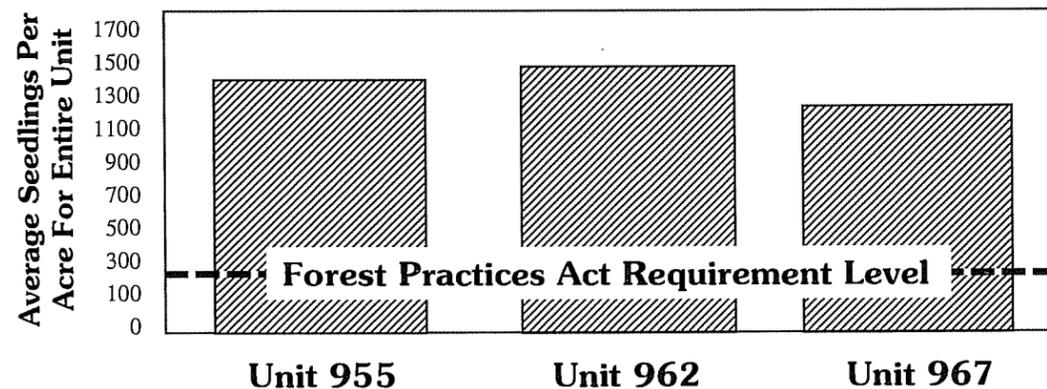


# Q. Do Trees Regenerate After A Timber Harvest?

**A.** Koncor Forest Products Company actively monitors regeneration on all of its managed lands. While Alaska's Forest Practices Act requires at least 200 seedlings per acre within five years of a timber harvest, in the three harvest units used in the graph below (as in most of Koncor's harvest units), there were more than 1,200 seedlings found growing on each acre during routine regeneration surveys. In fact, most harvest areas regenerate too densely and must be thinned to enhance tree growth.

**Typical Afognak Island Harvest Unit Regeneration Figures**

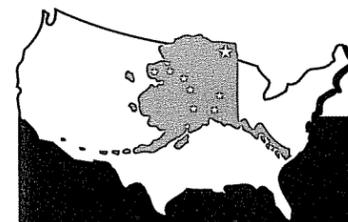


**...improving today's forest management for tomorrow's forests.**

If you are interested in additional information concerning Alaska's forest products industry, please write, call or fax us with your questions or comments at: 3501 Denali, Suite 202, Anchorage, Alaska 99503 Phone (907) 562-3335, Fax (907) 562-0599.

Resource Development Council  
121 W. Fireweed, Suite 250  
Anchorage, AK 99503  
ADDRESS CORRECTION REQUESTED

Bulk Rate  
U.S. Postage  
PAID  
Anchorage, AK  
Permit No. 377



This edition sponsored by

**Koncor Forest Products Company**

# Resource Review

June 1995

A monthly publication of the Resource Development Council, Inc.

## ANWR victory

Alaskans can rejoice, but not relax

By Roger Herrera  
RDC Board Member

It took eight long, frustrating years.

In March 1987, the first recommendation to Congress to open the Coastal Plain of the Arctic National Wildlife Refuge was issued by the Department of the Interior. In May 1995, the same Department of the Interior is trying to lock up the Coastal Plain, but, at last — almost 3,000 days later — both chambers of Congress have voted their initial approval of leasing in the area.

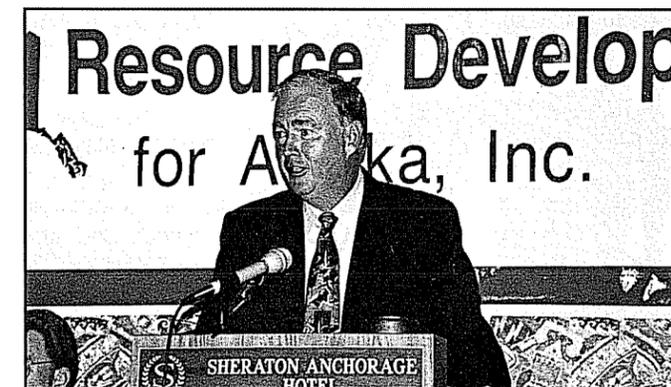
Alaskans can rejoice, but not relax. In fact, our good fortune has stung our opponents into bitter and belligerent action. The extremeness of their rhetoric and the paucity of the truth is fair warning of the battles about to begin. We have two choices. We can congratulate ourselves on our initial victory  
*(Continued to page 3)*

## Momentum builds, prospects improve to open Arctic Oil Reserve to drilling

*Window of opportunity opens in Congress*

Congress has set the stage for a bill authorizing oil and gas development in the Arctic Oil Reserve, formerly known as the Coastal Plain of ANWR after both the House and Senate passed major budget measures counting revenues from ANWR lease sales in the federal budget.

Passage of the budget resolutions means that language authorizing oil development in the Arctic Oil Reserve will be included later this year in a massive budget bill that will be difficult for environmentalists to stop. While the Clinton administration remains opposed to drilling, the drilling provision would be such a small issue in the huge budget-balancing package that it could es-



Senator Frank Murkowski told 450 people attending RDC's Annual Meeting that a window of opportunity has opened for congressional approval of oil and gas development in ANWR.

cape becoming a veto target.

The best chance for environmentalists to slow down the building momentum for Arctic drilling was in the Senate where critical votes came last month on two amendments which would have effectively eliminated drilling

revenues from the budget picture.

The problem facing environmentalist is that the big budget bill in which development will be included cannot be filibustered. A straight up or down vote on an earlier  
*(Continued to page 3)*

# Water quality standards and the arsenic cancer risk

*Editor's Note: The Montana Legislature passed several bills revising the state's water quality standards and requiring that treatment standards be economically, environmentally and technologically feasible. Legislation passed by the Montana Legislature and supported by Governor Rasicot revised the human health risk level from 1 in 1 million to 1 in 100,000 and adjusted the standard for arsenic from 1 in 1 million to 1 in 1,000 risk. The revisions were made after local communities and businesses throughout Montana were unable to obtain waivers from stricter standards which were economically and technologically infeasible.*

By Senator Lorents Grosfield  
Chairman, Montana Senate  
Natural Resources Committee

Second of two-part series  
(Edited for space)

One of the troubling policy questions that we must continually weigh is, how "clean" does "clean" need to be? If we are discharging water into a stream, should "clean" mean as close as we

The Resource Development Council (RDC) is Alaska's largest privately funded nonprofit economic development organization working to develop Alaska's natural resources in an orderly manner and to create a broad-based, diversified economy while protecting and enhancing the environment.

#### Executive Committee Officers

President ..... Elizabeth Rensch  
Sr. Vice President ..... Scott L. Thorson  
Vice President ..... John Sturgeon  
Secretary ..... Gerald G. Booth  
Treasurer ..... Allen Bingham  
Past President ..... David J. Parish

#### Staff

Executive Director ..... Becky L. Gay  
Communications Director ..... Carl R. Portman  
Special Assistant/Finance ..... Judie Schneiter  
Projects Coordinator ..... Ken Freeman  
Staff Assistant ..... Penny Booher

Resource Review is the official monthly publication of the Resource Development Council. RDC is located at 121 W. Fireweed, Suite 250, Anchorage, AK 99503, (907) 276-0700. Fax: 276-3887

Material in the publication may be reprinted without permission provided appropriate credit is given.

Writer & Editor  
Carl Portman

© RDC 1995

can get to totally pure? Should it mean cleaner than the water naturally occurring in the stream? Should it mean as clean as the water we're discharging into? Should it mean clean enough to meet all the water quality standards that have been set to protect our health and environment?

Take Anchorage, Alaska, a city of about 250,000 people. Recently it was discovered the discharge into Cook Inlet from the municipal sewage treatment facility contained too much arsenic to meet the standard. An analysis of the problem revealed that it would cost the city \$970 million to upgrade its system in order to eliminate enough arsenic to meet the standard. That's over \$12,000 for every family! The amount of arsenic to be eliminated was about one pound. But further investigation revealed that literally hundreds of pounds of arsenic already arrives naturally from the various rivers that flow into Cook Inlet and from the tide coming in from the ocean. Given that hundreds of pounds are already arriving naturally, what possible sense would it make for the city to tax its citizens enough to pay the \$970 million to eliminate one pound from the city's discharge? Could it be perhaps that the standard is flawed, or at least needed an exemption to deal with the specific Anchorage situation?

It's important to remember that water quality standards have not been cast in stone by some supreme being. Environmental science is not an exact science and none of these standards are "infallible."

Take Senate Bill 331 and the issue of Montana's water quality standard for arsenic. Arsenic is a known cancer causing agent. But there are at least four major points that need to be understood.

First, SB 331 changed the standard for arsenic from being based on a one-in-a-million increased lifetime cancer risk to a one-in-a-thousand increased risk. Does this mean that the Legislature has increased the cancer risk 1,000 times? Absolutely not.

At a one-in-a-million increased risk, the Montana water quality standard for arsenic in Montana streams and rivers

before SB 331 was 0.018 parts per billion (18 parts per trillion). But the EPA drinking water standard is 50 parts per billion (50,000 parts per trillion). This means that our old standard for streams and rivers was 2,778 times more restrictive than the federal drinking water standard!

The new one-in-a-thousand cancer risk standard in SB 331, for discharges to our rivers, streams and groundwater, figures out at 18 parts per billion, which is still almost three times stricter than the federal drinking water standard of 50. But what is even more telling are the relatively high levels of arsenic that occur in most Montana streams naturally. For example, the average arsenic in the Missouri River at Toston from natural sources is about 24 parts per billion. With this level of arsenic naturally occurring in the river, there is no increased cancer risk in the upper Missouri River by moving the standard from 0.018 to 18. Why? Because the standard is still less than what's there naturally.

Granted, not all Montana streams have as much naturally occurring arsenic as the Upper Missouri. The average natural arsenic in the Yellowstone River at Livingston is about 21 parts per billion. By the time the Yellowstone reaches the North Dakota border, it is down to about 7. But in the Madison River at West Yellowstone, the natural arsenic level is about 260 parts per billion!

Remember, with our standard now at 18, we are still nearly three times stricter than the federal standard of 50, which like all federal drinking water standards, already has a significant safety margin built into it.

The second point is that fish are not as sensitive to arsenic as humans. Changing the standard to 18 will have absolutely no effect on fish. The arsenic standard set for healthy fish is 190 parts per billion; that is, below this level, fish will not be affected at all, and it's not until continual exposure for a week or more at a level of 360 parts per billion that fish will actually die.

The third major point is that we

(Continued to page 5)



**Guest Opinion**  
by Geoffrey McNaughton, Koncor Forest Products Company

## Clearcutting in Alaska

# What may be aesthetically displeasing to the eye may be in the best interest of the forest

One of the biggest issues in forest management today is clearcutting. Recent clearcuts look terrible to most people. Images of total destruction come to mind to many of us when clearcutting is first mentioned because all trees are cut whether they will be utilized or not. With the timber industry under attack and facing an uncertain future in Alaska, why do we invite the emotional responses and bad publicity by continuing to clearcut?

Clearcutting is not the best regeneration method for many forest types, but it is the best method for most of our Alaskan tree species and climate. It provides the greatest amount of sunlight for seedling establishment and growth, promotes forage species for wildlife, increases soil temperatures to help decomposition and nutrient release, and reduces insect and disease problems. All this results in a healthy, vigorously growing young forest that is much more productive than a mature forest or even old growth. Most importantly, it reduces the amount of roads and land base needed for timber production. Roads and their potential sedimentation remain the most significant environmental problem associated with forest management. Clearcutting also maximizes economic return on the often substantial investment required to start a remote Alaskan timber harvesting operation.

There can be some real problems with clearcutting if done with some tree species or in an inappropriate area. Most problems occur in warmer, drier climates where direct sun can result in soil drying and lethal temperatures to seedlings. We are fortunate in Alaska because of the cooler, wetter climate that promotes natural forest regeneration and rapid growth of the new forest. In fact, regeneration is usually too dense in Alaska and may require thinning to maximize individual tree growth.

Ecosystem Management and/or New Forestry are often advocated today. Their approaches may sound good but are often difficult to define or implement. Overall, Ecosystem Management and New Forestry attempt to leave more structural diversity across the landscape in the form of standing trees, snags and down logs to help promote habitat for wildlife or their prey. But many people point out that this is nothing new since foresters have been doing this for many years as part of proper forest management. In many cases, however, the public does not like to see lots of dead trees and rotten logs left behind for wildlife because they perceive it as a messy "cut and run" harvest operation.

These management approaches also attempt to mini-

mize clearcutting. Avoiding clearcutting may be appropriate where other non-timber resources are more important such as in scenic viewsheds, important wildlife areas, or riparian management areas. However, if the management objectives for an area are timber production, using these other methods can create many problems. Alternatives to clearcutting usually include selectively harvesting only a portion of the valuable trees, or using "dirty clearcuts" where all the smaller, crooked, or rotten trees are left standing. Many foresters call these methods "green lie" because it may look good to the public, but the resulting forest may just stagnate and not grow. Any regeneration that does occur grows very slowly in the shade of trees left behind. The residual trees may not respond well to their thinning because they may first need to fill out with more leaves before they can start growing in size. This often requires as many years as it would take to grow a new forest from seedlings. In many cases, large trees can be produced much quicker by clearcutting and promoting a vigorously growing new crop.

There are other problems with avoiding clearcutting besides reduced regeneration and growth. More land base would be needed to provide the same amount of wood that clearcutting could provide. Most importantly, more roads (and potential sedimentation problems) would be needed to selectively harvest an individual area and also to serve the expanded land base required. Trees left standing may blow over, especially Alaskan species such as Sitka spruce which have shallow root systems. Engineering problems may not allow selective harvesting where it may cause logs to drag and tear up the soil. Logs being brought downhill by cables are more difficult to control and may damage or knock over the residual trees. Insect and disease control is not very effective where infected trees are left standing, or where trees damaged during logging may get infected through wounds in their bark. Finally, there is the danger of "highgrading" where the best trees and their genetics are removed from the area.

The next time you see a recent clearcut, consider how it will look in a few years. That is the real measure that should be used to judge the success of forest management. When people are given all the facts on clearcutting, hopefully they will realize that it ensures continued regeneration, healthy and productive forests and a sustained supply of wood products from the land for generations to come.

Geoffrey McNaughton, Environmental Manager at Koncor Forest Products Company, holds a Ph.D. in Forest Ecosystem Analysis.

# In brief

## Oil export ban falls in Senate

After the Senate voted last month by a 74-25 margin to lift the long-standing ban on the export of North Slope oil, the House is now debating the issue and is expected to grant its approval of lifting the ban.

Exports could bring Alaska anywhere from \$700 million to \$1.6 billion in additional revenues over the next six years. Exports could also stimulate oil exploration by boosting profits of North Slope oil producers. As many as 25,000 new jobs are forecasted nationwide by the year 2000 as a result of the exports.

"This is an historic moment," said Senator Frank Murkowski, who negotiated the Senate bill out of peril from a filibuster.

The issue is now in the House Committee on Natural Resources, Chaired by Congressman Don Young.

## Alaska among six states to get flunking grade

Alaska was among six states receiving a flunking grade for "business vitality" in the ninth annual report of the Corporation for Enterprise Development.

For the third year in a row, Colorado received top honors in a "report card" grading states for their economic performance, business vitality and development capacity.

Alaska received a B for its economic performance and a D for its development capacity.

In the "Development Report Card for the States," Idaho, Minnesota, Montana and Oregon made the honor roll. States

must achieve all As and Bs to make the honor roll.

The Mountain West region is "an ideal example of the importance of investing in resources -- excellent human resources, broad-based and equitable tax and fiscal systems and an improved physical infrastructure have given the region the tools to create a host of economic opportunities," said Brian Dabson, the corporation's president.

The corporation defined economic performance as a measure of the benefits and opportunities a state's economy provides its populace. Business vitality measures the dynamism of the state's business sector. Development capacity measures the state's capacity for future growth and recovery from economic adversity.

## Yukon Pacific wins another big permit

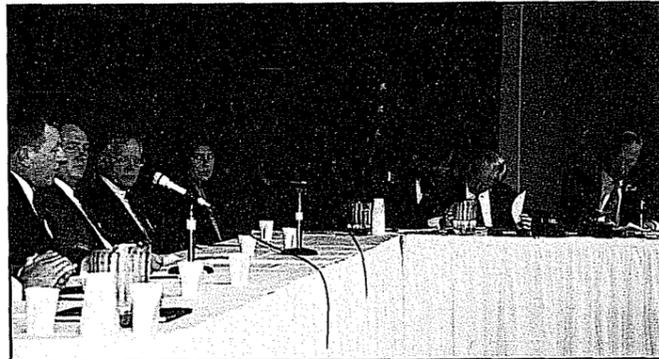
Yukon Pacific Corporation has won another major permit for a pipeline system that would carry North Slope natural gas to Valdez where it would be liquefied for export.

The Federal Energy Regulatory Commission gave its approval last month for the construction and operation of a liquefaction plant near Valdez. Although many more permits are required to build the multi-billion dollar system, the plant permit is considered the last of the potential "deal killers."

Anchorage-based Yukon Pacific has spent 14 years developing and marketing the \$14 billion project. The company has already obtained other major permits, including rights of way for the pipeline to cross federal lands.

The Valdez plant would be built on a 390-acre site on Anderson Bay, about three miles west of the Alyeska oil terminal. The plant would refrigerate the gas, turning it into a liquid that would be shipped by tankers to buyers in energy-hungry Asian countries.

Yukon Pacific has not yet secured commitments from Alaska's major oil producers to



RDC Executive Committee member Paul Glavinovich, far left, testified before a U.S. Senate Energy Committee field hearing in Anchorage May 31 on ANILCA access issues. Access to and across Alaska's conservation system units is a paramount concern of RDC. See story in next month's Resource Review.

sell the North Slope gas that they own.

The North Slope contains some of North America's richest natural gas deposits.

## Greens Creek Mine will reopen

The Greens Creek Mine on Admiralty Island will reopen with full production expected by January 1997.

Rebounding world mineral prices and a new, richer-than-expected ore body prompted the decision to reopen the mine. Owners of the mine expect to spend \$87 million over the next two years developing the new ore body.

Low metal prices led to the closing of the gold, lead and zinc mine in 1993. More than 200 workers were laid off. The mine, about 25 miles west of Juneau, was the largest source of silver in North America and had been the city's largest employer, with an annual payroll of \$13 million.

Employment at the mine should increase slowly over the next 18 months to 250 employees. With the addition of the new ore body, the mine's life expectancy is 18 years, at a production rate of 1,320 tons daily.

## Illinois Creek Mine project

USMX, Inc., is currently in the planning and design phase for the proposed Illinois Creek Mine project. USMX proposes developing the gold and silver deposit southwest of Galena using conventional open pit mining methods.

## Environmentalists oppose land deal

Sixteen environmental groups have joined together to oppose a proposed 1.6 million acre land exchange that could open coastal areas of the National Petroleum Reserve near Barrow to oil and gas development.

Arctic Slope Regional Corporation of Barrow supports the exchange which would give the federal government a huge chunk of land north of Gates of the Arctic National Park and a large parcel north of Point Hope.

The Native holdings north of the national park contain spectacular lakes and river valleys running off the Brooks Range and would serve as magnificent additions to the park. But the environmentalists claim that preservation of the petroleum reserve for wildlife is more important.

Oil companies have expressed interest in drilling on some of the lands ASRC could acquire in the exchange. In addition, the exchange could provide a pipeline corridor from Prudhoe Bay to a port facility on the Chukchi Sea. The port could be used to export natural resources developed in the Arctic, including Native-owned coal.

# Congress sets stage for oil development in Arctic Oil Reserve

(Continued from cover)

The recent passage of the budget measure in 1991 authorizing drilling on the Coastal Plain was prevented by a filibuster. Proponents of drilling felt they had enough votes in the Senate to pass the measure, but could not muster the 60-needed votes to break the filibuster mounted by drilling opponents.

The recent passage of the budget resolutions now sends the issue to the Senate Energy and Natural Resources Committee that Senator Frank Murkowski chairs. Murkowski expects the committee to begin writing a development bill this month. The process will be coordinated with the House Re-

sources Committee, chaired by Congressman Don Young.

Meanwhile, Secretary of the Interior Bruce Babbitt has vowed to fight drilling authorization at every step and would not rule out a Presidential veto of the massive budget bill if it includes authorization to drill. Congressional action on that bill will come by November, meaning that pro-drilling forces have about a five-month window of opportunity in Washington to secure development authorization.

As a result, pro-development forces have increased coordinated efforts to reach key members of both houses, especially those who are undecided on the issue.

Herrera:

## Alaskans can win ANWR battle, but must work hard

(Continued from cover)

and then start to talk about the next vote in the Senate Energy Committee on June 22 — and lose. Or we can work like hell writing letters, making phone calls, raising money, placing editorials and talking, arguing, explaining, cajoling and helping members of Congress — and win this issue against overwhelming odds.

We will be outspent, outmanned and outlawed by our opponents. Every trick in the congressional book, including a few dirty ones, will be used between now and next November to thwart our efforts. Yet we can win.

We will rely greatly on the impres-

sive experience of the three hard working members of our congressional delegation to outsmart the Ventos, Bradleys and Pells of the House and Senate. Thank goodness term limits have not denied us their 64 collective years of leadership. They control the agenda of the Budget Reconciliation debate in both chambers on the issue of the Arctic Oil Reserve. But when the votes are counted, Alaska's congressional delegation has three among 535.

If we, as Alaskans and members of RDC don't help, we can expect the worst. If we don't recognize that our many years of Permanent Fund checks

carry with them an obligation to fight for Alaska's future, we will lose.

All this is pretty heavy stuff, but the bottom line is that we can and should win this time. We have no doubt that oil can be found and produced without messing up the arctic environment. We know our oil builds schools, roads and libraries in Alaska, and provides water, sewer and other modern amenities to our towns and villages. We know it creates hundreds of thousands of jobs across America. We know it displaces imported oil from countries which do not or cannot protect the environment like Alaskans. We know oil is vital to our well-being.

Knowing all these good things, are we prepared to join the fight for the Coastal Plain? The fight has been ongoing for 3,000 days, but we can now win this issue in the next 3,000 hours. If 3,000 of us donated an hour each to writing letters, or if 3,000 Alaskans gave one hour's worth of their wages, or if the oil industry increases its help, we could win.

If the answer is YES, read the adjacent box.

Sometimes, reading the local newspaper, it is hard to recognize what a great job Alaska's delegation is doing for us these days. They are an awesome trio in Washington, D.C. A warm thank you, Chairmen and all.

## Act now!

It is imperative that RDC members take the time NOW to contact their friends, relatives and associates in other states and ask them to write their congressmen and senators in support of oil development in the Arctic Oil Reserve. RDC has a special packet of information you can send your friends. Ask them to write a personal letter, which receives more attention and is more effective than a pre-printed post card message. Our packets contain brief sample letters which can be typed on letterhead.

It is vital that the following senators be contacted immediately by Alaskans and their contacts Outside.

Common address: U.S. Senate, Washington, D.C., 20510 (Area Code: 202)

Contact senator	Phone	Fax
Sen. Akaka D-HI	224-6361	224-2126
Sen. Bryan D-NV	224-6244	
Sen. Campbell R-CO	224-5852	224-1933
Sen. Cohen R-ME	224-2523	224-2693
Sen. Ford D-KY	224-4343	224-4212
Sen. Hatfield R-OR	224-3753	
Sen. Hollings D-SC	224-6121	
Sen. Nunn D-GA	224-3521	224-0072
Sen. Packwood R-OR	224-5244	228-3576
Sen. Reid D-NV	224-3542	224-7327
Sen. Smith R-NH	224-2841	
Sen. Snowe R-ME	224-5344	224-1946
Sen. Specter R-PA	224-4254	224-8165

# RDC elects new officers, board

## Rensch is new RDC President

Elizabeth Rensch, President and owner of Analytica Alaska, Inc., an environmental testing laboratory based in Anchorage, has been elected President of the Resource Development Council. Rensch was elected to the one-year term at the Council's 21st Annual Meeting in Anchorage May 31.

Scott Thorson, President of Network Business Systems, was elected Senior Vice President and John Sturgeon, President of Koncor Forest Products, was elected Vice President. Elected to the office of Secretary was Jerry Booth, Vice President of Energy and Minerals at Cook Inlet Region, Inc. Allen Bingham, Partner at Deloitte & Touche, was re-elected Treasurer.

Originally from Spokane, Washington, Rensch's career in Alaska began 13 years ago with TransAlaska Data Systems as an account manager in sales. In 1988, Rensch became Director of



RDC board members attending the 21st Annual Meeting pose for a photo opportunity.

Marketing and Sales for Security Aviation and it was there that she first worked with RDC, helping to arrange the early Congressional wetlands tours of Western Alaska.

In 1990, she accepted the position of Regional Sales Manager for Analytica Inc., a full service environmental testing laboratory

based in Broomfield, Colorado. With the help of the parent corporation, Rensch opened Analytica Alaska in Anchorage in 1992 and was promoted to General Manager of Operations.

In November 1994, she purchased the company, and today, with a staff of seven, Rensch has become President and owner of Analytica Alaska Inc. She and her husband Tom, as well as their two sons, are avid outdoor enthusiasts with drift fishing and skiing topping their list of activities.

Newly-elected to RDC's Executive Committee were Charlie Boddy, Fairbanks; Mayor Dennis Egan, Juneau; Roy Ewan, Glennallen; Bob Loescher, Juneau; John Norman, Anchorage; Bob Stiles, Anchorage; Mike Stone, Anchorage and Cliff Taro, Ketchikan.

Anchorage residents

elected to the RDC statewide board include Ed Crane, Frank McQueary, Wesley Nason, Bob Stanton and Leo Walsh.

Also elected were Cliff Davis, Juneau; Lennie Gorsuch, Juneau; Troy Reinhart, Ketchikan and Ron Ricketts, Fairbanks.



New RDC President Elizabeth Rensch introduces Senator Ted Stevens to luncheon guests.



Congressman Don Young, Chairman of the House Resources Committee, enjoys a warm welcome before the large luncheon crowd at the RDC Annual Meeting. Young addressed new opportunities for Alaska in the new Congress.



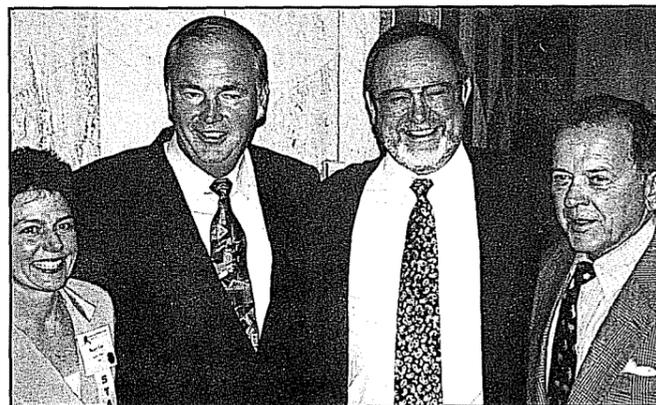
Outgoing President Dave Parish receives a "First Barrel of Oil" plaque from President Elizabeth Rensch for his outstanding service to RDC. Parish first came to RDC ten years ago as a student intern during summer break from college.



RDC board member John Forceskie, President of Teamsters Local 959, receives special recognition and a plaque from RDC's outgoing President Dave Parish. Forceskie, who retires from the Teamsters this month, served as Vice President of RDC for eight years, longer than any other board member in that office.



At upper right, members of RDC's new Executive Committee pose for the camera. At bottom right, Gail Phillips, Speaker of the Alaska House, presents Eielson Junior High School student Katrina Balash with a certificate for her winning essay in the RDC Statewide Essay Contest. Katrina's essay addressed "The Role of Resource Development in Alaska's Economy." The winner in the high school category was Skagway's Lisa See who focused on "Opening ANWR."



RDC's 21st Annual Meeting featured Alaska's Congressional Delegation. Pictured with the delegation is RDC Executive Director Becky Gay.

## Montana strives for reasonable water quality standards

(Continued from page 2)  
cannot, even given present technologies, reliably measure arsenic at less than 3 parts per billion. Now, if 0.018 parts per billion is not measurable, it's not detectable, and if it's not detectable it's certainly not enforceable.

The fourth point pertains to the creation of the old standard at 0.018 parts per billion. It was based on a Tai-

wan study showing that a person living in Taiwan had a one-in-a-million increased chance of getting cancer IF that person drank 2 liters of water per day from that same "contaminated" source of supply each consecutive day for 70 years and ate an average of 6.5 grams of fish caught from that same source of supply each day for 70 years.

If a person were to do these things, that person would have a one-in-a-million increased chance of getting cancer.

Given all this, was it reasonable to have a standard set at 0.018 parts per billion in the first place? Is it reasonable to have a water quality standard for discharges to streams and groundwater set at a level 2,778 times

stricter than the federal drinking water standard? It reasonable to have standards we cannot even measure? Is it reasonable to have standards set at a level substantially below the condition that nature provides naturally?

Don't forget who pays for the implementation of these standards.