to make it clear that the presumptive sentences provided in that subsection only apply if the defendant is not subject to sentencing as a third most serious felony offender under Sec. 6 of the bill.

Section 4 of the bill amends AS 12.55.125(i) by providing a conforming change to make it clear that the presumptive sentences provided in that subsection only apply if the defendant is not subject to sentencing as a third most serious felony offender under Sec. 6 of the bill.

Section 5 of the bill amends AS 12.55.125(j) to provide that a person sentenced to a mandatory term of 99 years under sec. 6 of the bill may apply to the court for a sentence reduction after serving one half of the sentence.

Section 6 of the bill amends AS 12.55.125 by providing a new subsection (l) that requires a court to sentence a defendant convicted of an unclassified or class A felony to a mandatory 99-year term of imprisonment when the defendant has been previously convicted of at least two most serious felonies. This section also provides that the mandatory 99-year term may not be suspended or reduced.

Section 7 of the bill amends AS 12.55.145(a) to explain how a conviction can qualify as a prior most serious felony conviction for purposes of sentencing under sec. 6 of the bill.

Section 8 of the bill amends AS 12.55.145(c) to provide the procedure by which a defendant may challenge the use of a conviction as a prior most serious felony conviction at sentencing under sec. 6 of the bill.

Section 9 of the bill amends AS 12.55.145(d) relating to the burden of proof of showing that a conviction is a prior most serious felony conviction for purposes of sentencing under sec. 6 of the bill.

Section 10 of the bill amends AS 12.55.145 by adding a new subsection (f) that explains when a prior conviction has occurred for use at sentencing under AS 12.55.145.

Section 11 of the bill amends AS 12.55.155(c)(20) by providing a conforming change to the change made in sec. 7 of the bill.

Section 12 of the bill amends AS 12.55.185 by adding a new paragraph (14) that provides a definition of what is a "most serious felony."

Section 13 of the bill amends AS 33.16.090(b) to provide that a person receiving a mandatory 99-year term under AS 12.55.125(l) is not eligible for discretionary parole during the entire 99-year term.

Section 14 of the bill amends AS 33.20.010(a) to provide that a person receiving a mandatory 99-year term under AS 12.55.125(a)(after the effective date of this bill) or AS 12.55.125(l) may not earn good time deductions from the 99-year term.

Section 15 of the bill amends AS 33.30.101 by adding a new subsection (c) that provides that furlough regulations may not allow for the granting of a furlough to any inmate serving a mandatory 99-year term under AS 12.55.125(l) except in certain limited instances.

Section 16 of the bill amends AS 33.30.161(b) by adding a new paragraph (5) that provides that an inmate serving a mandatory 99-year term under AS 12.55.125(l) may not serve the inmate's sentence in a correctional restitution center.

Section 17 of the bill provides an applicability section.

Section 18 of the bill provides notice that the change made in sec. 5 of the bill has the effect of modifying Alaska Rule of Criminal Procedure 35 which thereby necessitates a two-thirds vote.

GPL:glc
95-054.glc

UNCLASSIFIED AND CLASS A FELONY OFFENSES

Unclassifed Felonies

AS 11.41.100	Murder in the First Degree
AS 11.41.110	Murder in the Second Degree
AS 11.41.300	Kidnapping
AS 11.41.410	Sexual Assault in the First Degree
AS 11.41.434	Sexual Abuse of a Minor in the First Degree
AS 11.71.010	MICS in the First Degree

Class A Felony Offenses

AS 11.41.120	Manslaughter
AS 11.41.200	Assault in the First Degree
AS 11.41.500	Robbery in the First Degree
AS 11.46.400	Arson in the First Degree
AS 11.56.300	Escape in the First Degree
AS 11.61.190	Misconduct Involving Weapons in the First Degree
AS 11.61.240	Criminal Possession of Explosives (for murder/kidnapping)
AS 11.66.110	Promoting Prostitution in the First Degree
AS 11.71.020	MICS in the Second Degree

(sale of [illegible])

Crimes against the person, as defined in AS 33.30.901, include only offenses under AS 11.41.

Memorandum

State of Alaska
Department of Corrections
Division of Administrative Services
(907) 276-8122 Fax (907) 258-7512
800 A Street, Suite 102, Anchorage, Alaska

To: Diane Schenker
Special Assistant

Date: November 4, 1993

File: A-1-8A

Subject: Rep. Bunde request

From: Steve Schwartz
Research Analyst IV
Department of Corrections

The information requested from Rep. Bunde offices is as follows:

Inmate population on November 4, 1993 is 2,692 (In-state, out-of-state - excludes CRCs).

Inmates with two felony cases is 560 or 20.8%
Inmates with three felony cases is 253 or 9.4%
Inmates with four felony cases is 123 or 4.6%
Inmates with five or more felony cases is 133 or 4.9%

Rep. Bunde's original question was; "What percentage of prisoners in our present population have returned to jail after three felony convictions?" This percentage is 9.5% .

Thank you.

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To Patti Swenson	From B. Schenker
Co. Rep. Bunde	Co. DOC
Dept.	Phone #
Fax #	Fax #

HIGHLIGHTS

In 1960:

- There was a total of 3,384,200 million crimes reported to law enforcement authorities.
- The chance of being a victim of a crime was 1 in 53.
- There was a total of 288,460 million violent crimes reported to law enforcement authorities.
- The chance of being a victim of a violent crime was 1 in 622.
- While crimes were escalating throughout the 1960s, the actual prison population was on the decline; the aggregate national prison population fell from 190,000 in 1960 to 174,000 in 1972.

By 1980:

- There were 13,408,300 million crimes reported to law enforcement authorities.
- The crime rate had risen over 215 percent above its 1960 level.
- The chance of being a victim of crime was 1 in 17.
- There were 1,344,520 million violent crimes reported to law enforcement authorities.
- The violent crime rate had risen over 270 percent. The chance of being a victim of a violent crime was 1 in 168.

- From 1960 to 1980, the states that had the largest increases in imprisonment rates had the smallest increases in crime rates; while the states that had the sharpest decline in their incarceration rates had the largest increases in crime rates. The trend continued from 1980 to 1992.

- While the trends in each state are consistent, great differences exist among the states as to the degree of change. Between 1960 and 1980 the crime rate in California increased more than 125 percent, while in New Hampshire the crime rate increased over 579 percent.

By 1992:

- Crime rates had increased but had been curbed. There was a total of 14,438,200 million crimes reported to law enforcement authorities.
- The crime rate was 200 percent above its 1960 level.
- The chance of being a victim of a crime was 1 in 18.
- Violent crime had soared to 371 percent above its 1960 level.
- There were 1,932,246 million violent crimes reported to law enforcement authorities.
- The chance of being a victim of a violent crime was 1 in 132.

- Since 1987, the percentage of juvenile arrests for violent crimes has inc[illegible] more than 50 percent.

- In 1991, people under the age of 21 were responsible for more than o[illegible]rd of all murders in the country.

- Today, a woman faces four times the chance of being raped than in 1960. In 1960 a woman's chance of being raped was 1 in 10,400; in 1980 it was 1 in 2,717.

- In the ten states with the highest increases in incarceration rates between 1980 and 1992, crime rates were substantially reduced. Even so, in all ten states their crime rates are more than double their 1960 levels. The states are: New Hampshire, New Jersey, California, Connecticut, Massachusetts, Arizona, Rhode Island, Idaho, Alaska, and Delaware.

- Approximately, one-third of all violent crimes are committed by an offender who is on probation, parole or pretrial release. This year more than 1,200 violent crimes will be committed every day by convicted felons on probation or parole; almost 700 more will be committed by a defendant on pretrial release.

- In 1990, the average prison sentence for all felony offenses which resulted in a prison sentence was 6 years, months. However, the actual time served in prison for that sentence was 2 years, 1 month, only one-third of the sentence imposed.

- In 1990, the average prison sentence for violent offenses which resulted in a prison sentence was 9 years, 11 months; the time served was 3 years, 9 months, or 38 percent of the sentence imposed.

- From 1960 to 1991 the correctional expenditure per adult inmate increased by nearly double.

❖ In California, the Federal Court has dictated the number of changes of clothes which must be provided inmates each week.

It is unlikely that this understanding of the Eighth Amendment (which forbids "cruel and unusual punishment") is within the intent of the U.S. Constitution. The extraordinary burdens placed by Federal Courts on state corrections authorities have contributed to an escalation in prison costs. From 1960 to 1990, per-inmate operating costs (current expenditures) nearly doubled (inflation adjusted.)

Immense savings in direct costs to the public, as well as a significant reduction in crime with its consequent savings in both financial cost and human suffering, could be realized simply by putting and keeping more convicted offenders in prison. This is not an impossible task.

If the cost per inmate had remained within the inflation rate since 1960, nearly an additional $5.5 billion would have been available in 1990 alone for additional corrections capacity, tax reductions, or other public services. Some states achieved this level of cost control and better; the operating cost per inmate actually decreased in New Hampshire, Delaware and Oregon.

When prisoners are provided better institutional living conditions than they have available outside of prison, one of the primary purposes of punishment is undercut. "The infliction of disutility...is one of the objectives of criminal punishment; only if the only objective of punishment were incapacitation could it be argued that living conditions should be as comfortable in prison as outside."[3]

❖ ❖ ❖

TABLE 2.1: AVERAGE ESTIMATED TIME SERVED BY TYPE OF OFFENSE

Offense	Percent of Sentence Served	Mean Prison Sentence	Estimated Time Served
All Offenses	33.0%	6 yrs., 3 mos.	2 yrs., 1 month
Violent Offenses	38.0%	9 yrs., 11 mos.	3 yrs., 9 mos.
Murder	43.0%	20 yrs., 3 mos	8 yrs., 8 mos.
Rape	39.0%	13 yrs., 4 mos.	5 yrs., 2 mos.
Robbery	39.0%	9 yrs., 7 mos.	3 yrs., 9 mos.
Aggravated Assault	34.0%	6 yrs., 6 mos.	2 yrs., 2 mos.
Other	34.0%	7 yrs., 1 month	2 yrs., 5 mos.
Property Offenses	29.0%	5 yrs., 5 mos.	1 year, 7 mos.
Burglary	32.0%	6 yrs., 8 mos.	2 yrs., 2 mos.
Larceny	27.0%	4 yrs., 1 month	1 year, 1 month
Fraud	28.0%	4 yrs., 10 mos.	1 year, 4 mos.
Drug Offenses	29.0%	5 yrs., 6 mos.	1 year, 7 mos.
Possession	27.0%	4 yrs., 1 month	1 year, 1 month
Trafficking	31.0%	6 yrs., 2 mos.	1 year, 11 mos.
Weapons Offenses	40.0%	4 yrs., 2 mos.	1 year, 8 mos.

Source: Bureau of Justice Statistics, "Felony Sentences in State Courts, 1990"

[3] Davenport V. DeRobertis, 844 F.2d 1310, 1313 (7th Cir. 1988) (Posner, J.).

Western District of Washington[1], called on the LECC Advisory Board[2] to form a Triggerlock Task Force. This Task Force will meet on a regular basis to develop and implement strategies to "lock the triggers" of violent criminals - permanently. These criminals, especially repeat offenders, have demonstrated that only incarceration keeps them from committing new crimes. Recent FBI statistics reflect that violent crime was up 10 percent in 1991. Further studies show that 6 percent of the criminal population is committing 70 percent of the crime. One of the most effective ways to combat the armed criminal is to target these individuals and vigorously investigate, prosecute and imprison them. The Triggerlock Task Force will actively pursue drug traffickers and violent offenders, such as murderers, rapists, gang leaders -- virtually anyone who uses a gun in the commission of a crime is a potential target.

[1]The Western District of Washington is comprised of the 19 counties West of the crest of the Cascades - Clallam, Clark, Cowlitz, Grays Harbor, Island, Jefferson, King, Kitsap, Lewis, Mason, Pacific, Pierce, San Juan, Skagit, Skamania, Snohomish, Thurston, Wahkiakum and Whatcom Counties.

[2]The LECC Advisory Board is comprised of representatives from throughout Western Washington. City Agencies: Patrick Fitzsimons, Chief, Seattle Police Department; Rod Frederiksen, Chief, Vancouver Police Department; Don Pierce, Chief, Bellingham Police Department. County Agencies: C. Dan Clem, Kitsap County Prosecutor; Norm Maleng, King County Prosecutor, H. Steward Menefee, Grays Harbor County Prosecutor; Jim Scharf, Snohomish County Sheriff. State Agencies: Ken Eikenberry, Washington State Attorney General; George Tellevik, Chief, Washington State Patrol. Federal Agencies: William D. Gore, Special Agent-in-Charge, Federal Bureau of Investigation; Dixon McClary, Special Agent-in-Charge, Environmental Protection Agency; Ray McKinnon, Special Agent-in-Charge, Drug Enforcement Administration; Chris Nelson, Special Agent-in-Charge, Bureau of Alcohol, Tobacco and Firearms; Noreen Skagen, United States Marshal; Steve Carlisle, LECC Manager. Canadian Agency: John Sebastian, Chief Superintendent, Royal Canadian Mounted Police.

There are times when state laws do not provide appropriate sanctions against gun-using offenders. Federal prosecutions emanating from state violations can be of enormous help. Project Triggerlock has a simple, effective design - federal firearms laws carry tough penalties. They will now be fully employed against gun-using violators not only of federal laws, but of certain state and local laws as well. Absent evidentiary problems, there will be no plea bargains.

Since career criminals and violent offenders are normally encountered while committing street crime, their cases are usually investigated and prosecuted at the state and county levels. Project Triggerlock is not intended to compete with or supplant the traditional local response to violent criminals and career criminals. Rather, it is intended to assist state and local authorities in this area of enforcement by providing a method to refer those violent offenders who use or possess a firearm and are such a menace to their communities that a lengthy, mandatory prison term is the only appropriate response.

STRATEGY

The Triggerlock Task Force for the Western District of Washington will focus on three goals:

'Revolving door' syndrome feeds cycle of violence

By Sam Vincent Meddis
USA TODAY

In Washington, D.C., a teenager facing charges of deadly assault goes joy-riding while free on $1,000 bond. He fatally shoots a woman in another car because he feels like "bustin' somebody."

In Hugo, Okla., a 39-year-old with a record of assault and property crimes buys an assault weapon and kills two people, wounds three others, then kills himself.

Many blame the easy access to guns for such carnage. But similarly under fire is a justice system that, to critics, seems to do little more than recycle criminals to the streets.

That outrage has sparked calls for a crackdown on repeat criminals nationwide: Washington state voters approved stiffer sentencing last year, and California voters consider an initiative this fall.

About 30 states are weighing similar measures, most of which provide long sentences without early parole for many repeat offenders.

"People have just had it — they don't want to live with the fear anymore," says Paul McNulty of the First Freedom Coalition, a group that advocates stiff crime penalties.

Looking at the numbers, repeat crime seems to be becoming the nationwide norm:

▶ About 60% of prison inmates have been behind bars before, according to a U.S. Bureau of Justice Statistics study; 44% were on probation or parole when re-arrested.

▶ A mere 108,000 criminals in one federal study had a staggering 1.9 million arrests between them.

Recent U.S. and Pennsylvania studies found about 6% of criminals commit nearly 70% of violent crimes.

Targeting those criminals sounds simple. The reality is tougher.

'3 strikes, you're out' likely in California

In what could spark a new wave of citizen action nationwide, California voters are expected to approve a crackdown on career criminals in a November 1994 ballot measure.

The measure, known as "Three Strikes and You're Out," would double sentences for criminals convicted of second serious felonies — and require a minimum of 25 years to life for a third offense.

Thirty other states are considering similar measures to toughen sentences for repeat offenders.

Gov. Pete Wilson supports the concept, and supporters appear to have easily topped the 385,000 signatures needed to place it on the 1994 ballot.

The initiative has been pushed by Fresno photographer Mike Reynolds, whose 18-year-old daughter was killed by a parolee in June.

USA Today, p.7A 12/29/93

Violent crime up fivefold from '60s, legislators report

Cox News Service

WASHINGTON — Americans are almost five times more likely to be the victim of a violent crime in the 1990s than in 1960, the nation's state legislators reported Wednesday.

But "getting tough works," they said. States that increased their incarceration rates the most tended to reduce their violent crime rates the most, the lawmakers' "Report Card on Crime and Punishment" showed.

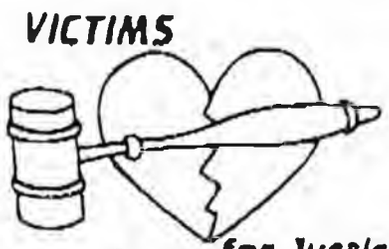
"The message here is unequivocal. Leniency is associated with higher crime rates; getting tough brings crime rates down," said Samuel Brunelli, executive director of the American Legislative Exchange Council, the nation's largest bipartisan association of state legislators.

The group released a study analyzing FBI crime statistics between 1960 and 1992 that shows how America has become a dramatically more dangerous place to live during the past three decades. In 1960, an American's chances of being a victim of a violent crime were 1 in 622. By 1992, the odds were 1 in 132.

"When the odds of being a victim of a violent crime increase five times over 32 years, there is an obvious problem with America's criminal justice system," said Brunelli.

"Today, criminals' rights are protected over victims'," he said. "The result is our schools, streets, neighborhoods and homes are unsafe, and crime is clearly the leading cause of America's decaying social fabric."

The report indicated that violent crime could be reduced by keeping known criminals off the streets.



Representative Con Bunde
State Capital, Room 108
Juneau, Alaska 99801-1182
Fax 1 (907) 465-3871

Jan 24, 1995

HB 38

Dear Representative Bunde,

Victims for Justice strongly supports "3 Strikes, You're Out". The "revolving door" system costs the state an enormous amount of money in law enforcement and legal fees each year, with no count of cost to the victims. It is time to stop this nonsense!

According to a study done by the Justice Department; of all crimes committed in this nation, only 15-20% of the criminals are apprehended and only 2-3% go to prison. Furthermore, 75-80% of all criminals who are released from prison reoffend within 36 months for the same offense!

Justice Charles L. Weltner sums it up well saying: "Right now a person who has been through the system and is contemplating a crime probably vies things as follows: 1. If I do it I won't get caught 2. If I get caught I won't get prosecuted, 3. If I get prosecuted I won't get convicted, 4. If I get convicted I won't go to prison, 5. If I go to prison I won't be there for very long". Given the statistics above, this assessment is real.

Criminals today are more violent than even a decade ago, and the cost to society is greater than the cost of keeping an offender incarcerated. Court costs are easily calculated but the cost to the victim is impossible to calculate. Victims never receive proper compensation or even proper justice through the system. With Alaska's modified matrix system DOC is releasing more serious offenders earlier, which will lead to more victimization. It is time to stop this madness! Please pass this important legislation! Build the necessary prisons, not resorts, but prisons and keep the repeat offenders in!

The prison system is told not heed the victims' pleas and public safety has been disregarded when releasing criminals. DOC claims to save money with early release into halfway houses, however the prior tracking system fails in this maze. Strikes Legislation will eliminate the errors of early release of repeat and dangerous offenders, which will ultimately save us millions in law enforcement, judicial, insurance, and victim costs.

Thank you for sponsoring this important bill!
Sincerely,

Sharon Nahorney
Janice Lienhart

HB

41

Alaska State Legislature

REPRESENTATIVE
JEANNETTE JAMES
P.O. Box 56622
North Pole, Alaska 99705
(907) 488-1546
FAX (907) 488-9006

While In Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-3743
FAX (907) 465-2381

House of Representatives
House District 34

HB 41 Gates of the Arctic Sponsor Statement

1-23-95

This Bill repeals the section of AS 42.40.355 that prohibits the State owned railroad from using the Gates of the Arctic National Preserve as a transportation corridor. In order to build rail a grade of 3% is the maximum, this requirement necessitates use of the Gates of the Arctic National Preserve.

Attached is 16 U.S.C. 410 hh (b)-(e), which states that Congress finds a need for access across the Western (Kobuk River) unit of the Gates of the Arctic National Preserve, and directs the Secretary (of the Interior) to permit such access.

The Alaska Railroad is the logical long term transportation provider for natural resources from Fairbanks to Nome. Currently there is no transportation corridor from east to west in Alaska.

Chapter 83 SLA 94 (HB 183) is an act directing the DOT to identify and delineate a transportation corridor between the Seward Peninsula and Fairbanks. The repeal of the prohibition will allow the Congressional intent and State Law to be followed.

REPRESENTATIVE
JEANNETTE JAMES
P.O. Box 56622
North Pole, Alaska 99705
(907) 488-0862

House District 34

Alaska State Legislature

While in Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-3745

House Of Representatives

Sponsor Statement HB 182 & HB 183

By Rep. Jeannette James

HB 182 and HB 183 are intended to initiate preliminary and ultimately result in final action necessary to properly review, identify and survey the best options for the establishment of a transportation/utility corridor from the Interior's existing transportation distribution hub to the western area of the Seward Peninsula near Nome.

The future of Alaskans residing north of the Alaska Range will require expansion of our existing transportation infrastructure. With the recent completion by the State of Alaska of its remaining land selection allotment, the major land ownership patterns are now discernable. There are four separate interior to the coast corridors now being evaluated on state owned land.

This legislation will direct the Dept. of Transportation to perform aerial reconnaissance, photography, interpretation and surveying. The DOT in the attached position paper supports this work. This work will identify areas with transportation corridors to be established and which offer the best cost effective options to access this vast resource rich area of our state.

The apprpriation for this project is included in HB 182 and will authorize the expenditure of the funds necessary to secure this very important multi-model land use transportation corridor as a step that will move us forward to a more positive economic future for a very large portion of Alaska.

2.

Alaska State Legislature

REPRESENTATIVE
JEANNETTE JAMES
P.O. Box 56622
North Pole, Alaska 99705
(907) 488-0862

House District 34

While in Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-3745

House Of Representatives

Sponsor Statement HB 182 & HB 183

By Rep. Jeannette James
Revised: 3/30/93

HB 182 and HB 183 are intended to initiate preliminary and ultimately result in final action necessary to properly review, identify and survey the best options for the establishment of a transportation/utility corridor from the Interior's existing transportation distribution hub to the western area of the Seward Peninsula near Nome.

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The apprpriation for this project is included in HB 182 and will authorize the expenditure of the funds necessary to secure this very important multi-model land use transportation corridor as a step that will move us forward to a more positive economic future for a very large portion of Alaska.

Alaska State Legislature

REPRESENTATIVE
JEANNETTE JAMES
P.O. Box 56622
North Pole, Alaska 99705
(907) 488-1546
FAX (907) 488-9006

While in Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-3743
FAX (907) 465-2381

House of Representatives

House District 34

MEMO

January 18 1995

To: Transportation Committee

From: Rep James

Re: Request for hearing on HB 41 Gates of the Arctic

Attn: Gary Davis Chair

Please schedule the above referenced Bill for a hearing at your earliest convenience.

Thompson TCC 452-8751 x 3227
rep on Substation
to report 2
Coal field in DNR 451-5000 Surveys
762-2165 Forest Inventory

Alaska State Legislature

REPRESENTATIVE
JEANNETTE JAMES
P.O. Box 56622
North Pole, Alaska 99705
(907) 488-1546
FAX (907) 488-9006

While in Juneau
State Capitol
Juneau, Alaska
99801-1182
(907) 465-3743
FAX (907) 465-2381

House of Representatives

House District 34

MEMO

January 19, 1995

To: Transportation Committee

From: Rep James

Re: Request for hearing on HB 41 Gates of the Arctic

Attn: Gary Davis Chair

Please schedule the above referenced Bill for a hearing at your earliest convenience.

A RESOLUTION

Supporting legislation to identify and delineate a transportation and utility corridor between Fairbanks and the Seward Peninsula for road, rail, pipeline, and electrical transmission purposes.

WHEREAS, House Bill 182 and House Bill 183 are now pending in the Alaska House of Representatives; and

WHEREAS, HB 183 directs the Northern Region of the Department of Transportation and Public Facilities to identify and delineate a transportation and utility corridor between Fairbanks and the Seward Peninsula; and

WHEREAS, the corridor would be sufficient to accommodate a road, an extension of the Alaska Railroad, pipelines for oil, natural gas, and coal slurries, and an electrical transmission line; and

WHEREAS, HB 182 appropriates $7.3 million to accomplish the purposes set out in HB 183; and

WHEREAS, the proposed corridor between Fairbanks and the Seward Peninsula would provide transportation access to highly mineralized areas of western Alaska; and

WHEREAS, HB 182 and HB 183 work in conjunction with previous actions by the Alaska Legislature to designate a rail corridor between Eielson AFB and the Canadian border; and

WHEREAS, the benefit to the greater Fairbanks area would be enormous as the hub of a rail network connecting the Seward Peninsula with Anchorage and the Lower 48 states through Canada;

NOW THEREFOR BE IT RESOLVED, that the Fairbanks Chamber of Commerce supports the passage of HB 182 and HB 183 by the second session of the 18th Alaska Legislature.

BE IT FURTHER RESOLVED, that copies of this resolution shall be sent to the appropriate committee chairmen in the Alaska House and Senate.

GATES OF THE ARCTIC NATIONAL PARK AND PRESERVE

ALASKA

Albers Equal Area Projection

Scale 1:2,000,000

0 50 miles

This map illustrates the administrative boundary of the Gates of the Artic National Park and Preserve. Land status is not represented.

Index Map

WORK ORDER REQUEST FORM W.O. [19] LS-0203

KEYWORDS: TRANSPORTATION ASSIGNED: Utermohle

REQUEST FOR: New Bill TAKEN BY: Cook

SUBJECT: AK Railroad Right-of-Way thru Gates of Arctic

REQUESTED FOR: REP JAMES BY: Walt PHONE: 465-3743

DELIVER TO: Rep. James, Cap 501

INSTRUCTIONS: Delete statute that prohibits railroad right-of-way through Gates of the Arctic.

OBTAIN	SPECIAL DRAFTING INSTRUCTIONS ATTACHED [ ] AUTHORIZED TO CONFER WITH _____ RETURN _____ _____ TO REQUESTOR APPROVED: X DIRECTOR, LEGAL SERVICES
REVIEWED _____ IN 11/14/94 DUE _____ TYPED: Draft _____ Date _____ Final _____ Date _____ PROOFED _____ DELIVERED _____	SPECIAL INSTRUCTIONS to TYPING/PROOFING Request for DRAFT

Sponsor

ALDP1010[11/15/94]

FISCAL NOTE

STATE OF ALASKA

BILL NO. HB 41

1995 LEGISLATIVE SESSION

Revision Date:

Dept. Affected: DOT&PF

Title: An Act Repealing prohibition against applications for a R/W across the Gates of the Arctic National Preserve

BRU: Northern Region

Component: Design and Construction

Sponsor: Representative Jeannette James

Requester: Representative Jennette James

COMPONENT SERIAL NO. 584

Expenditures/Revenues (Thousands of Dollars)

OPERATING EXPENDITURES	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01
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	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1006 GF/MHTIA	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0	0.0

Estimate of any current year (FY95) cost: $ 0.0

POSITIONS

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

ANALYSIS: (Attach a separate page if necessary)

Will not impact the DOT&PF. This proposed legislation deals with the state owned railroad.

Prepared by: Loren Rasmussen

Phone: 465-2960

Division: Engineering and Operations Standards

Date: 01/24/95

Approved by Commissioner: Joseph L. Perkins

Date: 01/24/95

Agency: Department of Transportation and Public Facilities

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for commercial and other uses authorized under this chapter if the use does not restrict other parallel uses of the utility corridor.

(c) The corporation may lease, subject to AS 42.40.285 and (d) of this section, grant easements in or permits for, or otherwise authorize use of portions of rail land. However, the corporation may not convey its entire interest in rail land except as provided in AS 42.40.285, 42.40.370(d) and 42.40.400.

(d) A lease or disposal of land approved by the legislature under AS 42.40.285 by the corporation to a party other than the state shall be made at fair market value as determined by a qualified appraiser or by competitive bid. (§ 2 ch 153 SLA 1984)

Opinions of attorney general. — Alaska Const., art. VIII, § 10, requiring public notice of the leasing of state lands, requires that the Alaska Railroad give prior public notice whenever it proposes to lease railroad lands. The word "state" throughout article VIII encompasses all lands held in common by the political community of Alaskan citizens rather than only those lands nominally held by one of the principle departments of the executive branch. March 8, 1985, Op. Att'y Gen.

Lands belonging to the Alaska Railroad Corporation are not within "legislative designations" as that term is used in AS 38.05.800, regarding reconstitution and administration of mental health land trust, and accordingly may not be designated by the commissioner of natural resources as replacement mental health trust lands. November 17, 1987, Op. Att'y Gen.

Sec. 42.40.355. Prohibition. Notwithstanding any other provision in this chapter, the state-owned railroad as defined under 45 U.S.C. 1202(14) may not apply for a right-of-way across, or exercise eminent domain in, the western (Kobuk River) unit of the Gates of the Arctic National Preserve under 16 U.S.C. 410hh(4)(b) — (e). (§ 2 ch 153 SLA 1984)

Sec. 42.40.360. Request for land. (a) The board may nominate federal land it determines may be useful for present or future railroad purposes for selection under the Alaska Statehood Act (P.L. 85 — 508, 72 Stat. 339), as amended, and request the commissioner of natural resources to select the land for the state through the federal land selection process.

(b) The board may identify and request the commissioner of natural resources to convey land necessary or useful for present or future railroad purposes owned by or tentatively approved for transfer to the state, including land not contiguous with a railroad utility corridor or rail land. The request must include a statement of and justification for the present or future railroad use. Upon receipt of a request, the commissioner shall temporarily reserve the land identified in the request for railroad purposes and defer disposal or lease of that land under other laws to a party other than the corporation. The temporary reservation of land is subject to valid existing rights and remains in effect for 180 days. (§ 2 ch 153 SLA 1984)

CS FOR HOUSE BILL NO. 183(TRA)

IN THE LEGISLATURE OF THE STATE OF ALASKA

EIGHTEENTH LEGISLATURE - FIRST SESSION

BY THE HOUSE TRANSPORTATION COMMITTEE

Offered: 3/31/93
Referred: Resources, Finance

Sponsor(s): REPRESENTATIVE JAMES

A BILL

FOR AN ACT ENTITLED

"An Act directing the identification and delineation of a transportation and utility corridor between Fairbanks and the Seward Peninsula for road, rail, pipeline, and electrical transmission purposes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. FAIRBANKS - SEWARD PENINSULA TRANSPORTATION AND UTILITY CORRIDOR. (a) Not later than April 1, 1995, the northern region of the Department of Transportation and Public Facilities shall identify and delineate a proposed transportation and utility corridor between Fairbanks and the western end of the Seward Peninsula. The corridor shall be sufficient to accommodate construction of

(1) a road;

(2) an extension of the Alaska Railroad;

(3) oil, natural gas, or coal slurry pipelines, or any of them; and

(4) an electrical transmission line.

(b) In performing the work required by (a) of this section,

Chap 83 SLA 93

(1) the railroad alignment and identification of a railroad right-of-way of not less than 500 feet shall guide the identification and delineation of the corridor; and

(2) the northern region shall consider the following factors:

(A) grade and alignment standards that are commensurate with rail and road construction standards;

(B) availability of construction materials;

(C) safety;

(D) service to adjacent communities;

(E) significant environmental concerns;

(F) use of public land to the maximum degree possible; and

(G) minimization of probable construction costs.

(c) Within 90 days after receiving a report transmitting the work of the northern region of the department under (a) of this section, the commissioner of transportation and public facilities shall, in conformity with AS 44.62 (Administrative Procedure Act), if necessary, adopt a regulation approving, modifying, or rejecting the proposed corridor.

(d) If the commissioner of transportation and public facilities approves or modifies the proposed corridor when presented under (c) of this section,

(1) the Department of Natural Resources shall promptly classify, or reclassify, and reserve any state land within the corridor for use as a corridor; and

(2) the Department of Transportation and Public Facilities shall

(A) exercise its authority under AS 19.05.040 to acquire rights-of-way across land within the corridor that is subject to the state's power of condemnation; and

(B) work with federal officials to secure reclassification and withdrawal of federal land in the corridor for reservations and rights-of-way across the federal land for use as a corridor.

(e) The requirements of AS 38.05 (Alaska Land Act) relating to classification and reclassification of land are inapplicable to actions taken under this section.

(f) In this section, "corridor" means the transportation and utility corridor required to be identified and delineated by (a) of this section.

* Sec. 2. This Act takes effect immediately under AS 01.10.070(c).

to exceed $8,500,000 for the acquisition of lands and interests therein, as provided in this title [16 USCS §§ 410gg et seq.]. Notwithstanding any other provision of law, no fees shall be charged for entrance or admission to the park.
(June 28, 1980, P. L. 96-287, Title I, § 106, 94 Stat. 600.)

HISTORY; ANCILLARY LAWS AND DIRECTIVES

Other provisions:

Authorizations effective October 1, 1980; contractual, obligatory, and payment authority provided in appropriations. Act June 28, 1980, P. L. 96-287, Title IV, § 401, 94 Stat. 602, provided: "Authorizations of moneys to be appropriated under this Act [which, among other things, enacted this section; for full classification, consult USCS Tables volumes] shall be effective on October 1, 1980. Notwithstanding any other provision of this Act, authority to enter into contracts, to incur obligations, or to make payments under this Act shall be effective only to the extent, and in such amounts, as are provided in advance in appropriation Acts.".

ALASKAN NATIONAL PARKS

CROSS REFERENCES

This subchapter is referred to in 16 USCS § 3191.

§ 410hh. Establishment of new areas

The following areas are hereby established as units of the National Park System and shall be administered by the Secretary under the laws governing the administration of such lands and under the provisions of this Act:

(1) Aniakchak National Monument, containing approximately one hundred and thirty-eight thousand acres of public lands, and Aniakchak National Preserve, containing approximately three hundred and seventy-six thousand acres of public lands, as generally depicted on map numbered ANIA-90,005, and dated October 1978. The monument and preserve shall be managed for the following purposes, among others: To maintain the caldera and its associated volcanic features and landscape, including the Aniakchak River and other lakes and streams, in their natural state; to study, interpret, and assure continuation of the natural process of biological succession; to protect habitat for, and populations of, fish and wildlife, including, but not limited to, brown/grizzly bears, moose, caribou, sea lions, seals, and other marine mammals, geese, swans, and other waterfowl and in a manner consistent with the foregoing, to interpret geological and biological processes for visitors. Subsistence uses by local residents shall be permitted in the monument where such uses are traditional in accordance with the provisions of title VIII [16 USCS §§ 3111 et seq.].

(2) Bering Land Bridge National Preserve, containing approximately two million four hundred and fifty-seven thousand acres of public land, as

generally depicted on map numbered BELA-90,005, and dated October 1978. The preserve shall be managed for the following purposes, among others: To protect and interpret examples of arctic plant communities, volcanic lava flows, ash explosions, coastal formations, and other geologic processes; to protect habitat for internationally significant populations of migratory birds; to provide for archeological and paleontological study, in cooperation with Native Alaskans, of the process of plant and animal migration, including man, between North America and the Asian Continent; to protect habitat for, and populations of, fish and wildlife including, but not limited to, marine mammals, brown/grizzly bears, moose, and wolves; subject to such reasonable regulations as the Secretary may prescribe, to continue reindeer grazing use, including necessary facilities and equipment, within the areas which on January 1, 1976, were subject to reindeer grazing permits, in accordance with sound range management practices; to protect the viability of subsistence resources; and in a manner consistent with the foregoing, to provide for outdoor recreation and environmental education activities including public access for recreational purposes to the Serpentine Hot Springs area. The Secretary shall permit the continuation of customary patterns and modes of travel during periods of adequate snow cover within a one-hundred-foot right-of-way along either side of an existing route from Deering to the Taylor Highway, subject to such reasonable regulations as the Secretary may promulgate to assure that such travel is consistent with the foregoing purposes.

(3) Cape Krusenstern National Monument, containing approximately five hundred and sixty thousand acres of public lands, as generally depicted on map numbered CAKR-90,007, and dated October 1979. The monument shall be managed for the following purposes, among others: To protect and interpret a series of archeological sites depicting every known cultural period in arctic Alaska; to provide for scientific study of the process of human population of the area from the Asian Continent; in cooperation with Native Alaskans, to preserve and interpret evidence of prehistoric and historic Native cultures; to protect habitat for seals and other marine mammals; to protect habitat for and populations of, birds, and other wildlife, and fish resources; and to protect the viability of subsistence resources. Subsistence uses by local residents shall be permitted in the monument in accordance with the provisions of title VIII [16 USCS §§ 3111 et seq.].

(4) (a) Gates of the Arctic National Park, containing approximately seven million fifty-two thousand acres of public lands, Gates of the Arctic National Preserve, containing approximately nine hundred thousand acres of Federal lands, as generally depicted on map numbered GAAR-90,011, and dated July 1980. The park and preserve shall be managed for the following purposes, among others: To maintain the wild and undeveloped character of the area, including opportunities for visitors to experience solitude, and the natural environmental integrity and scenic beauty of the mountains, forelands,

rivers, lakes, and other natural features; to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering, and other wilderness recreational activities; and to protect habitat for and the populations of, fish and wildlife, including, but not limited to, caribou, grizzly bears, Dall sheep, moose, wolves, and raptorial birds. Subsistence uses by local residents shall be permitted in the park, where such uses are traditional, in accordance with the provisions of title VIII [16 USCS §§ 3111 et seq.].

(b) Congress finds that there is a need for access for surface transportation purposes across the Western (Kobuk River) unit of the Gates of the Arctic National Preserve (from the Ambler Mining District to the Alaska Pipeline Haul Road) and the Secretary shall permit such access in accordance with the provisions of this subsection.

(c) Upon the filing of an application pursuant to section 1104(b), and (c) of this Act [16 USCS § 3164(b), (c)] for a right-of-way across the Western (Kobuk River) unit of the preserve, including the Kobuk Wild and Scenic River, the Secretary shall give notice in the Federal Register of a thirty-day period for other applicants to apply for access.

(d) The Secretary and the Secretary of Transportation shall jointly prepare an environmental and economic analysis solely for the purpose of determining the most desirable route for the right-of-way and terms and conditions which may be required for the issuance of that right-of-way. This analysis shall be completed within one year and the draft thereof within nine months of the receipt of the application and shall be prepared in lieu of an environmental impact statement which would otherwise be required under section 102(2)(C) of the National Environmental Policy Act [42 USCS § 4332(2)(C)]. Such analysis shall be deemed to satisfy all requirements of that Act [42 USCS §§ 4321 et seq.] and shall not be subject to judicial review. Such environmental and economic analysis shall be prepared in accordance with the procedural requirements of section 1104(e) [16 USCS § 3164(e)]. The Secretaries in preparing the analysis shall consider the following—

(i) Alternative routes including the consideration of economically feasible and prudent alternative routes across the preserve which would result in fewer or less severe adverse impacts upon the preserve.

(ii) The environmental and social and economic impact of the right-of-way including impact upon wildlife, fish, and their habitat, and rural and traditional lifestyles including subsistence activities, and measures which should be instituted to avoid or minimize negative impacts and enhance positive impacts.

(e) Within 60 days of the completion of the environmental and economic analysis, the Secretaries shall jointly agree upon a route for issuance of the right-of-way across the preserve. Such right-of-way

shall be issued in accordance with the provisions of section 1107 of this Act [16 USCS § 3167].

(5) Kenai Fjords National Park, containing approximately five hundred and sixty-seven thousand acres of public lands, as generally depicted on map numbered KEFJ-90,007, and dated October 1978. The park shall be managed for the following purposes, among others: To maintain unimpaired the scenic and environmental integrity of the Harding Icefield, its outflowing glaciers, and coastal fjords and islands in their natural state; and to protect seals, sea lions, other marine mammals, and marine and other birds and to maintain their hauling and breeding areas in their natural state, free of human activity which is disruptive to their natural processes. In a manner consistent with the foregoing, the Secretary is authorized to develop access to the Harding Icefield and to allow use of mechanized equipment on the icefield for recreation.

(6) Kobuk Valley National Park, containing approximately one million seven hundred and ten thousand acres of public lands as generally depicted on map numbered KOVA-90,009, and dated October 1979. The park shall be managed for the following purposes, among others: To maintain the environmental integrity of the natural features of the Kobuk river Valley, including the Kobuk, Salmon, and other rivers, the boreal forest, and the Great Kobuk Sand Dunes, in an undeveloped state; to protect and interpret, in cooperation with Native Alaskans, archeological sites associated with Native cultures; to protect migration routes for the Arctic caribou herd; to protect habitat for, and populations of, fish and wildlife including but not limited to caribou, moose, black and grizzly bears, wolves, and waterfowl; and to protect the viability of subsistence resources. Subsistence uses by local residents shall be permitted in the park in accordance with the provisions of title VIII [16 USCS §§ 3111 et seq.]. Except at such times when, and locations where, to do so would be inconsistent with the purposes of the park, the Secretary shall permit aircraft to continue to land at sites in the upper Salmon River watershed.

(7) (a) Lake Clark National Park, containing approximately two million four hundred thirty-nine thousand acres of public lands, and Lake Clark National Preserve, containing approximately one million two hundred and fourteen thousand acres of public lands, as generally depicted on map numbered LACL-90,008, and dated October 1978. The park and preserve shall be managed for the following purposes, among others: To protect the watershed necessary for perpetuation of the red salmon fishery in Bristol Bay; to maintain unimpaired the scenic beauty and quality of portions of the Alaska Range and the Aleutian Range, including active volcanoes, glaciers, wild rivers, lakes, waterfalls, and alpine meadows in their natural state; and to protect habitat for and populations of fish and wildlife including but not limited to caribou, Dall sheep, brown/grizzly bears, bald eagles, and peregrine falcons.

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TONY KNOWLES, GOVERNOR

☑ 794 UNIVERSITY AVENUE, SUITE 200
FAIRBANKS, ALASKA 99709-3645
PHONE: (907) 451-5000
FAX: 451-5050

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FAX: 696-0078

☐ 400 WILLOUGHBY AVENUE, 3RD FLOOR
JUNEAU, ALASKA 99801
PHONE: (907) 465-2520

January 30, 1995

Representative Jeanette James
State of Alaska House of Representatives
State Capitol, Room 501
Juneau, AK 99801-1182

Dear Representative James:

In response to a request from Mr. Walt Wilcox of your office, we are forwarding to you two of our reports which we hope will be of use to you: Information Circular 33; "Alaska's High Rank Coals" and Special Report 37, "Description of Alaska's Coal Resources".

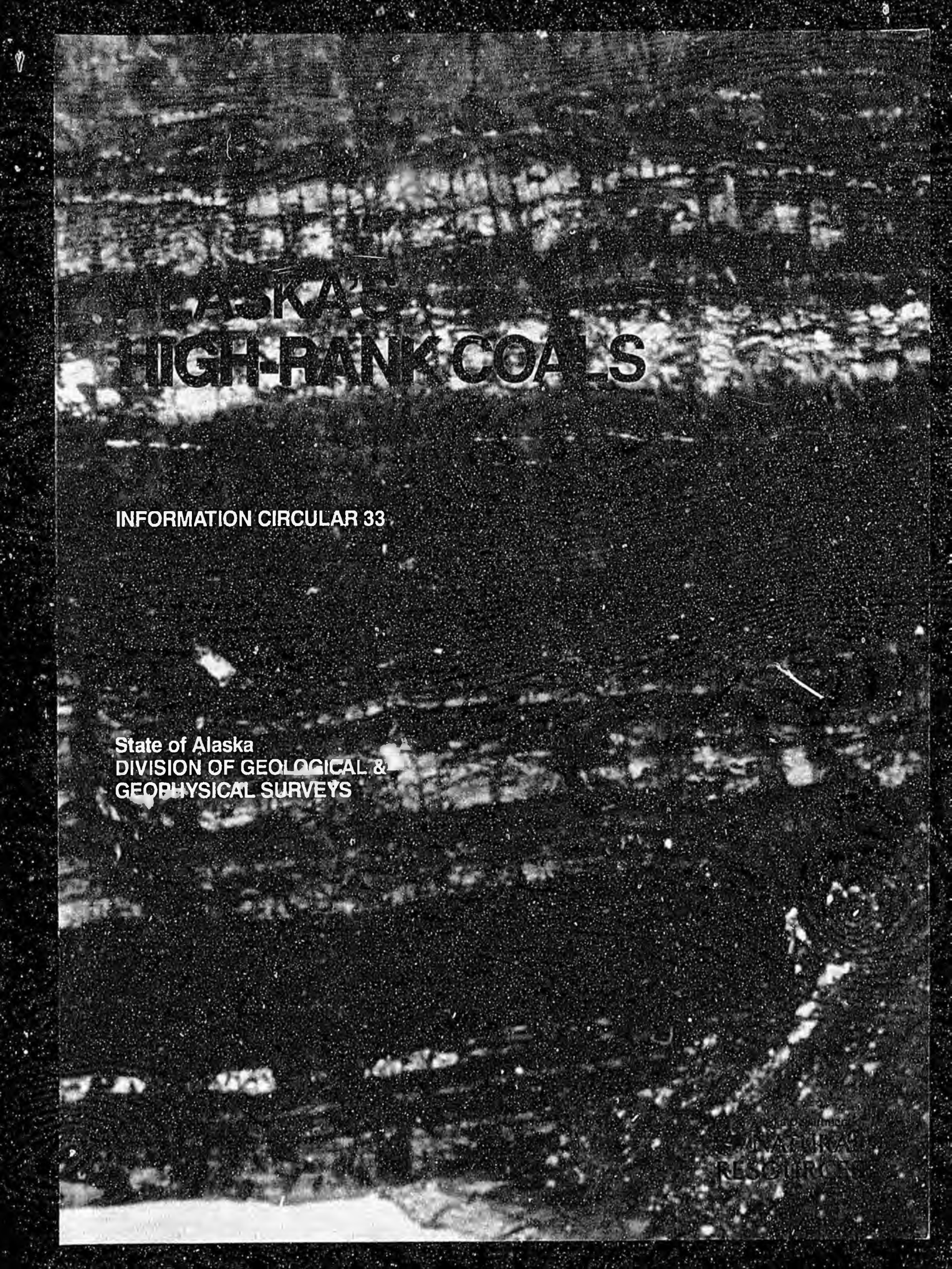
Please do not hesitate to contact us if you require additional information on Alaska's resources.

Sincerely,

Thomas E. Smith
Director & State Geologist

:keb

cc: Resource Information Section



ALASKA'S HIGH-RANK COALS

INFORMATION CIRCULAR 33

State of Alaska
DIVISION OF GEOLOGICAL &
GEOPHYSICAL SURVEYS

ALASKA'S HIGH-RANK COALS

A summary of high-rank coal resources in Alaska and their potential for mining and development.

First Edition 1990
Revised Edition 1993

Department of Natural Resources
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
Fairbanks, Alaska

Cover photo: *North limb of Wishbone Hill syncline, Matanuska Valley.* *(See fig. 8, p. 7.)*

STATE OF ALASKA
Walter J. Hickel, *Governor*

DEPARTMENT OF NATURAL RESOURCES
Glenn A. Olds, *Commissioner*

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
Thomas E. Smith, *State Geologist*

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FOREWORD

Although current coal production is limited to subbituminous coals, Alaska produced high rank coals from the Matanuska field until 1968. Plans are again under way for production from the Matanuska field. Deadfall syncline coal, being in close proximity to the Bering Sea, is another candidate for development and is receiving renewed attention. For example, seam K3 of this field is of high volatile A bituminous rank and has a maximum thickness of 17 feet, with an average ash content of 9 percent and over 10 feet of this seam averages less than 4 percent ash. Other exposures along Kukpowruk, Kokolik, and Utukok rivers are of similar high quality.

The low volatile bituminous coal of the Bering River field has been well explored. Some seams of this field have unusually low ash content and could be washed to produce clean coal containing less than 0.5 percent ash for special utilization purpose. Coals of the Alaska Peninsula, near Chignik, have been mined in the past for use in fish canneries. Alaska has extensive high rank coal deposits which await development.

P.D. Rao
Associate Director
Mineral Industry Research Laboratory

STATE AGENCIES INVOLVED IN COAL EXPLORATION, DEVELOPMENT AND MARKETING

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Robert Poe, *Director*

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Juneau, Alaska 99801
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Rod Swope, *Commissioner*

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Division of Mining (DOM)
Frontier Building
3601 C St., Suite 800
P.O. Box 107016
Anchorage, Alaska 99510
(907) 762-2163
Gerald L. Gallagher, *Director*

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(907) 451-2760
Robert B. Forbes, *Director and State Geologist*

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State Office Building, 9th Floor
P.O. Box D
Juneau, Alaska 99811
(907) 465-2500
Larry Merculieff, *Commissioner*

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Division of Business Development (DBD)
State Office Building, 9th Floor
P.O. Box D
Juneau, Alaska 99811
(907) 465-2094
James M. Parsons, *Director*
Tom Lawson, *Deputy Director*

Chief advocacy agency in state government for the mining industry. Provides liaison between state government and the private sector. Researches and publishes economic data on Alaska's mining industry.

• UNIVERSITY OF ALASKA
Mineral Industry Research Laboratory (MIRL)
210 O'Neill Resources Building
Fairbanks, Alaska 99775
(907) 474-7135 or 474-7136
Russell Ostermann, *Acting Director*
P.D. Rao, *Associate Director*

Conducts applied and basic research on the location, development, and use of Alaska's coal resources. Specializes in the mineralogical, chemical, and petrographic characterization of Alaska's coals and their preparation. Publishes reports and general information concerning coal mining and utilization in Alaska.

CONTENTS

FIGURES

TABLES

CONVERSION FACTORS

To convert	to	multiply by
acres	hectares	0.4047
feet	meters	0.3048
meters	feet	3.281
miles	kilometers	1.609
kilometers	miles	0.6214
square miles	square kilometers	2.590
tons*	metric tons	0.9072
Btu/lb	Kcal/Kg	0.5556

*All tonnages reported here are in short tons (2,000 lb).

ALASKA'S HIGH-RANK COALS

INTRODUCTION

It is estimated that as much as 55 percent of Alaska's abundant coal resources--approximately 3 trillion tons--is high-rank (bituminous) coal (fig. 1). Bituminous coal deposits are found not only on Alaska's North Slope, but also in the Matanuska, Bering River, Chignik, and Herendeen Bay coalfields (fig. 2). Measured resources are summarized in figure 3; identified and hypothetical resources are listed in table 1. Significant potential exists for large, yet-undiscovered deposits of high-rank coal.

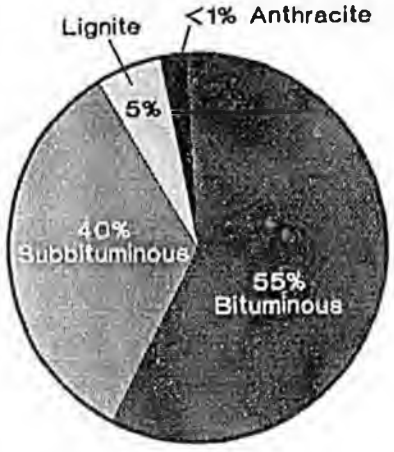

Figure 1. Alaska's coal resources divided by rank.

Early studies of Alaska's high-rank coals were directed at determining suitability for blacksmithing use or for steamship fuel. Investigations now are directed toward developing a market for Alaska coals in Pacific Rim nations, as well as for local heat and power generation (table 2).

Bituminous coals formed in Alaska during the Cretaceous Period (65-140 million years ago) from heat and pressure created by structural deformation of coal-bearing rocks. Most bituminous Alaska coals have a low sulfur content (less than 1 percent) and exhibit coking characteristics that range from poor to excellent. Potential coking and metallurgical-grade coals are found in the Chickaloon district, Matanuska coalfield; Western Arctic region, especially at Kukpowruk River; Bering River coalfield; Chignik and Herendeen Bay coalfields, Alaska Peninsula; Lisburne coalfield; and the Lower Yukon basin-Nulato coalfield. More than 7 million tons of bituminous coal has been mined in Alaska, most of it from the Matanuska coalfield before 1968.

Some of Alaska's coal resources (less than 1 percent) are anthracitic coals--semianthracite, anthracite, and meta-anthracite. Deposits of Tertiary age are found in eastern parts of the Matanuska and Bering River coalfields, and Mississippian-age deposits are found in northern Alaska. High-rank coal has long been known to exist in Mississippian rocks, but mineable resources are small and therefore not discussed here.

Table 1. *Estimate of identified and hypothetical resources of Alaska's high-rank coals (in millions of tons).*

	Identified	Hypothetical
Deadfall syncline	500	5,000
Cape Beaufort	390	1,700
Kukpowruk River	275	1,200
Chignik	230	1,500
Bering River	160	3,500
Herendeen Bay	130	1,500
Wishbone Hill	120	350
Chickaloon	25	100
Anthracite Ridge	4.5	50
TOTALS	1,834.5	14,900

Table 2. *Current high-rank coal development projects in Alaska.*

Company	Project and location
Union Pacific Resources/ Idemitsu Kosan	Wishbone Hill, Matanuska Field
Arctic Slope Regional Corporation	Western Arctic Coal Project
Morgan Coal Company	Kukpowruk River
Chugach Alaska Corporation	Korea-Alaska Development Corporation Project, Bering River Field
Bristol Bay Native Corporation	Chignik Field, Alaska Peninsula

ACKNOWLEDGMENTS

The Alaska Division of Geological & Geophysical Surveys (DGGS) thanks the Office of International Trade for funding, which initiated this study. The information was collected by R.D. Merritt, formerly of DGGS. Coalfield tables include data compiled by P.D. Rao and published by the University of Alaska Fairbanks, Mineral Industry Research Laboratory (1986). The design and production was by G.M. Laird (DGGS). The agency also wishes to thank the following individuals whose efforts made this brochure possible. We acknowledge technical reviews by John F.M. Sims, Usibelli Coal Mine, Inc., and Gilbert R. Eakins, geologist (retired) DGGS. The report was edited by C.L. Daniels and A.F. Seward (DGGS). Cartography by Nori Bowman and Teresa Imm. Typesetting by Roberta Mann, and paste-up by A-L. Schell.

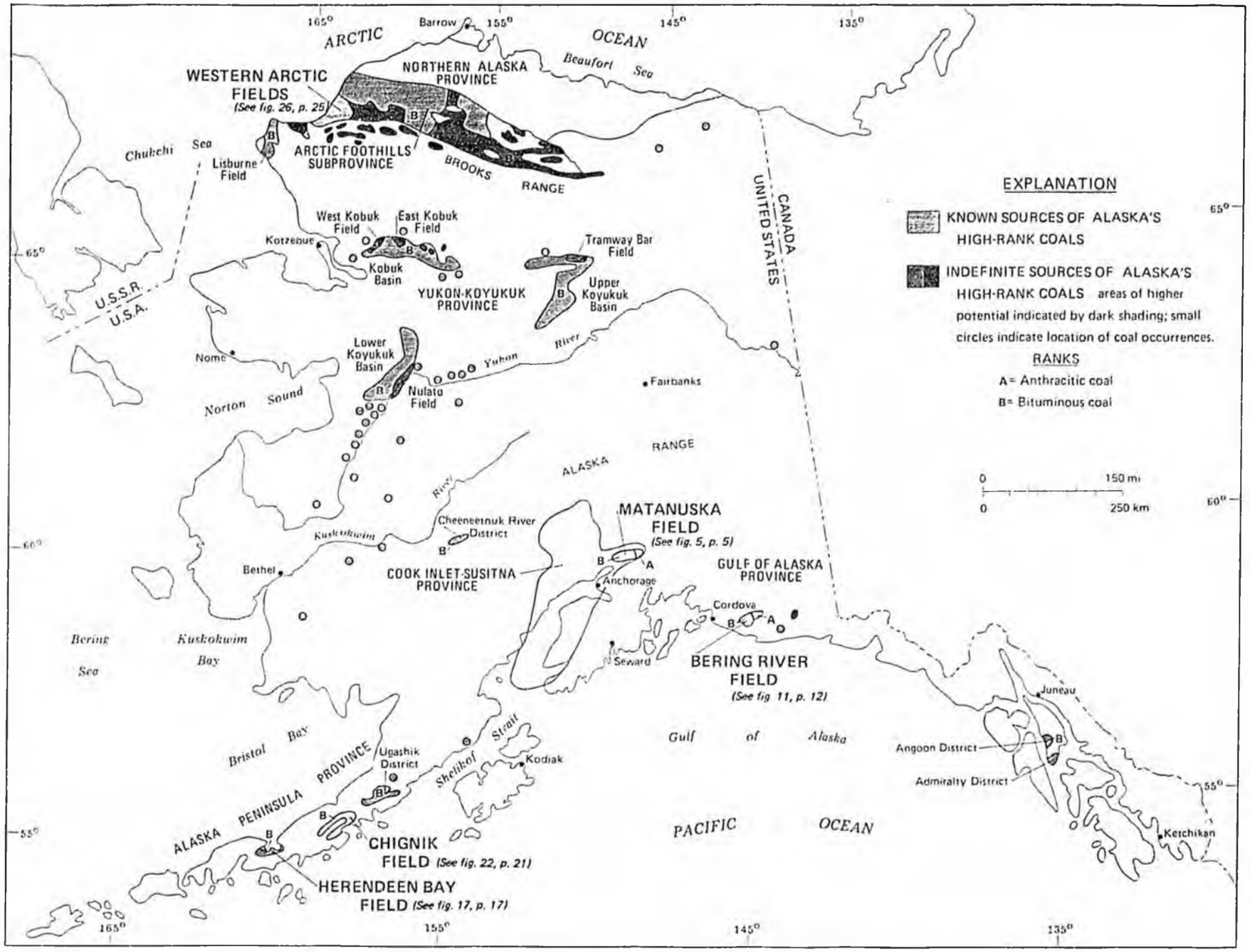

Figure 2. Map showing the general distribution of Alaska's high-rank coal deposits (modified from Merritt and Hawley, 1986).

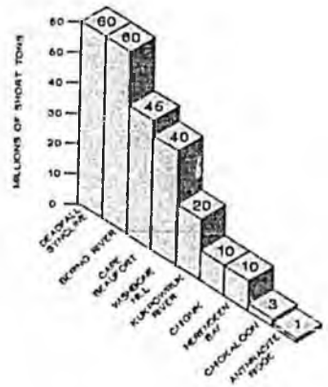

Figure 3. Estimated measured resources of Alaskan high-rank coals.

MATANUSKA COALFIELD

DESCRIPTION

LOCATION

The Matanuska coalfield in south-central Alaska is an eastern extension of the Cook Inlet-Susitna coal province and underlies most of the Matanuska Valley (fig. 2). Its western margin is 45 mi northeast of Anchorage.

The Matanuska field contains five coal districts (fig. 4). The Wishbone Hill district is located about 10 mi northeast of Palmer; its chief coal-bearing feature is the Wishbone Hill syncline. The Young Creek, Castle Mountain, and Chickaloon districts underlie the central Matanuska Valley. The Chickaloon district is centered around the old mining camp at Chickaloon, about 30 mi northeast of Palmer. The Anthracite Ridge district is situated at the east end of the Matanuska Valley about 12 mi east of Chickaloon.

AREA

The Wishbone Hill district occupies about 20 mi² between Moose and Granite Creeks. The Chickaloon district covers a 10-mi² area on lower Chickaloon River and Coal Creek. The Anthracite Ridge district includes a 20-mi² area that extends south from Anthracite Ridge to the Matanuska River.

GEOLOGY

Tertiary coal deposits of the Matanuska field occur within Paleocene-lower Eocene rocks of the Chickaloon Formation. The upper 1,400 ft of this unit contains several series (or groups) of coal beds within layers of claystone, siltstone, sandstone, and conglomerate (fig. 5). Deposition occurred predominantly in a meandering fluvial to paludal paleoenvironment. Stratigraphic structure varies from moderately complex at the west margin of the Matanuska field to complex at its east margin. Beds range in dip from 7° to overturned; typically they dip from 20° to 65°.

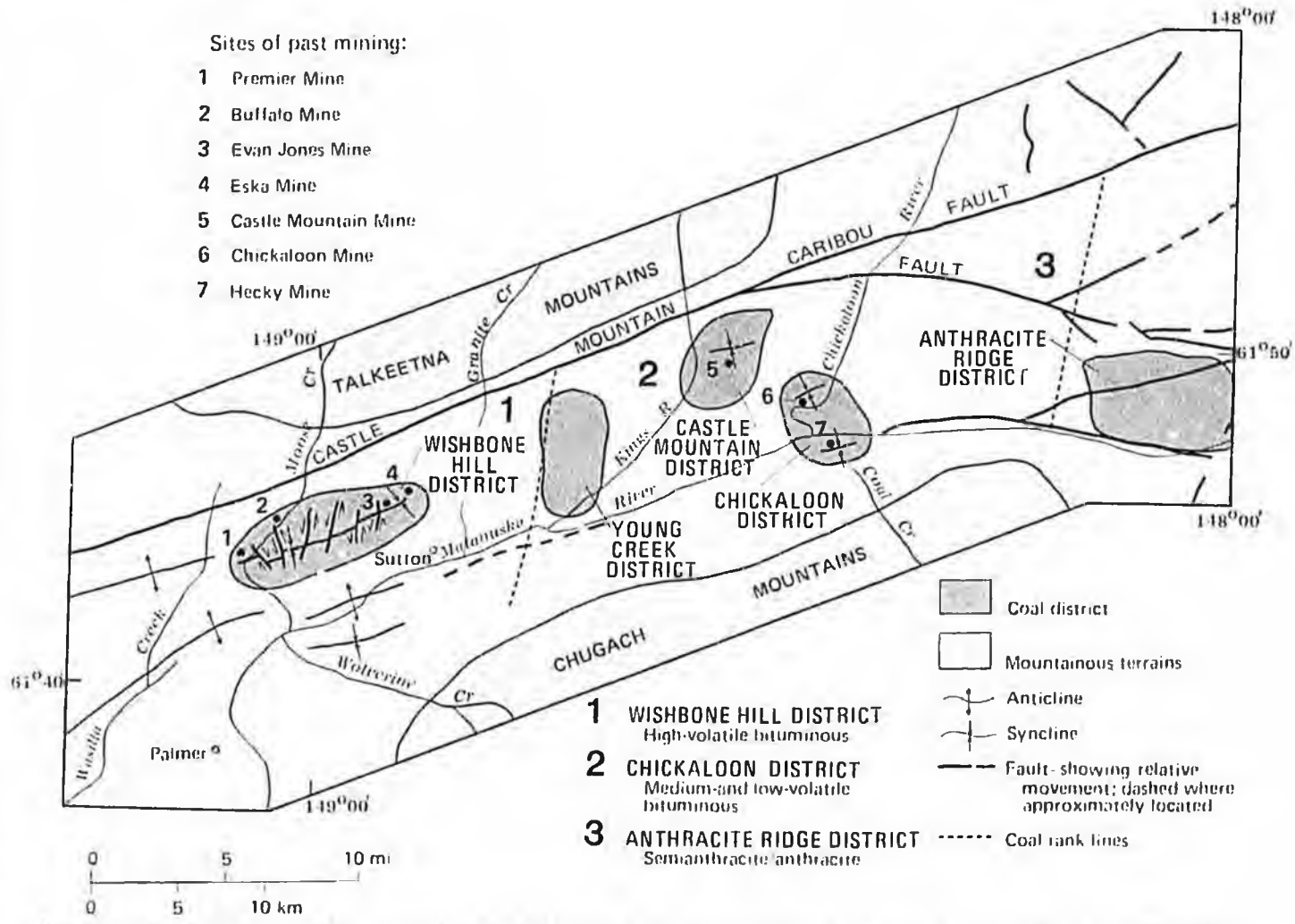

Figure 4. Major districts of the Matanuska coalfield, Matanuska Valley, south-central Alaska (modified from Merritt, 1986).

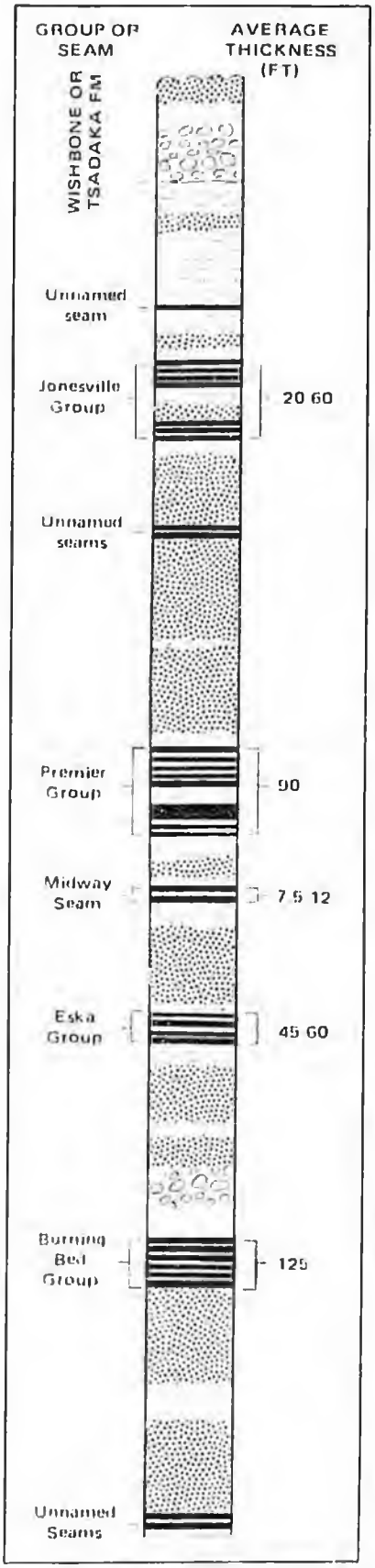

Figure 5. Generalized stratigraphic section of the upper Chickaloon Formation, western Wishbone Hill district, Matanuska field (after Hawley and others, 1984).

The main structural feature of the Wishbone Hill district is the northeast-trending Wishbone Hill syncline, which has moderately dipping limbs and is cut by several transverse faults (fig. 6). The structure of the Chickaloon district is dominantly synclinal, but complicated by faulting and intrusion of dikes and sills. The Anthracite Ridge district also encompasses a synclinal basin that has been sharply folded and faulted and intruded by igneous dikes and sills. Coal rank and structural complexity increase progressively to the east.

MINING HISTORY

Coal was mined in the Matanuska field from 1914 to 1968 (fig. 7). When the Alaska Railroad was completed to the Matanuska field in 1916, mining expanded to the Moose Creek area of the Wishbone Hill district. Early exploration and development in the Matanuska Valley was carried out by the U.S. Government; the Navy searched for steaming coal, and the Alaska Engineering Commission sought coal supplies for railroad fuel.

Figure 4 locates historical mining operations in the Matanuska field: the Premier Mine, which operated from 1925 to 1971; the Buffalo Mine, 1942-45; the Evan Jones Mine, 1920-65; the Eska Mine, 1917-46; the Castle Mountain Mine, 1958-60; the Chickaloon Mine, 1917-22; and Hecky or Coal Creek Mine, 1925-30. Total past production was about 7.5 million tons, mostly from stripping and underground workings of the Evan Jones Mine at Wishbone Hill (fig. 8). Mining ceased in the Matanuska field in 1968 when Cook Inlet natural gas supplanted coal use in the Anchorage area. Minor production at the Premier Mine continued to provide coal for local needs until 1982. Recent exploration and mine-feasibility studies have been completed by Union Pacific Resources (figs. 9 and 10).

ACCESS

The Matanuska field is favorably located with respect to rail and road links, and hence is not a 'green-field' energy development. The Glenn Highway passes along its southern edge, and the western part of the field is served by the Alaska Railroad. No major construction of transportation facilities would be required to resume coal-mining operations in the Matanuska field.

COAL RESOURCES

Wishbone Hill district

Bituminous coal beds to 23 ft thick occur in the upper 1,400 ft of the Chickaloon Formation. Most beds are greater than 3.5 ft thick. Total estimated resources (to a depth of 2,000 ft) are:

Measured	40 million tons
Identified	120 million tons
Hypothetical	350 million tons

Chickaloon district

Bituminous coal beds up to 14 ft thick yield two main deposits: at Chickaloon north of the Matanuska River and at Coal Creek south of the Matanuska River. Total estimated resources (to a depth of 2,000 ft) are:

Measured	3 million tons
Identified	25 million tons
Hypothetical	100 million tons

Anthracite Ridge district

A 20-acre tract in the Purinton Creek area contains an estimated 1 million tons of anthracite and semi-anthracite. Although coal beds are usually less than 5 to 10 ft thick, beds 24 and 34 ft thick have been measured at two exposures. Total estimated resources (to a depth of 2,000 ft) are:

Measured	1 million tons
Identified	4.5 million tons
Hypothetical	50 million tons

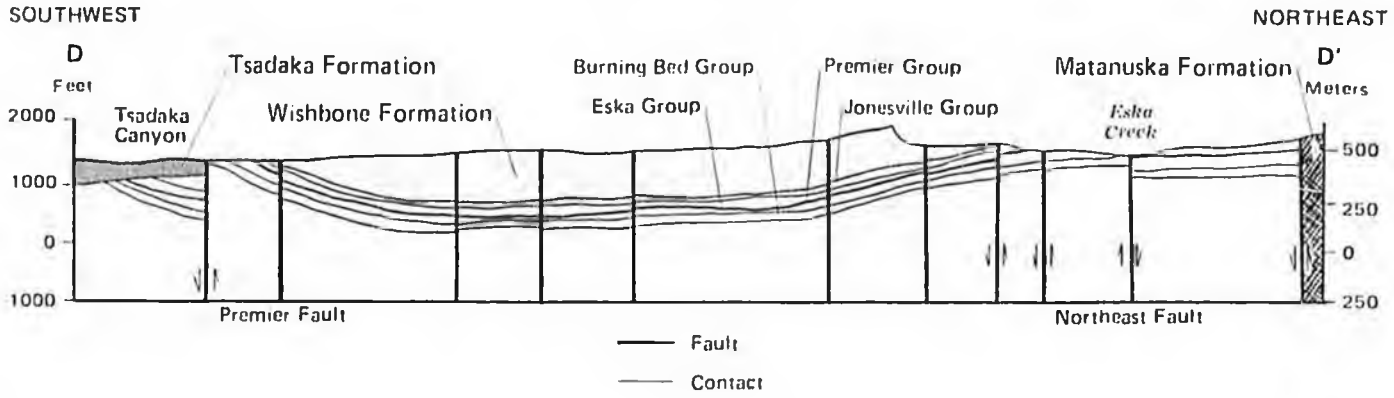

Figure 6. Longitudinal cross section of the Wishbone Hill syncline (from Gerner, 1987).

Figure 7. Coal production in Matanuska field, 1915-1970 (from Merritt and Belowich, 1984).

LAND STATUS

Land in the Matanuska coalfield is state-owned.

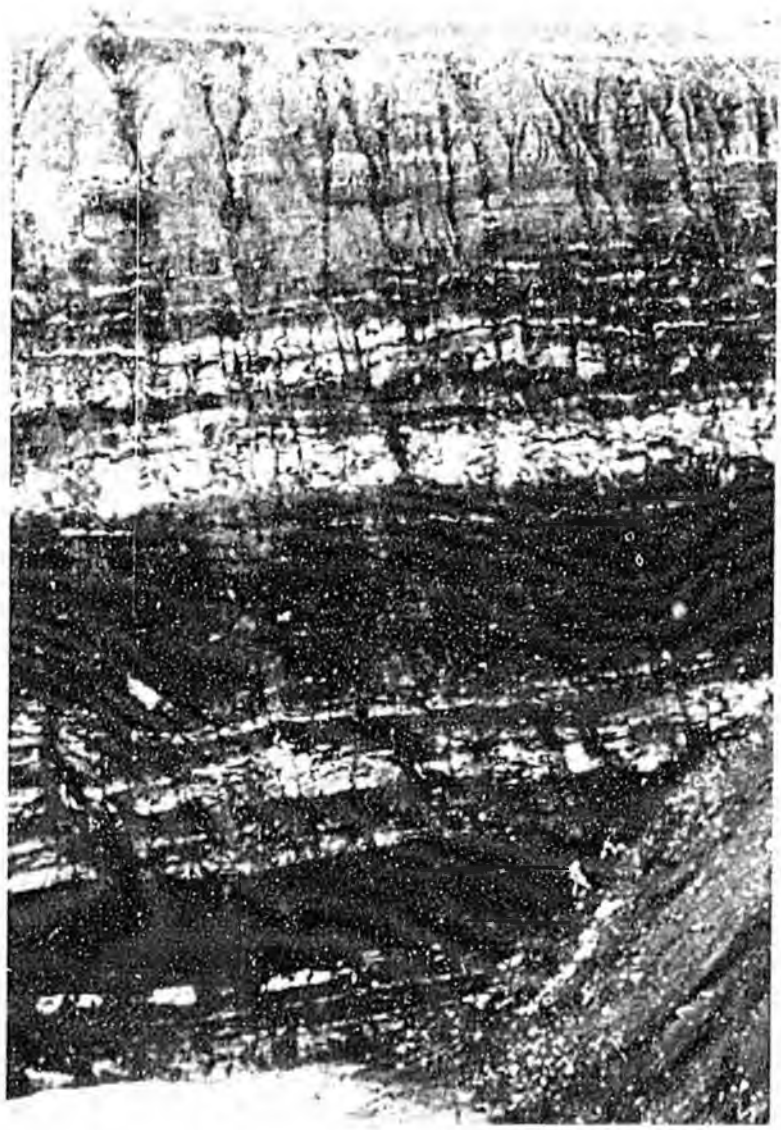

Figure 8. Highwall face at Evan Jones surface mine, north limb of Wishbone Hill syncline, Matanuska Valley. (Photo by G.R. Eakins, 1981.)

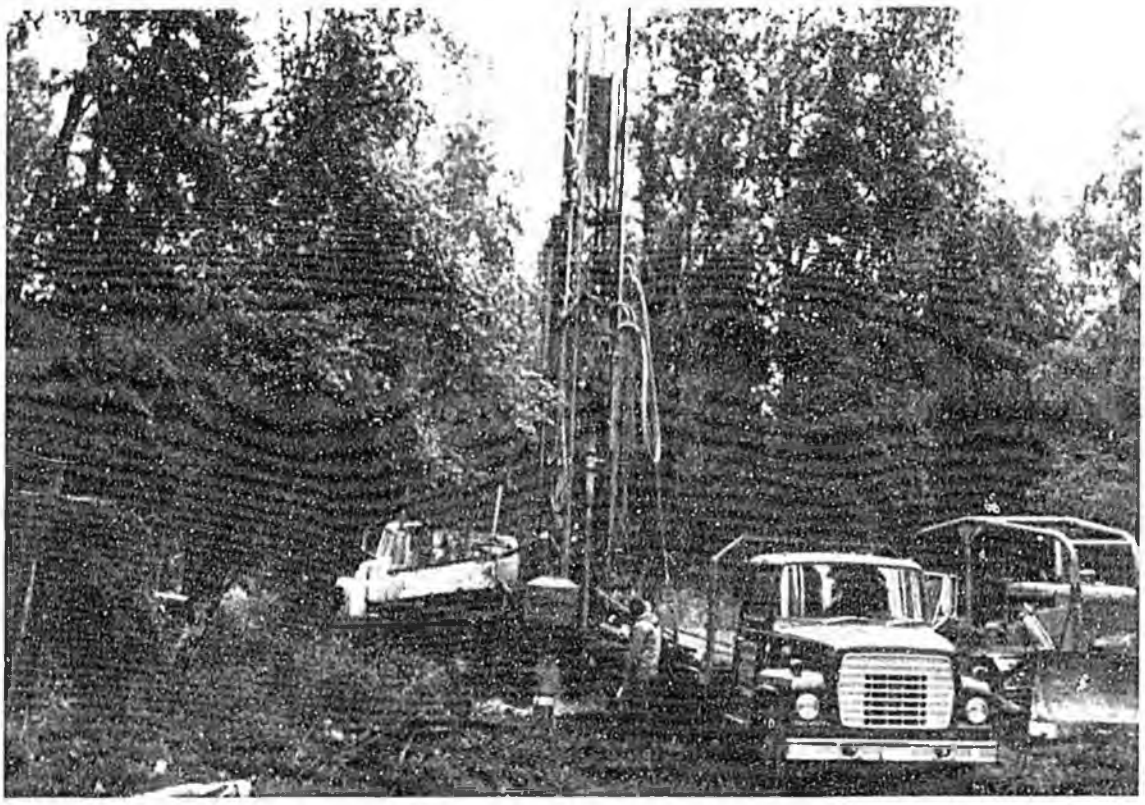

Figure 9. Drilling for coal at the Wishbone Hill project of Union Pacific Resources. (Photo by R.D. Merritt, 1983.)

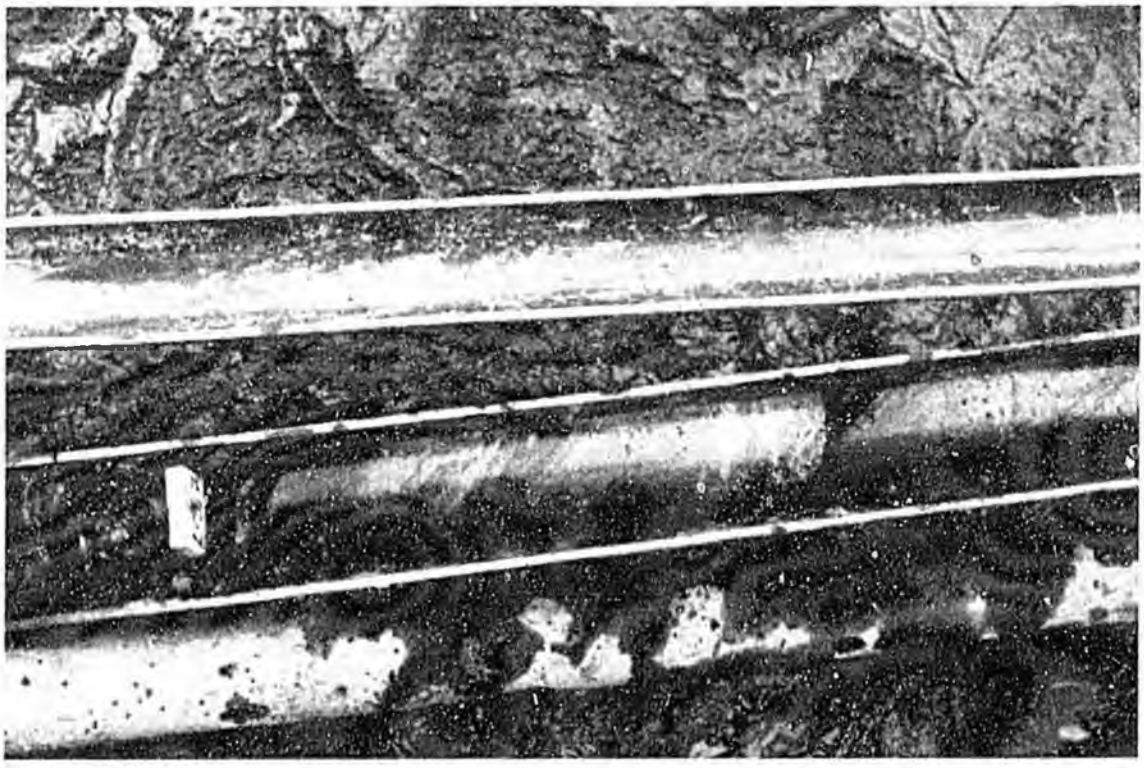

Figure 10. Drill core from the Wishbone Hill project of Union Pacific Resources. (Photo by R.D. Merritt, 1983.)

Matanuska Coalfield Data
WISHBONE HILL

COAL QUALITY

Rank: hvBb

Heating content: Range 10,400-13,200 Btu/lb

Proximate analysis (range in %):

Moisture	3-9	Fixed carbon	38-51
Volatile matter	32-45	Ash	4-24

Ultimate analysis (range in %):

Carbon	50-70	Oxygen	10-17
Hydrogen	4.5-5.5	Sulfur	0.2-0.6
Nitrogen	1.0-1.4	Ash	4-24

Major-oxide composition of ash (avg. in %):

SiO_2	56.81	SO_3	1.11
Al_2O_3	28.94	P_2O_5	0.79
Fe_2O_3	2.97	Na_2O	0.70
CaO	2.36	SrO	0.18
K_2O	1.86	BaO	0.18
TiO_2	1.56	MnO	0.02
MgO	1.12	Undet.	1.40

Trace elements in coal ash (avg. in ppm):

Antimony	2	Lithium	334
Arsenic	8	Molybdenum	3
Beryllium	0.5	Neodymium	4
Boron	77	Nickel	8
Bromine	2	Niobium	7
Cadmium	1	Praseodymium	4
Cerium	19	Rubidium	9
Cesium	3	Samarium	4
Chlorine	8	Scandium	19
Chromium	14	Selenium	2
Cobalt	16	Tellurium	1
Copper	27	Thorium	6
Europium	0.5	Tin	3
Fluorine	230	Uranium	4
Gallium	22	Vanadium	90
Germanium	1.1	Yttrium	22
Iodine	2	Zinc	14
Lanthanum	19	Zirconium	74
Lead	6		

Fusibility of ash (°F):

Initial deformation	2380
Softening temperature (H = W)	2600
Hemispherical temperature (H = W)	2640
Fluid temperature	2700

Free-swelling index: 0-2

Hardgrove grindability index: 47

Coking potential: Poor to fair strongly coking; possible metallurgical.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	78.0
Pseudovitrinite	0.1
Gelinite	1.1
Corpocollinite	0.2
Vitrodetrinite	12.8
Total vitrinite	92.2
Fusinite	0.3
Semifusinite	0.2
Sclerotinite	0.5
Macrinite	0.1
Inertodetrinite	1.2
Total inertinite	2.3
Cutinite	0.5
Sporinite	0.1
Resinite	3.2
Suberinite	0.1
Liptodetrinite	1.6
Total liptinite	5.5

Mean-maximum vitrinite reflectance (Ro_{max}, %): 0.5-0.6

CHICKALOON

COAL QUALITY

Rank: mvb-lvb

Heating content: Range 11,960-14,400 Btu/lb

Proximate analysis (range in %):

Moisture	1-5	Fixed carbon	60-72
Volatile matter	14-24	Ash	5-18

Ultimate analysis (range in %):

Carbon	65-77	Oxygen	6-10
Hydrogen	4.2-5.2	Sulfur	0.2-0.7
Nitrogen	1.3-1.7	Ash	5-18

Major-oxide composition of ash (avg. in %):

SiO_2	53.92	SO_3	1.13
Al_2O_3	29.73	P_2O_5	1.46
Fe_2O_3	4.34	Na_2O	0.68
CaO	2.63	SrO	0.22
K_2O	1.72	BaO	0.21
TiO_2	1.32	MnO	0.04
MgO	1.52	Undet.	1.08

Trace elements in coal ash (avg. in ppm):

Antimony	1	Lithium	222
Arsenic	4	Molybdenum	8
Beryllium	0.9	Neodymium	7
Boron	66	Nickel	9
Bromine	4	Niobium	11
Cadmium	2	Praseodymium	4
Cerium	36	Rubidium	28
Cesium	4	Samarium	5
Chlorine	32	Scandium	22
Chromium	18	Selenium	5
Cobalt	6	Tellurium	1
Copper	40	Thorium	10
Europium	0.9	Tin	8
Fluorine	425	Uranium	5
Gallium	18	Vanadium	85
Germanium	1.7	Yttrium	18
Iodine	5	Zinc	30
Lanthanum	27	Zirconium	80
Lead	14		

Fusibility of ash (°F):

Initial deformation	2360
Softening temperature (H=W)	2430
Hemispherical temperature (H= W)	2510
Fluid temperature	2560

Free-swelling index: 0-8

Hardgrove grindability index: 72

Coking potential: Noncoking to strongly coking; possible metallurgical.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	80.5
Pseudovitrinite	0.5
Gelinite	0.0
Corpocollinite	0.3
Vitrodetrinite	15.8
Total vitrinite	97.1
Fusinite	0.3
Semifusinite	0.3
Sclerotinite	0.2
Macrinite	0.1
Inertodetrinite	0.4
Total inertinite	1.3
Cutinite	0.0
Sporinite	0.0
Resinite	0.4
Suberinite	0.5
Liptodetrinite	0.7
Total liptinite	1.6

Mean-maximum vitrinite reflectance (Ro_{max}, %): 1.1-2.1

ANTHRACITE RIDGE

COAL QUALITY

Rank: sa-an

Heating content: Range 10,720-14,000 Btu/lb

Proximate analysis (range in %):

Moisture	3-9	Fixed carbon	65-81
Volatile matter	7-11	Ash	6-17

Ultimate analysis (range in %):

Carbon	66-75	Oxygen	6-15
Hydrogen	2.8-5.6	Sulfur	0.2-0.7
Nitrogen	1.2-1.7	Ash	6-17

Major-oxide composition of ash (avg. in %):

SiO_2	49.26	SO_3	0.97
Al_2O_3	29.95	P_2O_5	3.24
Fe_2O_3	4.46	Na_2O	0.71
CaO	4.75	SrO	0.31
K_2O	1.53	BaO	0.42
TiO_2	1.53	MnO	0.02
MgO	1.54	Undet.	1.31

Trace elements in coal ash (avg. in ppm):

Antimony	1	Lithium	84
Arsenic	7	Molybdenum	6
Beryllium	1.0	Neodymium	34
Boron	85	Nickel	58
Bromine	52	Niobium	7
Cadmium	2	Praseodymium	4
Cerium	35	Rubidium	12
Cesium	4	Samarium	3
Chlorine	66	Scandium	26
Chromium	9	Selenium	2
Cobalt	10	Tellurium	2
Copper	22	Thorium	7
Europium	0.5	Tin	2
Fluorine	361	Uranium	4
Gallium	17	Vanadium	79
Germanium	1.1	Yttrium	17
Iodine	3	Zinc	17
Lanthanum	22	Zirconium	61
Lead	7		

Fusibility of ash (°F):

Initial deformation	2490
Softening temperature (H=W)	2560
Hemispherical temperature (H= W)	2570
Fluid temperature	2590

Free-swelling index: 0-2

Hardgrove grindability index: --

Coking potential: Some coking properties in bituminous coals only.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	84.5
Pseudovitrinite	0.0
Gelinite	0.0
Corpocollinite	0.2
Vitrodetrinite	11.8
Total vitrinite	96.5
Fusinite	0.2
Semifusinite	0.1
Sclerotinite	0.4
Macrinite	0.0
Inertodetrinite	0.2
Total inertinite	0.9
Cutinite	0.1
Sporinite	0.0
Resinite	0.8
Suberinite	0.4
Liptodetrinite	1.3
Total liptinite	2.6

Mean-maximum vitrinite reflectance (Ro_{max}, %): 2.0-5.0

BERING RIVER COALFIELD

DESCRIPTION

LOCATION

The Bering River coalfield is located in south-central Alaska and constitutes the most important resource of the Gulf of Alaska coal province (fig. 11). The field is 12 mi northeast of Katalla, 50 mi east of Cordova, and 200 mi east of Anchorage.

AREA

The belt of coal-bearing rocks extends 20 mi northeast from the eastern shore of Bering Lake and disappears under ice fields in the Chugach Range. The Bering River coalfield width varies from 2 to 6 mi and covers an estimated area of 80 mi^2 (fig. 11).

GEOLOGY

The coalfield is defined by the outcrop of the Kushtaka Formation, a 2,000-ft-thick arkosic Tertiary (Eocene-early Miocene) sequence that also includes feldspathic sandstones, siltstones, shales, and coal beds (fig. 12; table 3). Its geologic structure

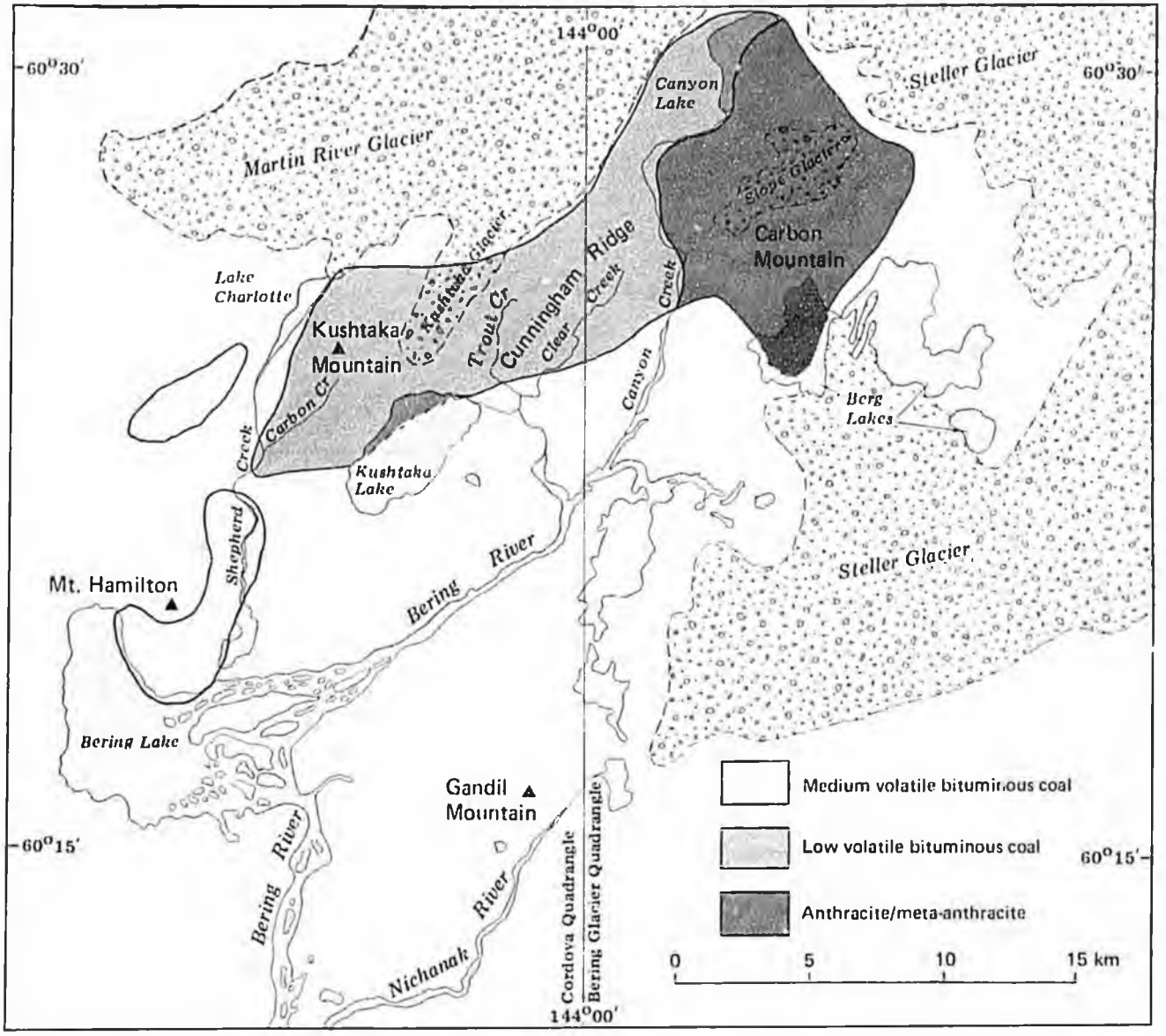

Figure 11. Generalized outcrop extent of the Kushtaka Formation of the Bering River coalfield showing the eastward gradation in coal rank (from Merritt, 1986).

Table 3. *Generalized stratigraphy in the Bering River coalfield (after Barnes, 1951).*

Age	Formation	Lithology	Sedimentation
Quaternary		fresh-water, glacial, marine origin sediments	fresh-water, glacial, marine
Tertiary or Post-Tertiary		diabase, basalt, dikes	
Tertiary	Tokun Formation	sandstone, sandy shale, shale	marine origin
	Kushtaka Formation	arkose, sandstone, sandy shale, shale, coal, coaly shale	fresh-water
	Stillwater Formation	shale, sandstone, sandy shale	partial saline partial fresh-water
	Katalla Formation	conglomerate, sandstone, shale, nodular shale, interbedded glauconitic sand	marine origin
Tertiary or Pre-Tertiary		graywacke, slate, igneous rock	

is complex; average dip of beds is 40° (fig. 13). Coals occur in a highly compressed series of isoclinal, chevron-like folds, incorporated into an imbrication or pinching-and-swelling selvage along one of numerous bedding-plane faults. The beds are thinned by tectonic lensing to form 'schlieren,' and thickened at the axes of folds (figs. 14 and 15). Coal rank increases with intensity of deformation to the east.

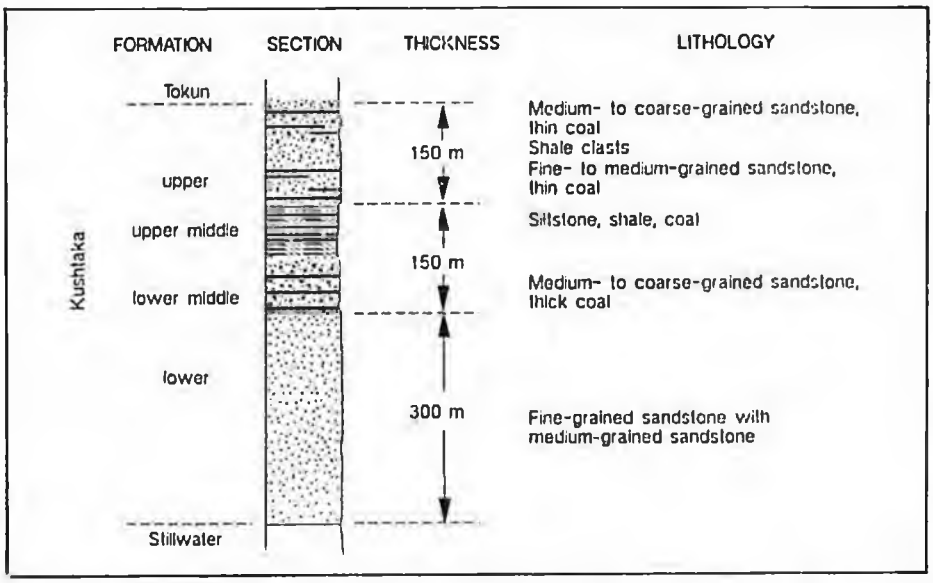

Figure 12. Stratigraphy of the Kushtaka Formation (after Smith and Rao, 1987).

MINING HISTORY

The Bering River field was discovered in 1896. Extensive exploration and testing of the coals were conducted during the early 1900s. Despite the identification of numerous surface and underground prospects, no commercial mines have been developed. The total amount of coal produced to date is estimated at only a few thousand tons.

In recent years, the Chugach Alaska Corporation, in association with the Korea-Alaska Development Corporation, has been studying the

feasibility of developing a coal mine in the Bering River field to produce coal for export. Thousands of feet of core drilling have been completed in the last few years (fig. 16). A tentative mine plan proposes a combination of open-pit and underground mining methods.

ACCESS

The Bering River field is about 25 mi from tidewater. It would be considered a 'green-field' energy project, since it has no infrastructure or overland transportation access system. Such a system would likely consist of a conveyor or aerial tramway to transport coal from the mine to a storage facility at a marine terminal on the southeast tip of Kanak Island, where it would be loaded on ships for export. An access road would connect the mine-site facilities with the road to Cordova.

COAL RESOURCES

Coal resources are concentrated in four main areas: Carbon Creek, Trout Creek, Clear Creek/Cunningham Ridge, and Carbon Mountain. The Carbon Creek area is the most promising in size and physical condition of beds. At least 20 coal beds ranging from 5 to 10 ft thick have been confirmed. Lenses 30 to 60 ft thick occur locally.

Resources are summarized as follows (with overburden depths of 0 to 3,000 ft):

Measured	60 million tons
Identified	160 million tons
Hypothetical	3,500 million tons

LAND STATUS

Lands in the Bering River coalfield are owned by Chugach Alaska Corporation.

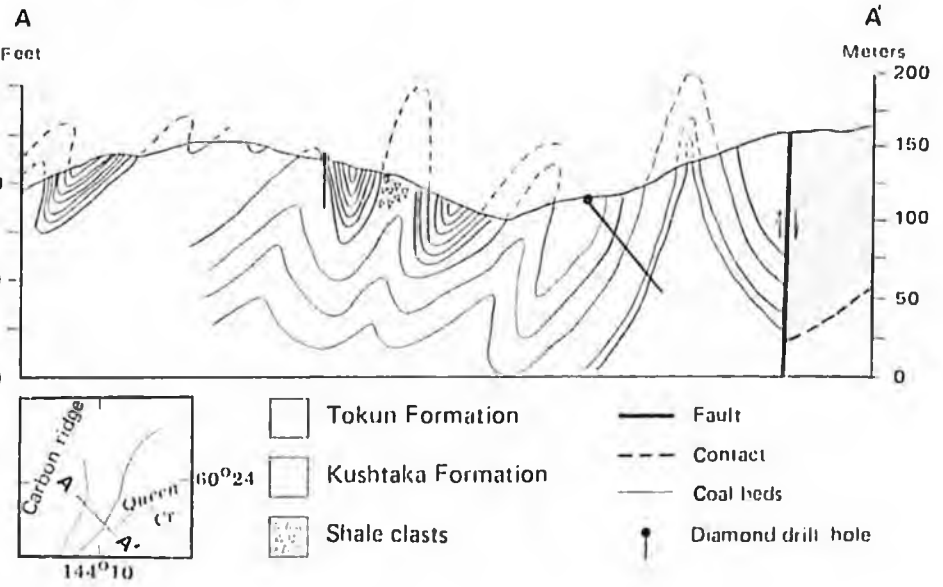

Figure 13. Cross section of the Carbon Ridge area (modified from Smith and Rao, 1987).

Figure 14. The 'Queen Vein,' a 28-foot thick coal seam of the Bering River field. (Photo by R.B. Sanders, 1973.)

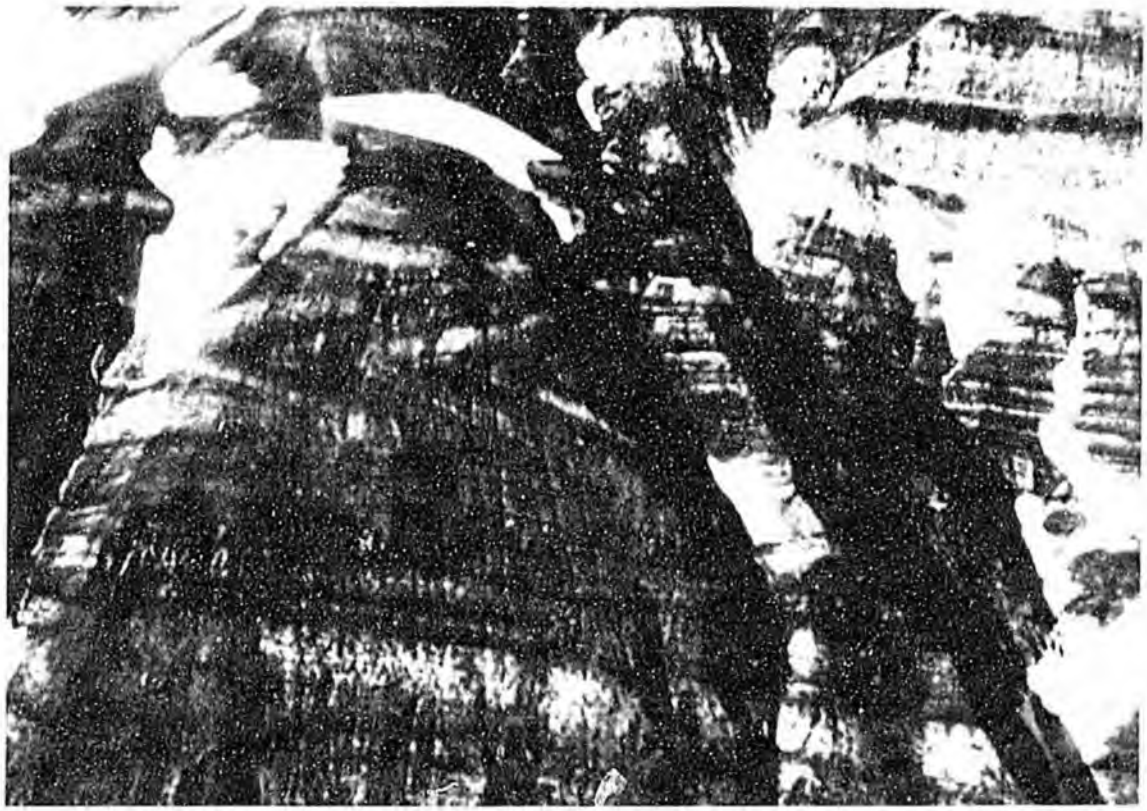

Figure 15. Folding in coal beds in the Carbon Mountain area, Bering River field. (Photo by R.B. Sanders, 1973.)

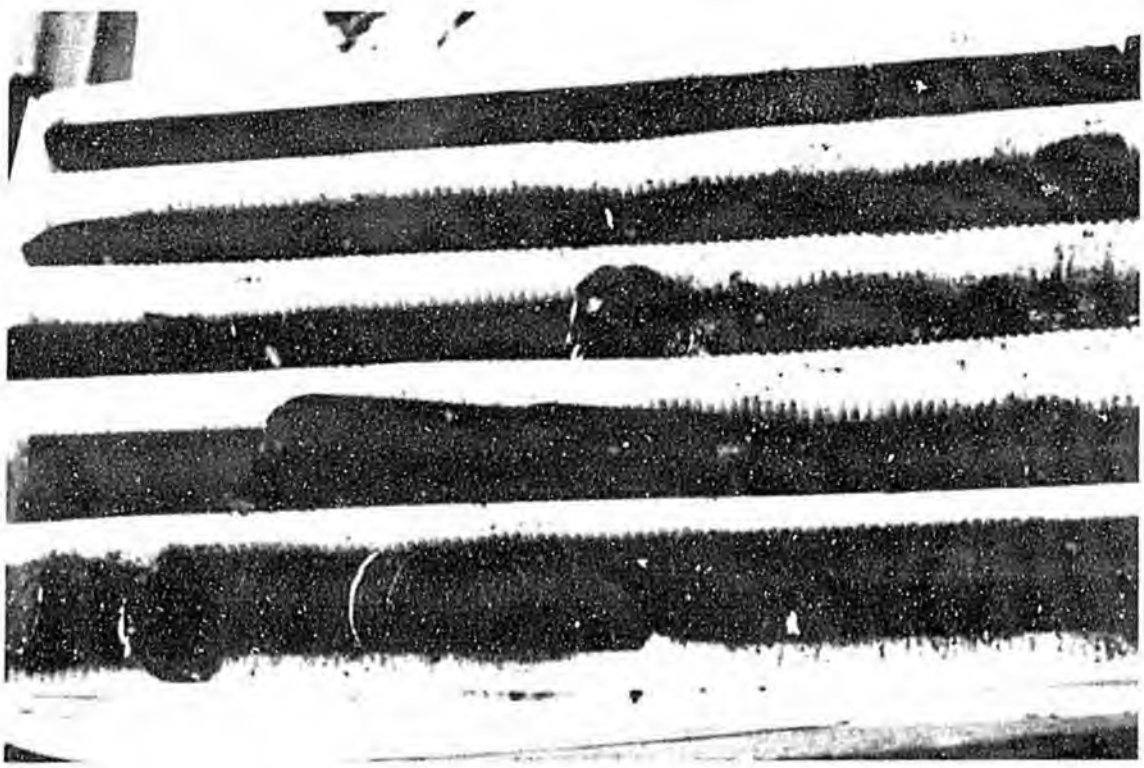

Figure 16. Coal core from Bering Development Corporation's drilling project in the Bering River field, 1984. (Photo courtesy of Bering Development Corporation.)

Bering River Coalfield Data

COAL QUALITY

Rank: Ranges from low-volatile bituminous in the western part of the field to semianthracite and anthracite in the eastern part.

Heating content: Range 11,000-15,000 Btu/lb
Average 14,000 Btu/lb

Proximate analysis:	Range (%)	Average (%)
Moisture	0.01-1.80	0.52
Volatile matter	2.67-16.15	12.45
Fixed carbon	63.51-85.03	78.55
Ash	1.14-22.46	8.48

Ultimate analysis:

Carbon	68.02-89.14	82.14
Hydrogen	0.76-4.49	3.82
Nitrogen	0.81-1.66	1.31
Oxygen	1.40-4.17	3.00
Sulfur	0.21-4.49	1.25
Ash	1.14-22.46	8.48

Major-oxide composition of ash (avg. in %):

SiO_2	40.03	MgO	1.78
Al_2O_3	20.82	P_2O_5	1.84
Fe_2O_3	14.26	Na_2O	1.00
CaO	7.02	MnO	0.10
K_2O	1.29	Undet.	10.86
TiO_2	1.00		

Trace elements in coal ash (avg. in ppm).

Barium	1,850	Nickel	273
Beryllium	10.5	Strontium	4,282
Chromium	246	Vanadium	198
Cobalt	86	Zinc	677
Copper	166	Zirconium	232

Free-swelling index: 0-2.5

Coking potential: It is questionable whether the low-volatile bituminous coals possess coking properties, but it is expected that a good coke can be produced by blending the low-volatile bituminous coals with other high-volatile bituminous coals.

Metallurgical potential: Possible source of high-grade metallurgical coal.

COAL PETROLOGY

Maceral Composition

Because of the high rank of the coals of the Bering River field, maceral analyses are of little benefit (Smith and Rao, 1987). Although some samples retain remnant morphological structures of various macerals, the coals are overall petrologically similar and morphologically homogeneous.

Mean-maximum vitrinite reflectance (Ro_{max}, %): 1.63-2.66; locally to 9.46

HERENDEEN BAY COALFIELD

DESCRIPTION

LOCATION

The Herendeen Bay coalfield is located along the shore of the Bering Sea on the northern Alaska Peninsula, between Herendeen Bay and Port Moller, about 350 mi southwest of Kodiak and 100 mi southwest of the Chignik coalfield (fig. 17).

AREA

The belt of coal-bearing rocks is about 25 mi long and 5 mi wide. The field covers an area of 100 mi² (fig. 18).

GEOLOGY

The high-rank coal deposits of the Herendeen Bay field occur mainly in the Coal Valley Member of the Upper Cretaceous Chignik Formation (fig. 19), which is over 1,500 ft thick. Typical sections of coal-bearing strata are shown in figure 20, and a seam at Mine Harbor in figure 21. Beds are moderately folded and locally broken by small-scale faults.

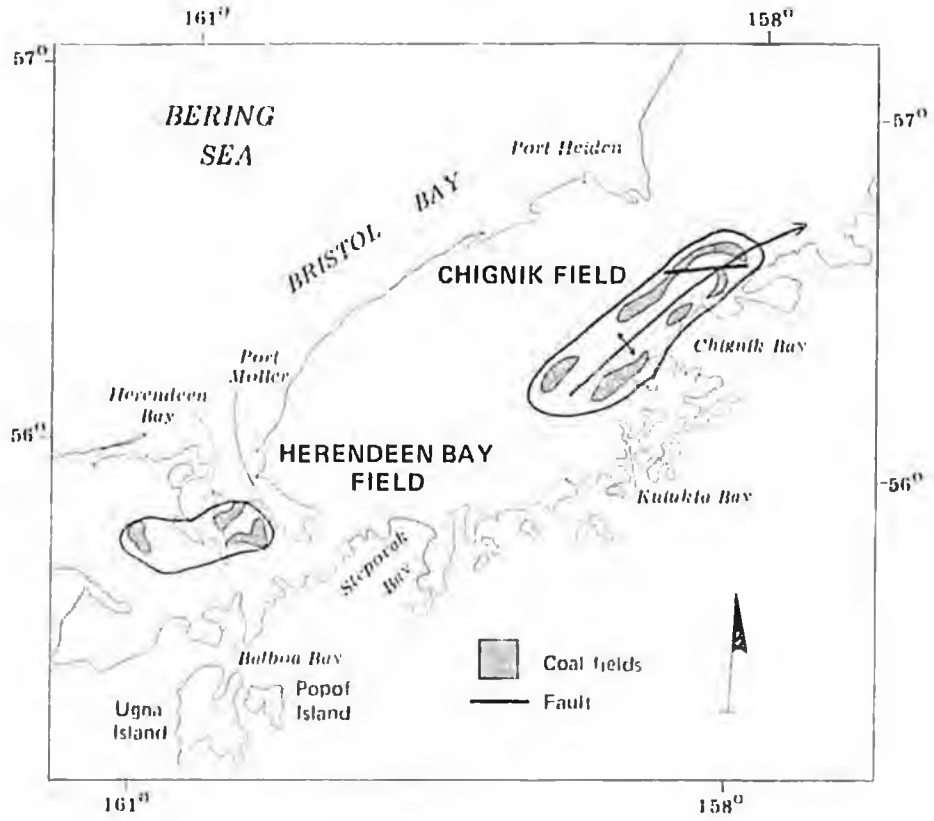

Figure 17. Index map of the southern Alaska Peninsula showing the locations of the Herendeen Bay and Chignik coalfields (modified from Merritt and Hawley, 1986).

MINING HISTORY

Between 1889 and 1904, the Herendeen Bay field was the site of local coal developments, small-scale mining, and underground exploration. Mine Harbor was the main focus of activity. However, very little commercial production occurred.

The mining potential of the coalfield has not been thoroughly investigated, and it may hold considerable potential for development of small mines.

ACCESS

The Herendeen Bay field is accessible to tidewater, but Herendeen Bay is blocked by ice several months each year. The most likely scenario for coal shipment would require the construction of an overland transportation system (road, rail, conveyor, aerial tramway, or slurry pipeline) 15 mi through a low pass to Balboa Bay, on the Pacific side of the Alaska Peninsula (fig. 17).

COAL RESOURCES

Coal resources are concentrated in five main areas: Mine Creek/Mine Harbor, Coal Bluff, Coal Valley, Lawrence Valley, and Coal Point. A large number of closely-spaced coal beds up to 7 ft thick have been found within these areas; however, thickness of beds averages 2 to 4 ft. One 200-ft section contains an aggregate 26 ft of coal.

Resources are summarized as follows (overburden depth to 2,000 ft):

Measured	10 million tons
Identified	130 million tons
Hypothetical	1,500 million tons

LAND STATUS

The Herendeen Bay coalfield occupies land owned by the state of Alaska and the Aleut Native Corporation.

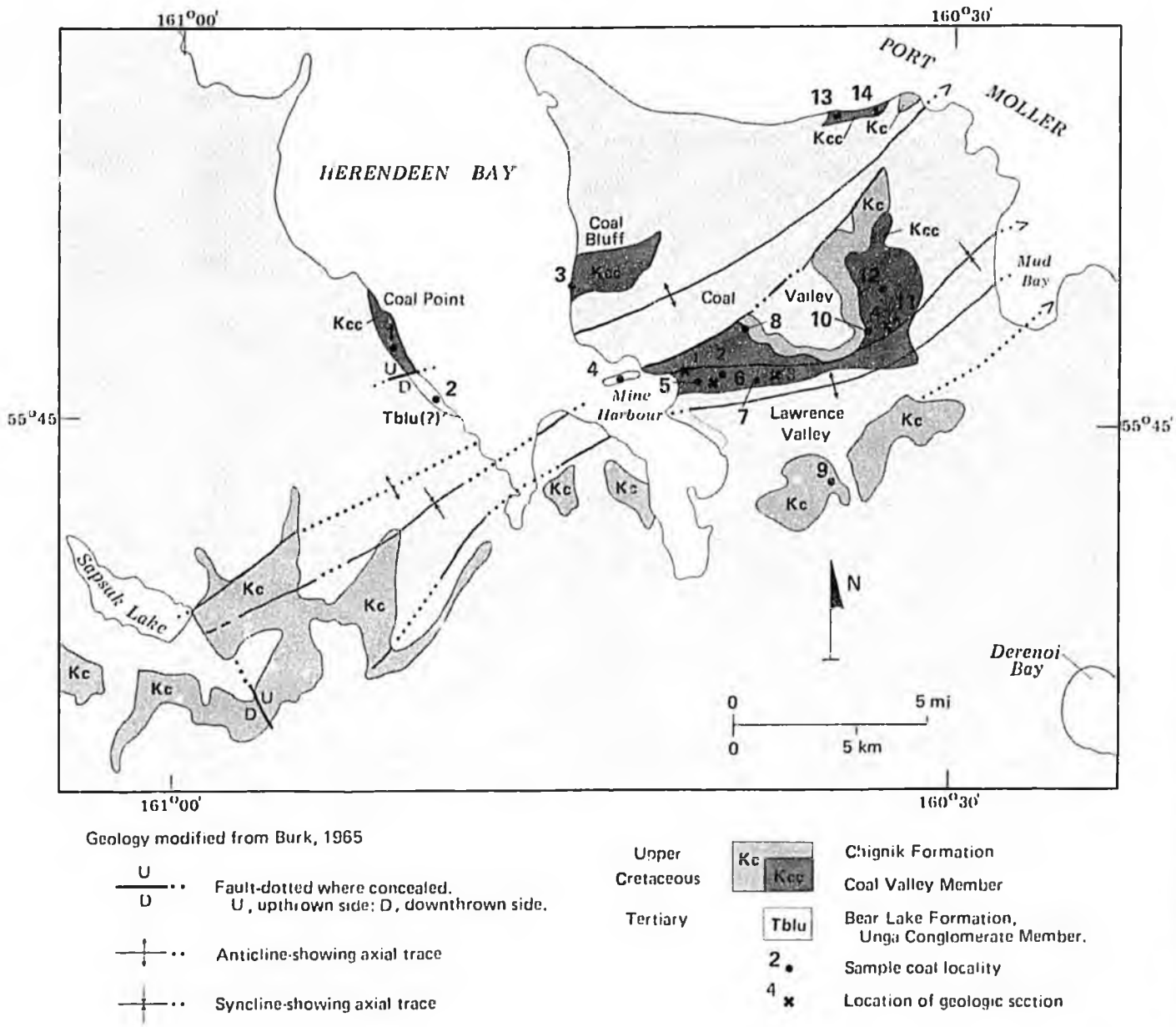

Figure 18. Generalized geologic map of the Herendeen Bay coalfield, Alaska Peninsula (from Merritt and McGee, 1986).

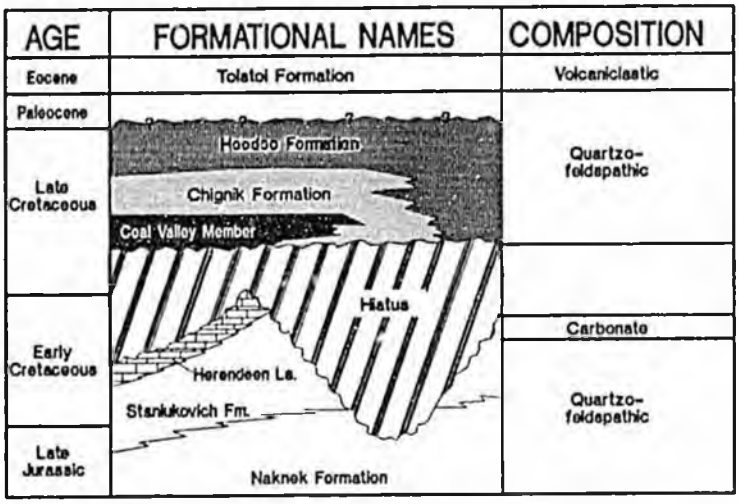

Figure 19. Generalized stratigraphy in the Herendeen Bay coalfield (modified after Burk, 1965; Moore, 1974; and Mancini and others, 1978).

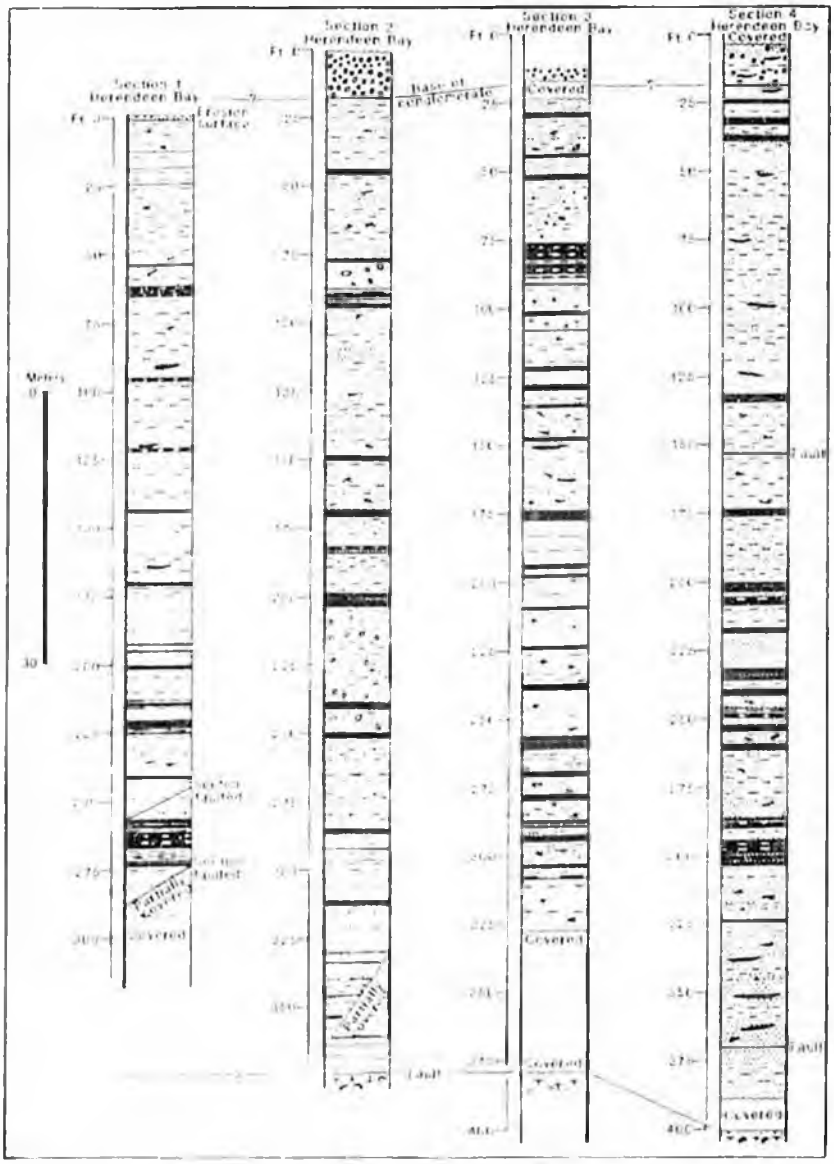

Figure 20. Detailed correlation sections of Herendeen Bay coalfield (from Merritt and McGee, 1986).

Figure 21. One of the thicker coal seams at Mine Harbor, Herendeen Bay field. (Photo by R.D. Merritt, 1984.)

Herendeen Bay Coalfield Data

COAL QUALITY

Rank: High volatile bituminous, typically hvBb.

Heating content: Range 8,400-12,900 Btu/lb
Average 11,060 Btu/lb

Proximate analysis:	Range (%)	Average (%)
Moisture	1.80-10.09	4.29
Volatile matter	28.41-48.95	34.13
Fixed carbon	29.88-57.89	48.80
Ash	2.52-33.23	12.78

Ultimate analysis:	
Carbon	56.71-64.52
Hydrogen	4.38-5.09
Nitrogen	0.35-0.90
Oxygen	18.47-24.10
Sulfur	0.29-4.68
Ash	2.52-33.23

Major-oxide composition of ash (avg. in %):

SiO_2	45.2	MgO	1.8
Al_2O_3	27.6	P_2O_5	0.6
Fe_2O_3	2.8	Na_2O	0.5
CaO	5.4	MnO	0.1
K_2O	0.7	SO_3	1.7
TiO_2	2.0	Undet.	11.6

Trace elements in coal ash (avg. in ppm):

Barium	860	Molybdenum	63
Boron	168	Nickel	43
Cadmium	1	Scandium	23
Chromium	226	Strontium	600
Cobalt	282	Vanadium	154
Copper	81	Ytterbium	5
Gallium	27	Yttrium	51
Lead	38	Zinc	138
Lithium	88	Zirconium	250
Manganese	269		

Trace elements in coal (avg. in ppm):

Antimony	0.9	Selenium	0.7
Arsenic	4.8	Thorium	3
Fluorine	143	Uranium	1.6
Mercury	0.05		

Fusibility of ash (°F):

Initial deformation	2701
Softening temperature	2800+
Fluid temperature	2800+

Free-swelling index: 0-1.5

Hardgrove grindability index: 52

Coking potential: Poor caking and coking properties.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	78.5
Pseudovitrinite	0.1
Gelinite	2.7
Corpocollinite	0.7
Vitrodetrinite	8.4
Total vitrinite	90.4
Fusinite	2.5
Semifusinite	1.1
Sclerotinite	0.4
Macrinite	0.6
Inertodetrinite	2.2
Total inertinite	6.8
Cutinite	0.4
Sporinite	0.8
Resinite	0.7
Exsudatinite	0.2
Suberinite	0.1
Liptodetrinite	0.6
Total liptinite	2.8

Mean-maximum vitrinite reflectance (Ro_{max}, %):

Range 0.55-0.90
Average 0.65

Locality (See figure 18)	Ro_{max} (%)
1	0.66
2	0.27
3	0.67
4	0.62
5	0.60
6	0.66
7	0.59
8	0.67
9	0.90
10	0.69
11	0.58
12	0.61
13	0.60
14	0.55

CHIGNIK COALFIELD

DESCRIPTION

LOCATION

The Chignik field, about 250 mi southwest of Kodiak and 100 mi northeast of the Herendeen Bay field, lies on the northwest shore of Chignik Bay, which indents the south side of the Alaska Peninsula (fig. 17).

AREA

The belt of coal-bearing rocks is about 30 mi long and 1 to 6 mi wide, an estimated area of 100 mi² (fig. 22).

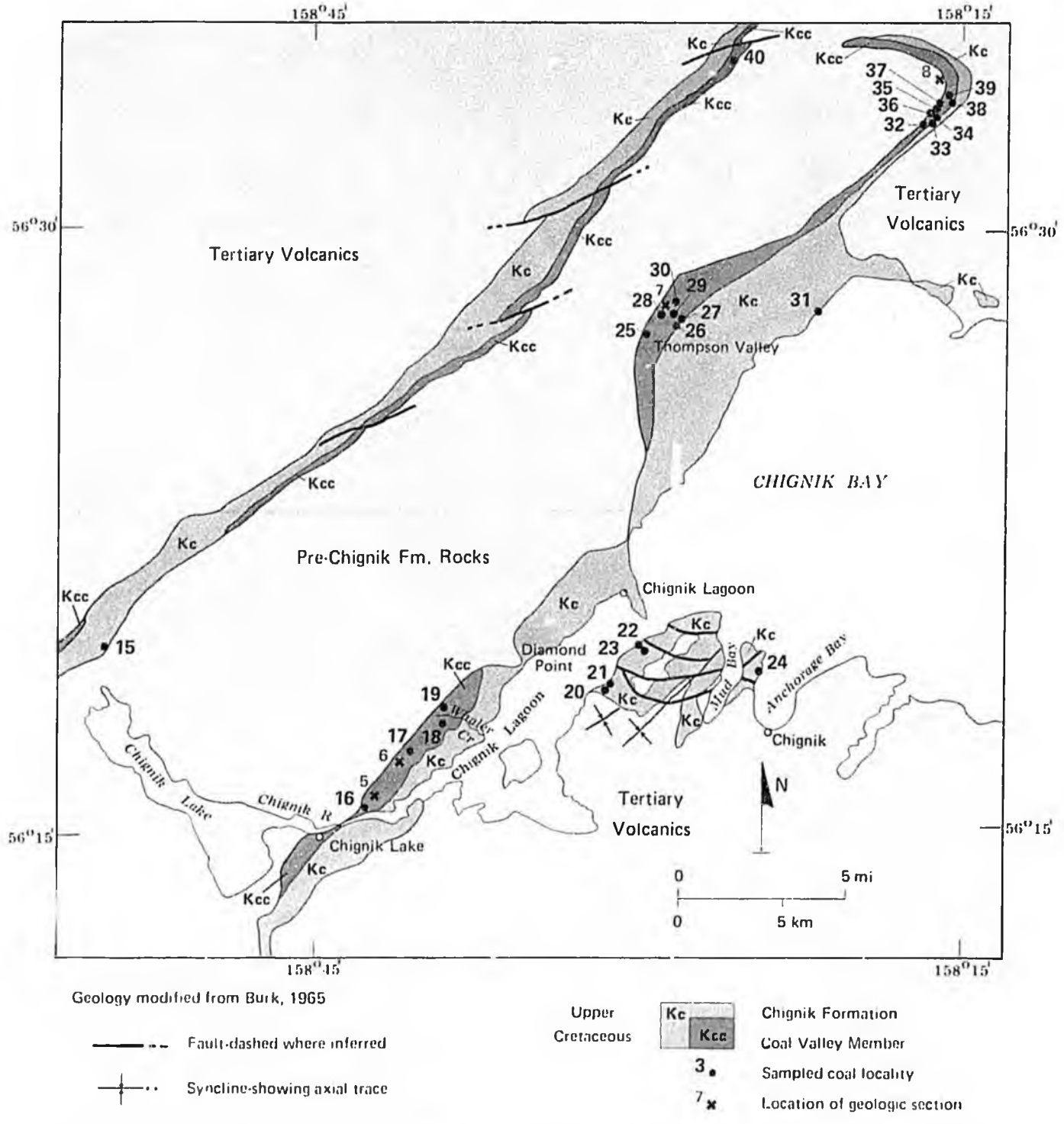

Figure 22. Generalized geologic map of the Chignik coalfield, Alaska Peninsula (from Merritt and McGee, 1986).

GEOLOGY

Coal deposits of the Chignik field lie within the Coal Valley member of the Upper Cretaceous Chignik Formation (fig. 23). This unit of cyclic nearshore marine and nonmarine sedimentation ranges in thickness to 1,500 ft and is composed of sandstone, pebble-cobble conglomerate, siltstone, shale, and numerous coal beds (fig. 24). Strata are moderately folded and locally faulted. Dips vary from 20° to 35°.

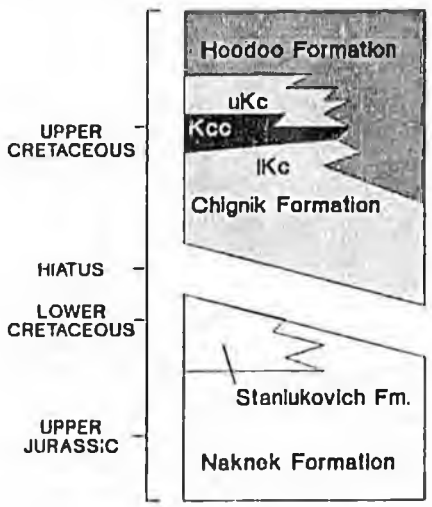

Figure 23. Generalized stratigraphy in the Chignik coalfield. Kcc = Coal Valley Member, Chignik Formation (after Vorobik and others, 1981).

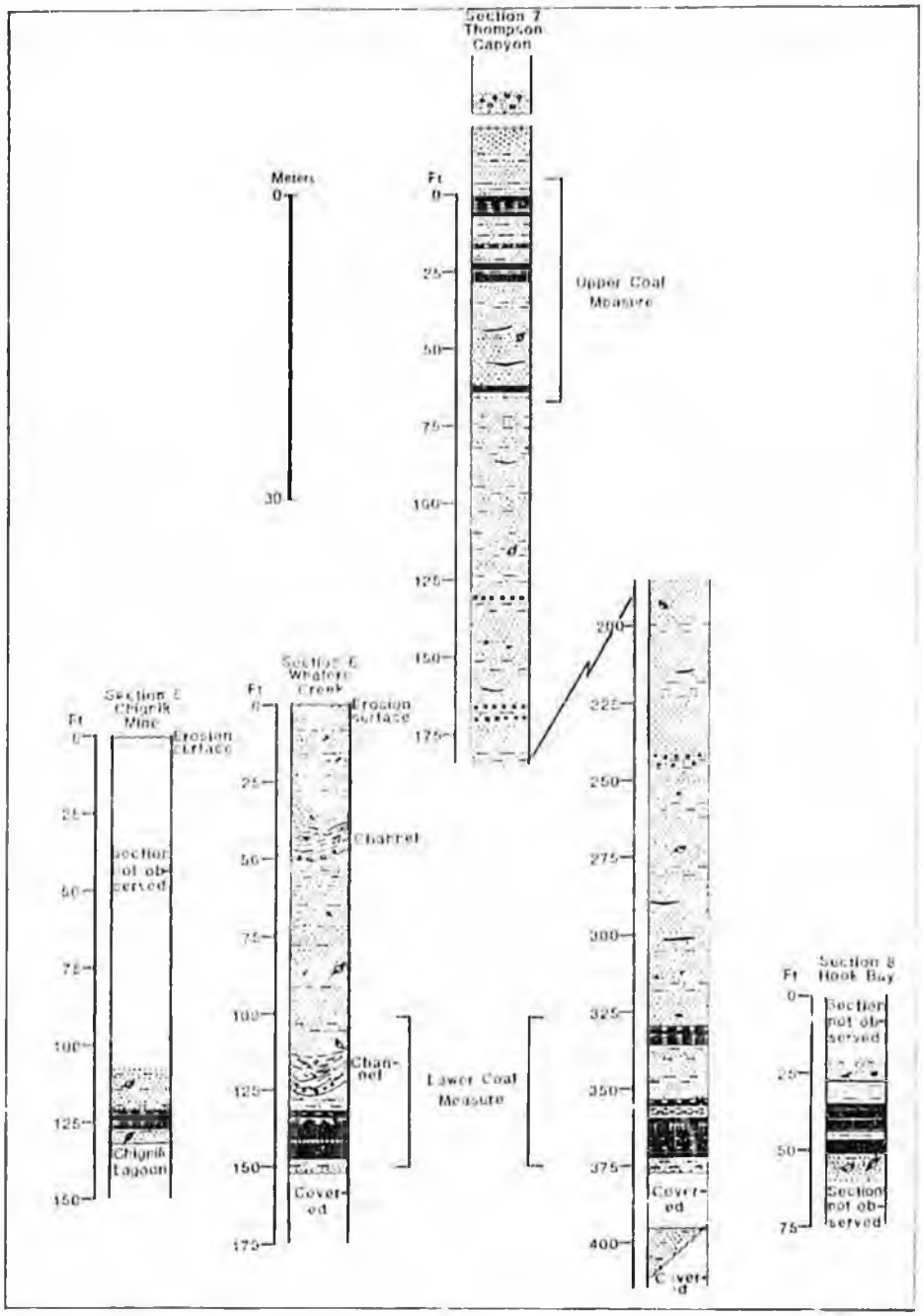

Figure 24. Detailed correlation sections of Chignik coalfield (from Merritt and McGee, 1986).

MINING HISTORY

Coal was first discovered on the banks of the Chignik River in 1885. In 1893, the Alaska Mining and Development Company opened a small coal mine on Anchorage Bay near Chignik Lagoon, and the Alaska Packer's Association opened the Chignik River Mine to produce coal for the local fish cannery and for steamers. The Chignik River Mine operated until 1911. Several other small underground mines and prospects were opened in the early 1900s at Thompson Valley (fig. 25), Whaler's Creek, and Hook Bay, but they accounted for very little production. There has been no mining activity since.

Although some exploration has been conducted in recent years, the mineability of most areas has not been thoroughly investigated. During 1980-81, Resource Associates of Alaska, Inc. (a subsidiary of NERCO Minerals Co.), explored several areas owned by the Bristol Bay Native Corporation in the Chignik field and outlined small potential mining blocks.

ACCESS

Although the Chignik field is accessible to tidewater, Chignik Bay itself has no suitable harbor facilities for large vessels. It would be necessary to construct coal shipment facilities, including overland transportation system (access road and conveyor or aerial tramway) through a low pass to the head of Kuiukta Bay, about 5 mi south of the coal belt.

COAL RESOURCES

Coal resources are concentrated in four main areas: Chignik River, Whaler's Creek, Thompson Valley, and Hook Bay. Coal beds range in thickness to 7 ft, but are typically about 3 ft thick.

Resources are summarized as follows (depths of 0 to 2,000 ft):

Measured	10 million tons
Identified	230 million tons
Hypothetical	1,500 million tons

LAND STATUS

The Chignik coalfield lies within lands owned by the Bristol Bay Native Corporation.

Figure 25. Lower coal horizon at Thompson Valley, Chignik field, Alaska Peninsula. This seam previously supported a small mine. (Photo by R.D. Merritt, 1984.)

Chignik Coalfield Data

COAL QUALITY

Rank: High volatile bituminous, typically hvBb.

Heating content: Range 8,800-13,750 Btu/lb
Average 11,800 Btu/lb

Proximate analysis:	Range (%)	Average (%)
Moisture	1.09-6.97	4.40
Volatile matter	25.54-40.61	36.33
Fixed carbon	37.86-57.08	47.66
Ash	4.15-30.56	11.61

Ultimate analysis:		
Carbon	56.59-68.45	64.15
Hydrogen	4.12-5.10	4.71
Nitrogen	0.68-0.78	0.71
Oxygen	14.14-24.65	17.46
Sulfur	0.28-4.79	1.36
Ash	4.15-30.56	11.61

Major-oxide composition of ash (avg. in %):

SiO_2	42.0	MgO	2.2
Al_2O_3	29.3	P_2O_5	0.5
Fe_2O_3	5.6	Na_2O	0.2
CaO	4.0	MnO	0.1
K_2O	0.5	SO_3	5.9
TiO_2	1.7	Undet.	8.0

Trace elements in coal ash (avg. in ppm):

Barium	367	Molybdenum	7
Boron	400	Nickel	27
Cadmium	1	Scandium	30
Chromium	55	Strontium	150
Cobalt	13	Vanadium	173
Copper	78	Ytterbium	6
Gallium	30	Yttrium	57
Lead	32	Zinc	83
Lithium	192	Zirconium	217
Manganese	455		

Trace elements in coal (avg. in ppm):

Antimony	0.3	Selenium	0.4
Arsenic	3.7	Thorium	4.0
Fluorine	65	Uranium	1.1
Mercury	0.09		

Fusibility of ash (°F):

Initial deformation	2794
Softening temperature	2800+
Fluid temperature	2800+

Free-swelling index: 0-1.5

Hardgrove grindability index: 46

Coking potential: Poor caking and coking properties.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	78.3
Gelinite	2.0
Corpocollinite	0.4
Vitrodetrinite	10.9
Total vitrinite	91.6
Fusinite	2.0
Semifusinite	1.0
Sclerotinite	0.4
Macrinite	0.5
Inertodetrinite	1.8
Total inertinite	5.7
Cutinite	0.3
Sporinite	0.8
Resinite	0.6
Exsudatinite	0.1
Suberinite	0.1
Alginite	0.1
Liptodetrinite	0.7
Total liptinite	2.7

Mean-maximum vitrinite reflectance (Ro_{max}, %):

Range 0.57-1.76
Average 0.73

Locality (See figure 22)	Ro_{max} (%)
15	0.57
16	0.62
17	0.62
18	0.67
19	0.64
20	0.82
21	1.01
22	0.95
23	0.79
24	1.76
25	0.58
26	0.62
27	0.60
28	0.60
29	0.66
30	0.58
31	0.68
32	0.69
33	0.70
34	0.71
35	0.78
36	0.60
37	0.66
38	0.65
39	0.65
40	0.70

WESTERN ARCTIC COALFIELDS

DESCRIPTION

LOCATION

The Western Arctic region forms a part of the Foothills subprovince in northern Alaska (fig 26). Three specific areas that show the highest potential for near-term development of bituminous coal deposits are Cape Beaufort (or Liz-A syncline), Deadfall syncline, and Kukpowruk River, west of Howard syncline (fig. 27). The Liz-A syncline is just inland from Cape Beaufort on the Chukchi Sea coast. The Deadfall syncline is 6 mi east of the Chukchi Sea, and the Kukpowruk River area is about 14 mi east of the Chukchi Sea and 25 mi upstream from the mouth of the Kukpowruk River.

AREA

The Cape Beaufort area covers about 30 mi^2. The Deadfall syncline encompasses less than 100 mi^2, and that portion of the Kukpowruk River area under consideration here--the western end of the Howard syncline--has an area of 20 to 30 mi^2. Within these broad areas, several specific mining blocks or units can be defined.

GEOLOGY

The geology of the Western Arctic region is dominated by a series of east-west-trending synclines and anticlines. The synclines contain bituminous coal beds in the Corwin Formation of the Cretaceous-age Nanushuk Group (figs. 28 and 29). In the Western Arctic region, the Corwin Formation varies in thickness from 7,000 to 10,000 ft. The type locality of the Corwin Formation is at Corwin Bluffs (fig. 26), 35 mi west of Cape Beaufort, where 80 or more coal beds over 1 ft thick are exposed. Interbedded with coal seams are sandstones, claystones, siltstones, and carbonaceous shales that formed in a prograding deltaic

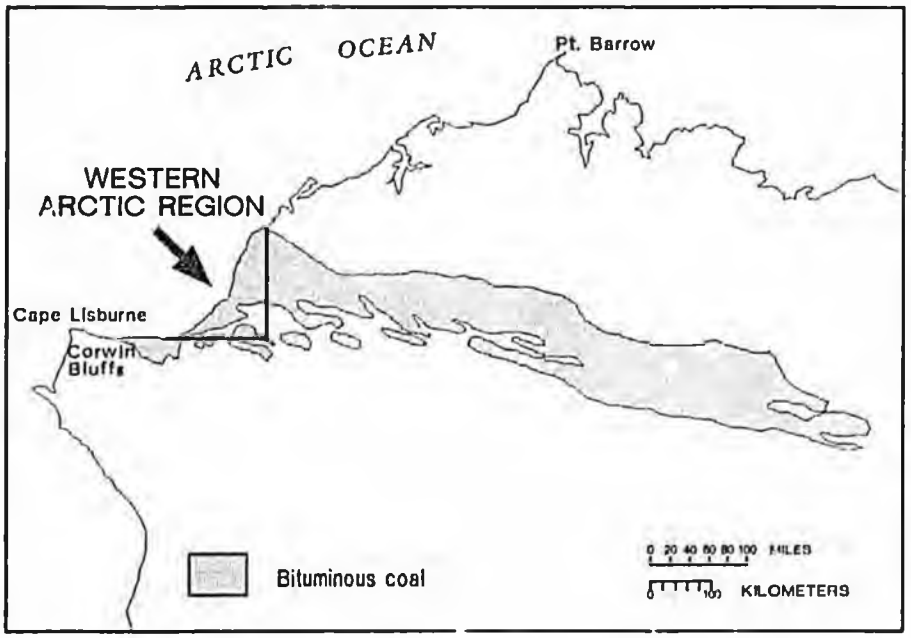

Figure 26. Distribution of bituminous coal deposits in northern Alaska (modified from Knutson, 1981).

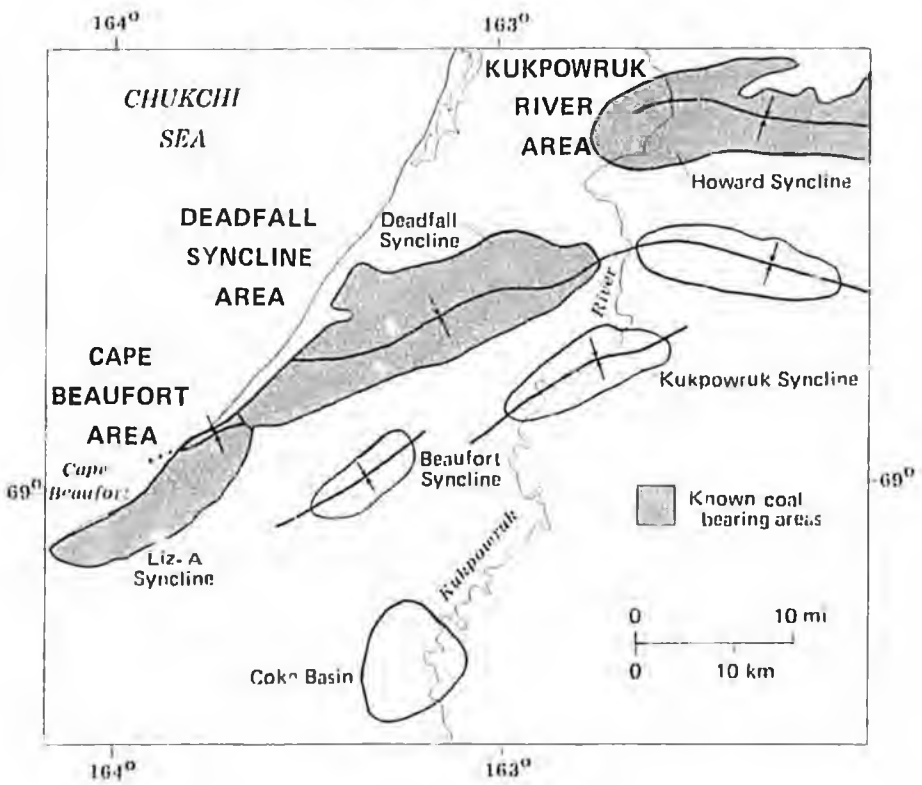

Figure 27. Important bituminous coal-bearing areas and structural features of the Western Arctic region (modified from Chapman and Sable, 1960).

system in swampy coastal lowlands. The strata are flat-lying to gently dipping (10° to 20°) and their structure is relatively simple (figs. 29 and 30). Rank of the coals increases with the complexity in structure from north to south in the foothills of the Brooks Range.

MINING HISTORY

The coals of the Western Arctic region were first reported by the Beechey expedition of 1826-27. In the late 1800s and early 1900s, coal from the Corwin Bluffs and Cape Beaufort areas was used to fuel whaling ships. A.J. Collier conducted the first geologic reconnaissance of coastal deposits south of Cape Beaufort in 1904.

Morgan Coal Company first explored the coking coal deposit on the Kukpowruk River in 1954, by driving a 70-ft tunnel in the 20-ft-thick bed. The company still holds a U.S. Bureau of Mines preference-right coal lease on 5,000 acres in that area. Union Carbide investigated the Kukpowruk River coking coal deposit from 1961 to 1963,

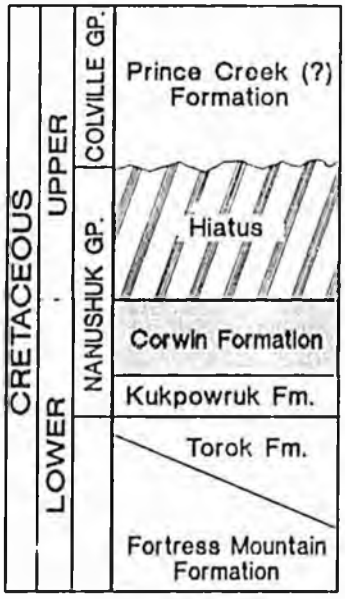

Figure 28. Generalized stratigraphy of the Western Arctic region (modified from Ahlbrandt and others, 1979).

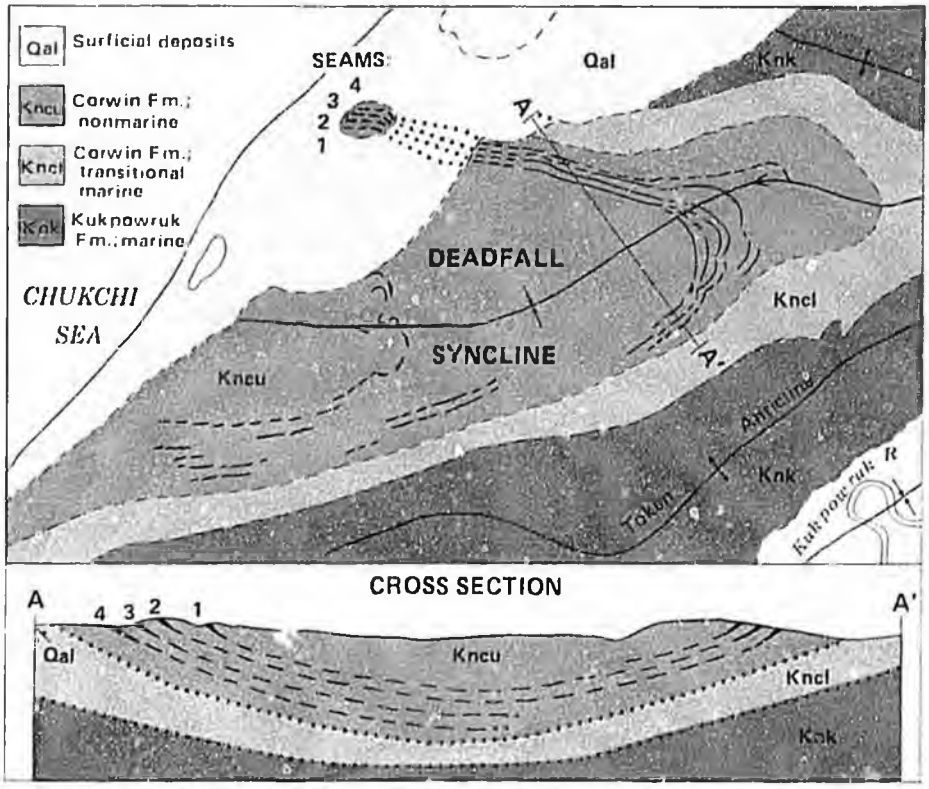

Figure 29. Geologic map and cross section of the Deadfall syncline, Western Arctic region (modified from Callahan and Eakins, 1987).

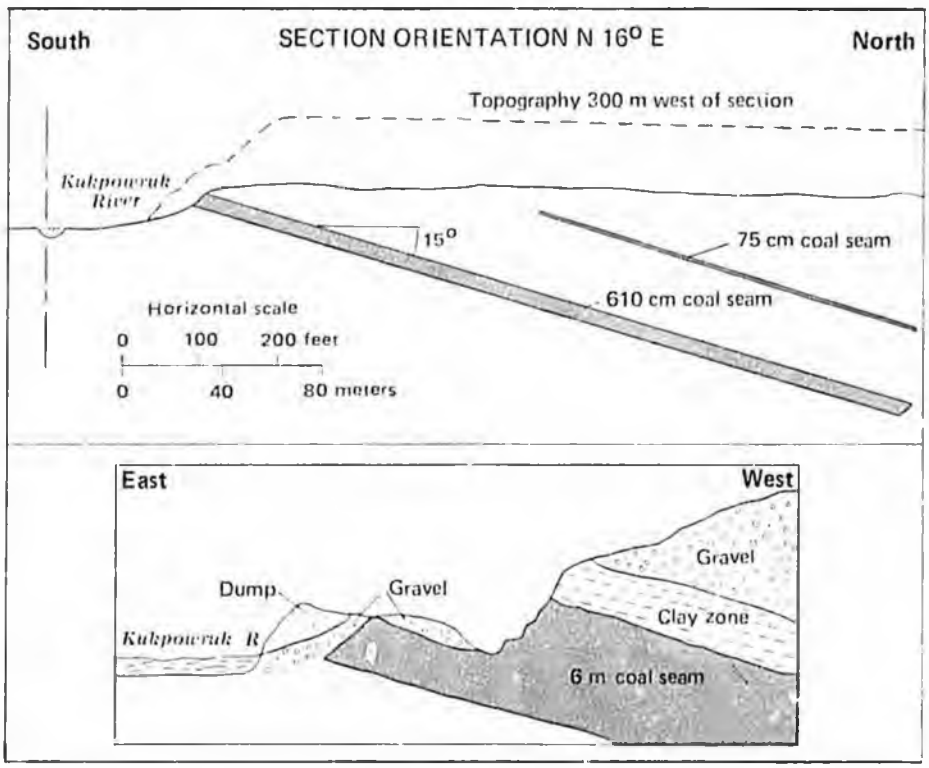

Figure 30. Typical cross sections in the Kukpowruk River area of the Western Arctic (from Knutson, 1981).

and Kaiser Engineers performed detailed mining and economic evaluations from 1970 to 1977. From 1981 to 1986, the State of Alaska and the North Slope Borough conducted extensive exploration and predevelopment site investigations of coal deposits at Cape Beaufort and in the Deadfall syncline area.

ACCESS

Access to the Deadfall syncline deposits was thoroughly studied by the Western Arctic Coal Development Project (Arctic Slope Consulting Engineers, 1986). A 5.4-mi haul road would connect the mine site with a port facility and berthing area for barge traffic. A 2,800-ft lead-in channel would be dredged to an operating depth of 13 ft. Coal would be stored at the barge loading facility for domestic shipment during the ice-free season. Coal for foreign export would be transported to a separate ice-free port facility with a large storage capacity and a harbor for berthing and loading of seagoing carriers. Large-volume shipments from either the Cape Beaufort or Kukpowruk River areas would probably follow a similar plan, unless a long-distance rail line were completed to the Western Arctic region.

COAL RESOURCES

The North Slope, including the National Petroleum Reserve of Alaska (NPRA) and bordering areas to the east and west of it, holds as much as 4 trillion tons of coal. The Western Arctic region west of NPRA may contain up to 1 trillion tons of coal. Approximately 60 percent of North Slope coal is estimated to be of bituminous rank. Ten percent or more of the stratigraphic section from some wells consists of coal. Between 150 and 200 coal beds, 60 percent of which are over 3.5 ft thick, have been correlated in the Corwin Formation of the Western Arctic. The thickest identified outcropping seam in the region is at Kukpowruk River (fig. 31). At Cape Beaufort, coal beds range in thickness to 9 ft in outcrops (Fig. 32) and to 17 ft in drill holes; at Deadfall syncline, coal beds range in thickness from 4.5 to 13 ft.

Figure 31. Twenty-foot thick coal seam at Kukpowruk River, Western Arctic region. (Photo by G.R. Eakins, 1982.)

At a minimum, the Western Arctic region contains 125 million tons of strippable coal resources amenable to modern mechanized mining; further exploration will delineate other strippable resources. Plentiful additional resources can be developed by underground mining methods. Domestic uses of Western Arctic coal are heat and power generation for villages in northwest Alaska and power production for other large-scale mining such as the Red Dog zinc mine north of Kotzebue.

Coal resources at Cape Beaufort, Deadfall syncline, and Kukpowruk River are listed below in millions of tons (overburden depths from 0 to 3,000 ft):

	Cape Beaufort	Deadfall syncline	Kukpowruk River
Measured	45	60	20
Identified	390	500	275
Hypothetical	1,700	5,000	1,200

LAND STATUS

Lands in the Western Arctic coalfields region are owned by Arctic Slope Regional Corporation, and leased by the Morgan Coal Company (U.S. Bureau of Mines preference-right lease to 5,000 acres in the Kukpowruk River area).

Figure 32. Sampling a thick coal bed north of Cape Beaufort, Western Arctic region, 1981. (Photo courtesy of P.D. Rao, University of Alaska MIRL.)

Western Arctic Coalfields Data
CAPE BEAUFORT

COAL QUALITY

Rank: hvAb-hvCb

Heating content: Range 9,100-12,700 Btu/lb; Average 12,300 Btu/lb

Proximate analysis (range in %, mean in parentheses):

Moisture	2.5-7 (4.5)	Fixed carbon	37-55 (46.8)
Volatile matter	22-33 (29.7)	Ash	8-27 (16.0)

Ultimate analysis (range in %, mean in parentheses):

Carbon	46-71 (58.3)	Oxygen	13-25 (19.1)
Hydrogen	3.5-5 (4.5)	Sulfur	0.2-0.4 (0.3)
Nitrogen	0.7-1.5 (1.1)	Ash	8-27 (16.7)

Major-oxide composition of ash (avg. in %):

SiO_2	49.7	MgO	2.7
Al_2O_3	25.1	SO_3	0.6
Fe_2O_3	3.2	P_2O_5	0.3
CaO	6.2	MnO	0.1
TiO_2	1.1	Undet.	7.5

Trace elements in coal ash (avg. in ppm):

Boron	440	Nickel	40
Chromium	55	Silver	3.5
Cobalt	40	Tin	295
Copper	40	Vanadium	130
Gallium	30	Zinc	110
Lead	55	Zirconium	500
Molybdenum	5		

Trace elements in raw coals (avg. in ppm):

Boron	75	Nickel	8
Chromium	15	Silver	1
Cobalt	8	Tin	35
Copper	9	Vanadium	30
Gallium	6	Zinc	25
Lead	10	Zirconium	100
Molybdenum	1		

Fusibility of ash (reducing temperature, °F):

Initial deformation	2320
Softening temperature	2410
Fluid temperature	2520

Free-swelling index: 0-6

Hardgrove grindability index: 58

Coking potential: Increased with depth; coal from 200-ft shows pronounced coking characteristics.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	62.2
Pseudovitrinite	10.0
Gelinite	0.7
Phlobaphinite	0.4
Pseudophlobaphinite	1.0
Sporinite	1.2
Resinite	0.8
Cutinite	0.1
Alginite	0.0
Exsudatinite	0.1
Thick cutinite	0.1
Suberinite	0.0
Other liptinite	0.0
Fusinite	0.8
Semifusinite	14.3
Macrinite	1.7
Globular macrinite	1.3
Inertodetrinite	5.3
Sclerotinite	0.0

Mean-maximum vitrinite reflectance ($R_{o_{max}}$, %): 0.70

DEADFALL SYNCLINE

COAL QUALITY

Rank: hvAb-hvCb

Heating content: Range 10,900-13,200 Btu/lb; Average 12,900 Btu/lb

Proximate analysis (range in %, mean in parentheses):

Moisture	2.5-8 (4.6)	Fixed carbon	35-56 (53.9)
Volatile matter	22-36 (33.9)	Ash	5.5-22 (7.6)

Ultimate analysis (range in %, mean in parentheses):

Carbon	451-65 (59.4)	Oxygen	17-27 (23.3)
Hydrogen	3.7-5.1 (4.6)	Sulfur	0.2-0.3 (0.2)
Nitrogen	0.8-1.4 (1.1)	Ash	5.5-22 (11.4)

Major-oxide composition of ash (avg. in %):

SiO_2	30.9	MgO	6.7
Al_2O_3	29.2	SO_3	1.5
Fe_2O_3	4.8	P_2O_5	0.8
CaO	17.5	MnO	0.0
TiO_2	0.7	Undet.	0.5

Trace elements in coal ash (avg. in ppm):

Boron	300	Nickel	25
Chromium	50	Silver	2
Cobalt	30	Tin	180
Copper	35	Vanadium	95
Gallium	30	Zinc	100
Lead	50	Zirconium	220
Molybdenum	5		

Trace elements in raw coals (avg. in ppm):

Boron	55	Nickel	7
Chromium	12	Silver	1
Cobalt	8	Tin	25
Copper	10	Vanadium	20
Gallium	5	Zinc	18
Lead	10	Zirconium	80
Molybdenum	1		

Fusibility of ash (reducing temperature, °F):

Initial deformation	2093
Softening temperature	2143
Fluid temperature	2189

Free-swelling index: 0-6

Hardgrove grindability index: 56

Coking potential: Similar to Cape Beaufort coals.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	58.1
Pseudovitrinite	10.7
Gelinite	0.9
Phlobaphinite	0.1
Pseudophlobaphinite	1.1
Sporinite	1.7
Resinite	1.0
Cutinite	0.2
Alginite	0.0
Exsudatinite	0.0
Thick cutinite	0.3
Suberinite	0.0
Other liptinite	0.0
Fusinite	2.0
Semifusinite	16.4
Macrinite	2.4
Globular macrinite	0.3
Inertodetrinite	4.8
Sclerotinite	0.0

Mean-maximum vitrinite reflectance (Ro_{max}, %): 0.70

KUKPOWRUK RIVER

COAL QUALITY

Rank: hvAb-hvCb

Heating content: Range 11,900-14,100 Btu/lb
Average 13,800 Btu/lb

Proximate analysis (range in %, mean in parentheses):

Moisture	0.8-10 (2.8)	Fixed carbon	52-60 (58.5)
Volatile matter	31-40 (35.2)	Ash	2.5-15 (3.5)

Ultimate analysis (range in %, mean in parentheses):

Carbon	57-77 (70.0)	Oxygen	12-18 (14.5)
Hydrogen	4.5-5.6 (5.1)	Sulfur	0.2-0.5 (0.3)
Nitrogen	1.0-1.6 (1.3)	Ash	2.5-15 (8.8)

Major-oxide composition of ash (avg. in %):

SiO_2	51.5	MgO	3.0
Al_2O_3	25.5	SO_3	0.5
Fe_2O_3	4.8	P_2O_5	0.6
CaO	3.5	MnO	0.1
TiO_2	1.0	Undet.	6.5

Trace elements in coal ash (avg. in ppm):

Boron	--	Nickel	80
Chromium	40	Silver	--
Cobalt	35	Tin	--
Copper	150	Vanadium	65
Gallium	50	Zinc	--
Lead	150	Zirconium	190
Molybdenum	--		

Trace elements in raw coals (avg. in ppm):

Boron	--	Nickel	7
Chromium	4	Silver	--
Cobalt	4	Tin	--
Copper	12	Vanadium	9
Gallium	4	Zinc	--
Lead	14	Zirconium	19
Molybdenum	--		

Fusibility of ash (reducing temperature, °F):

Initial deformation	2040
Softening temperature	2110
Fluid temperature	2390

Free-swelling index: 0-6

Hardgrove grindability index: --

Coking potential: Significant coking properties; generally soft-coking.

COAL PETROLOGY

Avg. composition, volume, mineral-matter-free basis, in %:

Vitrinite	60.9
Pseudovitrinite	16.3
Gelinite	1.7
Phlobaphinite	0.3
Pseudophlobaphinite	1.0
Sporinite	1.9
Resinite	0.7
Cutinite	0.4
Alginite	0.1
Exsudatinite	0.0
Thick cutinite	0.3
Suberinite	0.1
Other liptinite	0.0
Fusinite	0.6
Semifusinite	11.4
Macrinite	1.1
Globular macrinite	0.3
Inertodetrinite	2.9
Sclerotinite	0.0

Mean-maximum vitrinite reflectance (Ro_{max}, %): 0.73

OUTLOOK FOR COAL DEVELOPMENT IN ALASKA

As the chief energy resource of the world today, where escalating energy needs sap rapidly declining petroleum resources, coal will play an increasing part in the world energy supply. Coal is the primary source of fuel for electrical-power generation in the United States.

Alaska's total coal resources are estimated at between 5.5 and 6.0 trillion tons, over half of which are of bituminous rank. The total energy equivalent (in Btu) of all the coal in Alaska exceeds by several orders of magnitude that of all known oil reserves in the State. The energy equivalent of Alaska's bituminous coal resources alone is estimated to be more than 1,000 Prudhoe Bays (original recoverable reserves of about 10 billion barrels).

Because of its vast coal resources, Alaska promises to become an important coal-mining and export center for the next decade and well into the next century. The potential for coal development in Alaska is unlimited, and Alaska's strategic position on the northern Pacific Rim places it in the center of expanding trade routes. Alaska is, in fact, closer to Far East markets than Australia, Canada, or South Africa.

The low sulfur content of Alaska's coal (less than 0.5 percent) is a chief attraction for Pacific Rim industrial buyers. The environmental significance of low-sulfur coal will increase dramatically in the future; environmental problems encountered in mining, preparation, and use of high-sulfur coal can be avoided with low-sulfur Alaska coal.

The sulfur content of Alaska coals, on average, is about half that of the lowest-sulfur coals of the contiguous U.S. Alaska's coals are uniquely low in the acid-producing, pyritic form of sulfur that causes acid-mine drainage in other U.S. coal-producing regions, and lower mean annual temperatures and local relative aridity act to reduce oxidation effects on Alaska's coals when exposed to the environment.

Alaska coals produce low sulfur-oxide (SO_X) emissions. Most Alaska coals meet the USEPA emission standards (1.2 lb SO_2/MM Btu) for direct combustion. Because nitrogen content is also low, the low combined emission of SO_X and NO_X gases during combustion make Alaska's coals among the most environmentally safe in the world. Alaska's high-rank coals also possess good ash-fusion characteristics and low moisture and metallic trace-element content.

Coal mining has taken place in Alaska for 130 yr. If this long history of coal development proves one thing, it is that coal mining can exist in harmony with the unique Alaska environment. The Usibelli Coal Mine near Healy (in interior Alaska) provides an example--from its longstanding commitment to land-restoration programs--that coal mining can be conducted in Alaska with both economic success and environmental restraint. As coal mining activities increase in the state, Alaska has the opportunity to serve as a model for mining efficiency and prudent land-restoration practices in Arctic and Subarctic regions.

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