



WE DEVELOP ALL KINDS OF NATURAL RESOURCES.

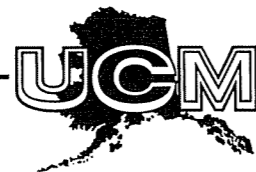
The flowers that bloom on the hillsides near Healy each spring were planted long before there were federal requirements for reclaiming mining areas in Alaska.

Years before balancing development and preservation occurred to Congress, it occurred to us.

Alaska's unique environment is respected and guarded at the Usibelli Coal Mine. We've inherited a strong sense of responsibility from the generations that lived and worked here before us.

We think our grandchildren will be able to say that, too.

USIBELLI COAL MINE



P.O. Box 1000 • Healy, AK 99743 • (907) 683-2226

122 1st Ave. • Suite 302 • Fairbanks, AK 99701 • (907) 452-2625

This edition sponsored by:

**Usibelli Coal Mine, Inc.**



Resource Development Council  
Box 100516, Anchorage, AK 99510

ADDRESS CORRECTION  
REQUESTED

# Resource Review

September 1989

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

## Salmon catch is highest ever

### Prince William Sound catch doubles last year's harvest

Fishermen netted a record number of salmon off the Alaska coast this summer, despite the closure of some fishing grounds due to the oil spill in Prince William Sound.

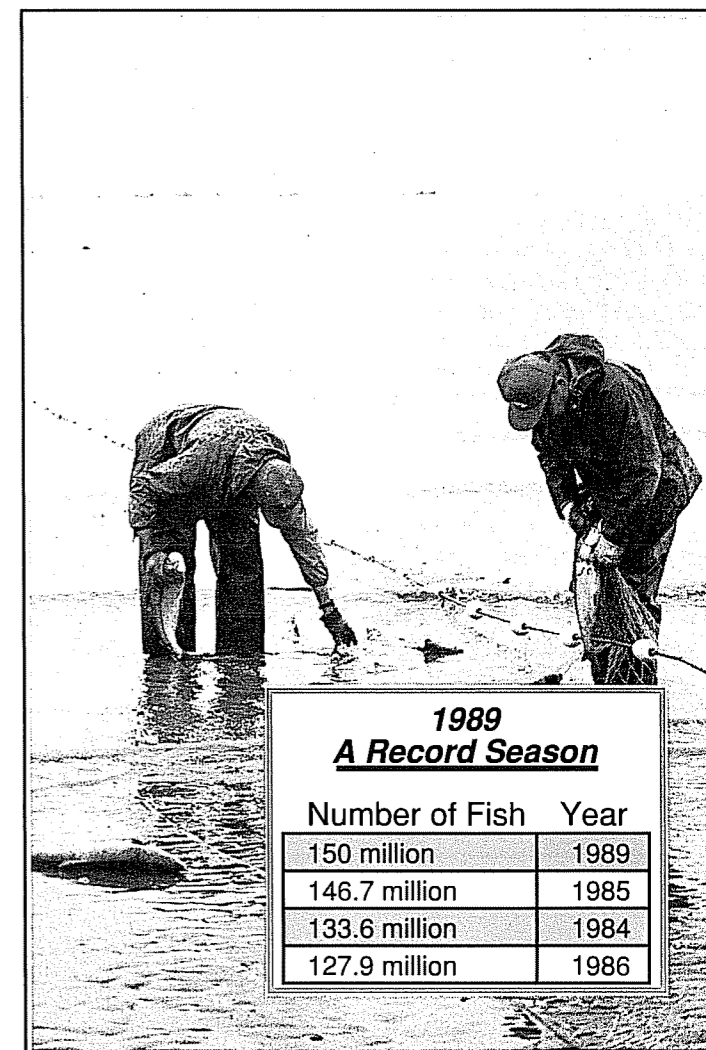
The record catch, 150 million salmon, is worth about \$491 million, the second highest total on record, but far short of last year's record-shattering value of \$742 million. Last year's catch was much smaller and prices in 1988 averaged 30 to 50 percent higher. This season, prices for premium sockeye salmon from Bristol Bay averaged from \$1 to \$1.35 a pound, roughly half the price fishermen received in 1988.

A major cause of the price plunge is a glut of frozen salmon in Japan where inventories exceeded 60,000 metric tons at the beginning of this year's season. The weakening of the yen may have also contributed to the depressed prices since such a factor makes Alaska salmon more expensive to Japanese consumers.

This summer's harvest was paced by a record catch of 65 million salmon in Southeast Alaska. Bristol Bay was also a major surprise when fishermen, anticipating a harvest of 16 million fish, hauled in some 30 million salmon.

Even in Prince William Sound, where some fishing grounds were off limits due to the March oil spill, a respectable harvest occurred. Over 23 million fish were caught in the Sound by fishermen and hatcheries this summer. That's nearly double the 12.5 million fish harvested from Sound last summer, but far short of an anticipated catch in excess of 40 million fish. The record catch for the Sound was set in 1987 when 32.7 million fish were harvested.

Chuck Meacham, Regional Research Supervisor with the Alaska Department of Fish and Game, said the shortfall in Prince William Sound was largely a function of reduced returns in wild stock. Although the closures associated with the spill did contribute to a smaller catch, Meacham said the reason for the reduced return is not known at this time. (continued on page 4)



Fishermen across Alaska hauled in a record catch in 1989. Some setnetters had a season of a lifetime.

#### Inside

Oil spill cleanup ..... 4  
War on the beetles ..... 6  
Alaska's clean coal ..... 7

# Steady as she goes

RDC has been busy readying itself for the approaching winter, including the active legislative session. Following is a quick overview of recent activities and a glance at the upcoming quarter.

This summer RDC staff and board traveled hither and yon across Alaska and listened to what the people are saying. Membership outreach consumed a great deal of time in great part due to the effects of the oil spill. RDC visited the clean-up effort at various sites, enabling the Council's individuals to be informed and to respond more directly to the media requests, interviews and editorials. Many RDC members worked directly on the spill, so firsthand knowledge abounds within our membership. As a special vote of confidence, RDC is proud to say that all its community memberships have been renewed.


In publications, RDC's **Resource Review** oil spill series is still available. RDC also released an **ANWR Facts brochure** with a perspective of the oil spill this summer. The **Wilderness brochure** is in its third printing with a new cover photo.

Some travel took RDC outside the state, as when **President Pete Nelson** spoke at the second Wise Use Conference in Reno last month.

Closer to home, RDC staffed an exhibit at the Alaska State Fair with the Alaska Miners, Alaska Women in Mining and the Mat-Su Loggers to meet and educate the public about utilization of resources. I personally never get tired of seeing those giant cabbages! Many thanks to our board and volunteer members for their individual efforts: **Al Hastings, Curtis and Jan Foster, Easy and Millie Gilbreth, Joe, Aletha, Stephan and William Henri, Kathleen Weeks, George Schmidt, Joe and Dorothy Cincotta, Dick and Marge Tindall, Len McLean and Scott Thorson.**

RDC heads met with **Senator Ted Stevens** to discuss federal issues (see last month's editorial), which are dismal on most accounts. **Senator Murkowski** spoke at RDC's 15th annual meeting of the board of directors on the "Future of Resource Development" earlier this summer. The Adopt-a-Congressman campaign goes on, with able Member Services Director **Kim Duke** ready to help you participate.

The big news for loyal RDC conference supporters and participants is that RDC is **changing its conference dates** this year to accommodate the legislature. Please NOTE: RDC's tenth annual conference will be held this November 29 - 30



**Message from the Executive Director**  
by  
Becky L. Gay

(Wednesday, Thursday) at the Sheraton. The title and theme chosen by RDC's Executive Committee is **Alaska: Playground, Park and Production State**. The focus will be on examining competing interests on resource production opportunity and the relationship between producers and consumers. Plan to attend.

RDC will be re-releasing the **New Strategies for Advancing Alaska's Economy, 1986-90**. Projected completion: late November. A call has already gone out for comment. It is not too late, however, so contact **Debbie Reinwand**, Projects Coordinator, to contribute your piece of mind. Copies of the document are available.

RDC is gearing back up with **Thursday Breakfast Forums** at the Sheraton. It is a new location and a new price, \$10.50. Coffee is still \$4.00 and reservations are requested so we can serve you better. Please join us to hear the latest on major state and federal issues facing Alaska.

On a more long-term agenda, RDC is designing a broad educational response to counter the hysteria-driven non-development groups attack on life as we know and love it. Your extra contributions are appreciated to build a larger quiver of arrows. RDC is also continuing its "If you can't fund us, don't fund them" campaign. Believe me, the funds national groups raised on the back of the oil spill will be aimed at stopping resource development and the warchests RDC is facing are staggering.

With this activities update, I welcome you back from the last summer of the decade. The learning curve has been advanced, the salmon have spawned, the summer people have left and we are still here. "Demobilization dust" is on the mountains and the state is in its fall glow of colors. The road ahead is full of hurdles and potholes, but passable. Stay with us, RDC will help lead the way.



Becky Gay shows off the catch she made in her spare time this summer.

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..... Pete Nelson  
Vice President..... Joe Usibelli, Jr.

Vice President..... John Forceskie  
Secretary..... Easy Gilbreth  
Treasurer..... Larry Laughman  
Past President..... Shelby Stastny

**Staff**  
Executive Director..... Becky L. Gay  
Public Relations Director..... Carl Portman  
Member Services/Admin Asst..... Kimberly R. Duke  
Project Coordinator..... Debbie Reinwand  
Staff Assistant..... Heather Hall

**Resource Review** is the official monthly publication of the Resource Development Council, Box 100516, Anchorage, Alaska 99510 - (907) 276-0700. RDC is located at 807 G Street, Suite 200, Anchorage. Material in the publication may be reprinted without permission provided appropriate credit is given.

**Writer & Editor**  
Carl Portman



# Alaska's clean coal

## Future is bright

By John Sims

America is energized by coal, though many people may not know it. Fully 57% of electricity generated in the United States is produced from coal-fired power plants. In Alaska, according to current Alaska Energy Authority information, less than 3% of non-military electrical energy is generated from coal-fired plants. There are valid historic reasons for this, but nevertheless, in a state which contains upwards of 40% of the known coal resources of the entire country, that figure is paltry as well as surprising.

I look to a future in which a much greater share of our Alaskan electrical energy needs will be satisfied by coal-fired plants and one in which Alaska coal will gain greater and greater market share in the Pacific Rim. In terms of the size of the resource, future costs for competing energy sources, reliability and long-term economic benefit, coal cannot be denied.


Another vital dimension to Alaska coal is its cleanness. To some "clean coal" is a contradiction of terms. However, what is really meant is coal with low pollution characteristics. There are three major forms of pollution emitted when coal is burned. These are sulfur dioxide, which is a function of the sulfur content of the coal; nitrogen oxides, which are a function of nitrogen content and combustion conditions; and finally, fly ash or post-combustion particulate residues, which may enter the atmosphere from the stack. Conventional technologies easily control the latter to a very high degree of efficiency.

It is an over-simplification to evaluate the pollution characteristics of coal by merely examining the sulfur content. Low-sulfur steam coal includes those with less than 0.8% sulfur. Most Eastern United States coal significantly exceeds this threshold, whereas Western United States coals from the Powder River Basin, having an average of 0.5% sulfur, qualify as low-sulfur.

What about coal with less than 0.2% sulfur? There are very large tonnages of sub-bituminous coal in the Nenana Coal Field (Usibelli Coal Mine) and Beluga/Chuitna Coal Fields (Placer U.S. and Diamond Alaska prospects) with a sulfur content in the range of 0.1% to 0.2%. The three-year average (1986-1988) of all coal shipped by Usibelli was 0.17% sulfur. These coals can be termed ultra-low sulfur coal as they have a higher degree of cleanness. These Alaska Railbelt coals are also at the low end of the scale in terms of nitrogen content. Thus, when burned, they form low levels of oxides of nitrogen. Additionally, Usibelli coal has an additional attribute in the form of a high calcium oxide content in the ash. Typically, the calcium oxide content of UCM coal ash ranges up to 25%. In new coal utilization technologies, such as fluidized bed and entrained combustion, the calcium oxide is available to react with the low sulfur content to reduce sulfur dioxide emissions from Usibelli coal to ultra-low levels.

The message is becoming clear. Alaska is host to the world's largest resource of clean coal in the broadest sense of the term. Alaska's clean coal resource is estimated at 5 trillion tons and has the energy equivalence of about fifteen trillion barrels of oil! Who can doubt that Alaska coal is destined to play an important role in international energy markets and in domestic energy policy?

Why are buyers not tripping over each other to get their hands on Alaska coal? Price is certainly a consideration, however, the major constraint lies in the fact that all utility plants in the Pacific Rim, with one exception at Honam in South Korea, were designed to burn bituminous coal. When such plants use sub-bituminous fuel with its



**Guest Opinion**  
by  
John Sims

lower heating value, the power output will drop by more than 30%. Thus a 300 megawatt plant using sub-bituminous coal may be hard pressed to produce 200 megawatts!

The lower heating value of sub-bituminous coal is mainly a function of high moisture content. Usibelli coal, for example, averages 27% moisture. A cost effective process that could reduce the moisture content to less than 10% would also significantly elevate the heating value, of the coal. Such a process is being researched at the University of Alaska Fairbanks and other institutes with support from Usibelli Coal Mine and other Alaskan coal interests. But the solution to this seemingly simple problem is, in fact, far from easy. Straight forward thermal drying is not effective since the dried coal rapidly reabsorbs moisture and is unstable. Thermal drying, following by treating the coal's surface to prevent reabsorption of moisture, has been tried but the resulting large quantities of coal dust from the process create additional unmanageable problems. Attention is now focused on processes which induce chemical and physical changes in the coal using elevated temperatures and pressures. Success will seemingly emerge with one of these single-stage processes and recent test results have been optimistic.

Since transportation costs between a mine and the overseas end user account for up to 60% of the delivered price of coal, there is a strong economic inducement to reduce the moisture content of these coals. There is no doubt that a processed, upgraded, high heating-value product with excellent low pollution characteristics will command premium price in the future. A low moisture sub-bituminous coal could be used in existing utility and industrial facilities without reductions of power output.

Markets may be won in the future for a variety of Alaska coals. Railbelt sub-bituminous coals may be utilized in specially designed conventional pulverized coal units built by utilities or consumed in circulating fluidized bed units for which tests have shown the coal to be ideally suited. There may be a market for blending up to 20% sub-bituminous coal with bituminous coal to gain anti-pollution benefits without dramatic power reductions in existing units.

Sub-bituminous coal may also, because of its high reactivity, develop as a major feedstock for gasification plants. With the emergence of new technology, a particularly promising future is in store for processed, premium, low-pollution fuels derived from sub-bituminous coal feed stock.

Higher rank coals, which may be produced from proposed mines such as Wishbone Hill near Palmer and even the Arctic Alaska Coal Province may enjoy captive markets or attract market attention because of their excellent characteristics without the need for drying.

Approaching the end of this century in a world faced with declining oil and gas reserves and an ever increasing concentration of these remaining reserves within the volatile Arabian Gulf region, the Western world economic order is at very serious risk. Fortunately, the United States and especially Alaska, are blessed with an abundance of coal, which can help buffer the effects of future energy crises. National and state policy must increasingly recognize the role coal must play to provide for energy security, energy self-sufficiency and economic expansion. Clean Alaska coal is a vital part of our future.

# Praying for rain is not enough

## Bug ravages forest

The U.S. Forest Service and state forestry officials are considering an increase in timber harvests on the Kenai Peninsula to slow the spread of the spruce bark beetle infestation that has ravaged billions of board feet of timber across popular recreation lands south of Anchorage. However, such action is likely to be met with stiff opposition from the Alaska Center for the Environment and the Sierra Club, two groups which appealed earlier plans to harvest areas now ravaged by the bugs.

RDC intervened in the administrative appeal brought by the environmental groups of Operation Resource Renewal in 1985. RDC efforts were directed at defending higher harvest projections to address the beetle outbreak, but negotiations ended with the Forest Service adopting severely-limited harvest levels.

Chugach National Forest managers now plan to revisit the decision in developing a long-term strategy with other government entities in addressing the devastating infestation, according to Peggy Fox, Acting Supervisor of the Chugach National Forest. Fox said foresters are forced to rethink plans for managing the dead trees because the beetle infestation shows no sign of slowing down.

Removing the dead trees through a silviculture harvesting program is the cheapest and most effective way to deal with the crisis. However, the earlier plan to manage a large number of acres for timber harvesting failed when environmentalists protested. The Forest Service scaled down harvesting plans and the required logging roads, leaving only a token amount of acreage available for logging.

The beetle infestation has since spread in a wild and unchecked attack across the forest, resulting in a staggering loss of trees and creating huge dead zones of forest resources. The problem continues to spread to new areas and threatens lush green areas along Turnagain Arm and the Anchorage Hillside.

Addressing an RDC Thursday breakfast forum in September, State Forester Robert Dick said land managers have the technical ability to control the infestation, but "we have some real social problems to overcome if we're going to get into forest management. You can have the law on your side, but still lose."

In the short term, Dick said the state plans to restructure its Southcentral forest division and build a "strike team" to deal with the bug problem. In addition, the division plans to hold three small timber sales of 500,000 board feet each by early March. However, the sales would only target about 1.5 million board feet of timber for harvesting when billions upon billions of board feet have been ravaged by the bugs. But Dick believes the smaller sales represent a step in the right direction, at least in the short term, because larger sales would require a lengthy and slower process.

"As we have the ability to put up sales and identify those lands particularly susceptible to the beetle, we will get to those areas and put them up," Dick said.

Dick plans to put together a permanent team of specialists to consider a statewide attack on forest infestations. The team would include a public information officer to sell a new forest management program to the public. The price tag for the team is estimated at \$300,000.

"We have a very tricky path to walk and if we stumble, we're in deep trouble," Dick said. "If we appear to be bulldozing our way to a



According to State Forester Robert Dick, "We have over a million acres of sick forest out there. Who wants to recreate in a forest of dead trees? It's not very pretty."

solution, we're in trouble. If we don't sell it, I promise you we will be back in court."

Becky Gay, RDC's Executive Director, pointed out the concern of local communities and asked Dick to urge the Governor to declare an emergency on state lands in the affected areas. Dick said the state will work hard on the bug problem, even on lands recently transferred to the Kenai Peninsula Borough.

Kathleen Weeks, an attorney with the Pacific Legal Foundation, complained that instead of a coordinated attack on the spruce bark beetle crisis on the Kenai Peninsula, the state has come forward with "three ridiculously small timber sales next spring, requests for more budget money and a new public relations agenda."

Weeks said the state's key approach to tackling the epidemic seems to lie in constructing a new public relation tactic that dismantles the "Smokey the Bear" mythology and create a new public image around the theme "fire is our friend."

If fire is the state's special friend and the beetle's best enemy, Weeks asked, "Why not immediately designate selected areas for clearing of any useful timber and then do a controlled burn of the site immediately after the harvest?"

Weeks urged the state to take immediate steps to control the path of future fires on the Kenai. She suggested a major harvest program to take out dead trees and create fire breaks to preserve foliage along buffer zones of anadromous streams.

"The fire that will follow in the wake of the beetle will be incredibly hot and unusually destructive," Weeks said. "Think about the difference in the heat and the length of time the fire burns in your own fireplace when you used dried out wood or green wood," she added. "The next fire we are likely to see on the Kenai will burn so fast and so hot that it will destroy soil nutrients and microorganisms."

Gay, again voicing local concerns, asked "what will happen to Cooper Landing if a fire sweeps through there?" Gay suggested that "fire prevention should be a part of the fire-fighting budget and nowhere is it needed more than in Alaska."

Whatever plan of attack the state and federal governments adopt against the beetle epidemic will involve some tradeoffs and a measure of controversy. But one thing is for certain, the longer the landowners wait to implement a meaningful plan that will address the magnitude of the problem, the more difficult and expensive the task of halting the infestation will become.

"The value-added potential will go up in smoke, along with all the plans and best intentions, if someone doesn't do something soon," Gay said. "Praying for rain is not enough."

# Bad days for American oil

Is Middle East oil really good for the economy? Should we just open the spigot and let the good times roll?

With a worldwide glut of foreign oil, Americans appear to be less concerned about our nation's energy future. Few are aware of our nation's growing dependence on cheap foreign oil and the growing vulnerability to new supply interruptions and price shocks. The Alaska oil spill is an example of a price shock resulting from a temporary and partial supply disruption.

How much longer will America's joyride on OPEC oil continue? According to Charles DiBona, President of the American Petroleum Institute, the ride is about to end. The turning point could come when world demand for OPEC oil exceeds 80% of the cartel's capacity. DiBona says that in the past "this has signalled a dangerously tight market. Under current conditions, it could happen again in three to five years."

At present rates of steadily increasing consumption, rising imports and falling domestic production, the U.S. may be buying more foreign oil than it can competitively produce in two or three years. Imports last year accounted for 42% of daily consumption, which represents almost 30% of our trade deficit. This year imports hit the 50% mark, and before the new decade is out, America could be importing 65% of its daily energy needs. This would cost Americans at least \$200 billion a year, more than our total current trade deficit.

Most energy experts believe the U.S. can avoid getting caught in another OPEC oil crunch, but only if it starts developing more of its own resources now. Increased conservation efforts would help, but would fall far short. Government studies estimate that by the year 2000, renewable energy sources such as sun, water and wind would at best supply only 13% of the nation's energy needs.

At present consumption rates, the U.S. has enough oil and natural gas in the ground to fuel its energy needs for eleven years without relying on foreign imports, but only if domestic production is drastically increased. Geologists estimate that as much as 100 billion barrels of crude oil are thought to exist in America, but most of this enormous energy potential is beneath public lands off limits to exploration and development because of environmental opposition. And the greatest controversy boils around the vast oil and gas



## Thoughts from the President

by  
Pete Nelson

potential of the Arctic National Wildlife Refuge (ANWR).

Meanwhile, output from the giant Prudhoe Bay oil field, the nation's largest at about 2 million barrels per day, has leveled off and is expected to begin a steady decline. ANWR is thought to have potential to more than replace Prudhoe Bay, but congressional action to open the refuge has been stalled. Action to allow drilling is needed soon, given the 10 to 15 years it will take to bring ANWR oil on line.

The Valdez oil spill has indeed killed further action on ANWR this year, but it has not altered the critical nature of the issue to the nation and the American consumer. A transportation accident is no reason to fence off exploration and production activities in what may be the nation's last great oil fields, especially when oil output continues to fall and our dependency on imports from unreliable foreign sources continues to grow. Yes, we need to take action to assure that the Valdez experience will not be repeated, but we also must move forward with a drilling program that can and will protect the ANWR environment.

In perspective, under a full development scenario, the pads, pipelines, facilities and roads associated with oil production would directly affect less than 7,000 acres of ANWR, a fraction of one percent of the 19-million acre refuge.

ANWR represents the best single opportunity to significantly increase domestic oil production. And despite promises of energy alternatives, oil remains the world's most sought-after commodity.

For better or for worse, oil will be driving the U.S. and Alaska economy for decades to come.

## Crude reserves continue decline

Oil imports in July supplied more than half of the nation's petroleum needs for the first time in a decade, according to a report released by the Energy Department.

The report also noted that known reserves of U.S. crude oil has fallen for the eighth time in ten years, and domestic oil discoveries were the second-lowest on record last year. In addition, U.S. energy demand has continued to increase, which has not only increased imports, but the national trade deficit as well.

The report by the Energy Information Administration said that U.S. proved oil reserves totaled 26.8 billion barrels as of December 31, 1988, a drop of 431 million barrels from a year earlier. The 1988 total oil reserves would disappear in about nine years, at current rates of consumption, if additional oil was not found.

The Interior Department reported last month that undiscovered U.S. oil resources totaled about 49 billion barrels, implying a further 16 years life expectancy for oil in this country.

While prospects have dimmed nationwide, Alaska has become the most promising development area for oil in the U.S. The government report estimated that 13.2 billion barrels of oil are recoverable in Alaska, compared with a 1981 estimate of 6.9 billion barrels. The

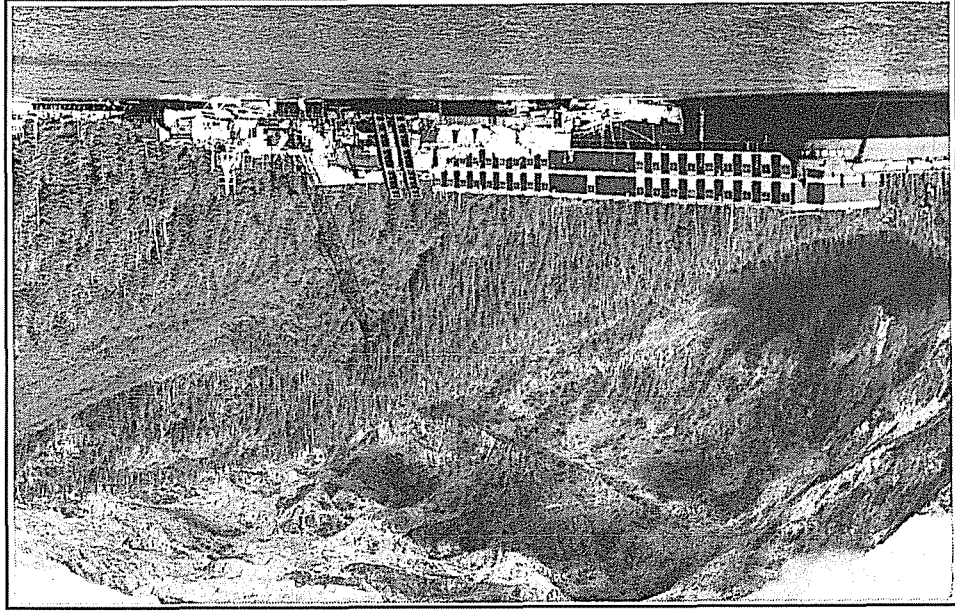
(continued on page 5)

# Oil Spill Cleanup

## The story behind the statistics



*RDC President Pete Nelson toured oil spill operations earlier this fall. Nelson gave Exxon an "A" for its effort in mobilizing an army of 1,500 people to clean up the spill.*  
(Photo by Becky Gay)



*An army of cleanup workers were housed in massive floating cities, moored off distant and remote beaches in Prince William Sound. Exxon's cleanup costs for this summer are likely to exceed \$2 billion, not including major costs associated with lawsuits. Hundreds of companies in some 33 states and a half-dozen foreign countries were tapped for material and equipment, although 85% of the orders were handled through Alaska vendors. Exxon also spent over \$30 million in wildlife rescue operations.*  
(Photo by K. Weeks)

By Kathleen Weeks

There are news stories that are never told. So I learned when I toured Prince William Sound earlier this fall.

Nothing I had read prepared me in any way for what I saw at Knight Island. Naked island, Snug Harbor and the innumerable jagged tops of mountains which drop off at 60 or 70 degree angles into the sea. They are beyond all normal boat charter routes. (My trip from Valdez to the first spill site was a five and a half hour boat ride across pristine seas.) There are few landing beaches, only some narrow shelves of rock at points where the submerged mountain breaks out of the ocean.

Exxon elected to confine its task forces to the water. For beach cleanups, portable toilets were set up and all human waste was bagged and removed, freighted out of the Sound, leaving the least possible impact on the beach. Workers were even prohibited from hiking on nearby land to minimize any further harm.

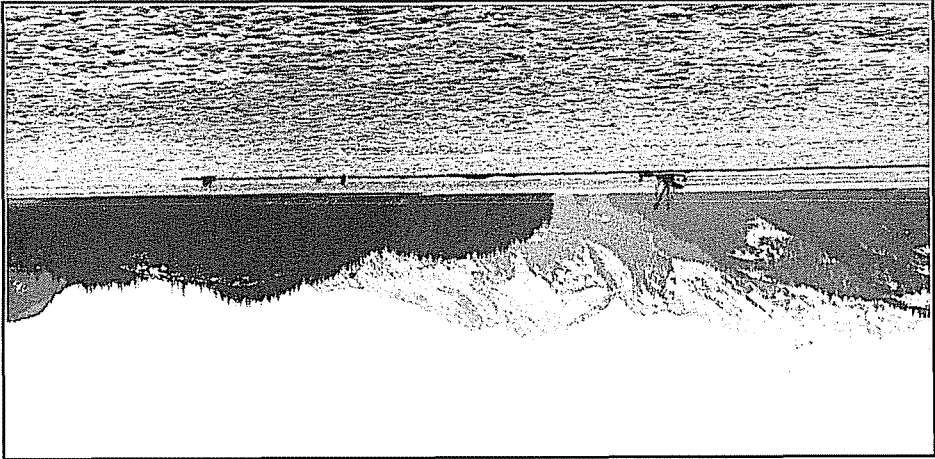
The task forces were serviced by auxiliary bases. There were refueling barges, floating grocery stores, fire stations, mail boats, and medical units.

Employee morale, the human element, was a factor balanced into the equation. This giant corporation which stands accused of callous indifference to the environment might have minimized personnel costs massive drydocks, some of the world's largest

by not hiring quality caterers for the crew caterers, but it didn't. Instead, the two and three story dormitories, which looked like college campuses on floats, had exceptional meals, video rooms and even weight rooms.

I sat at a cafeteria lunch table on a repair barge. The men were master mechanics and heavy equipment operators. Most had been working during the night to get some of the larger vessels on the barge back into the water. For some this was their first trip to Alaska. They had been sought out and enlisted by Exxon for their skills. They were tired yet anxious to get back to work. But when lunch was done, they watched a safety video on hypothermia to prepare for the harsher fall weather. This was no class mandated by legal fiat. The safety engineer responded to questions from a calm but concerned audience.

This fleet of more than 1,300 barges, crafts and floating hotels, supported by



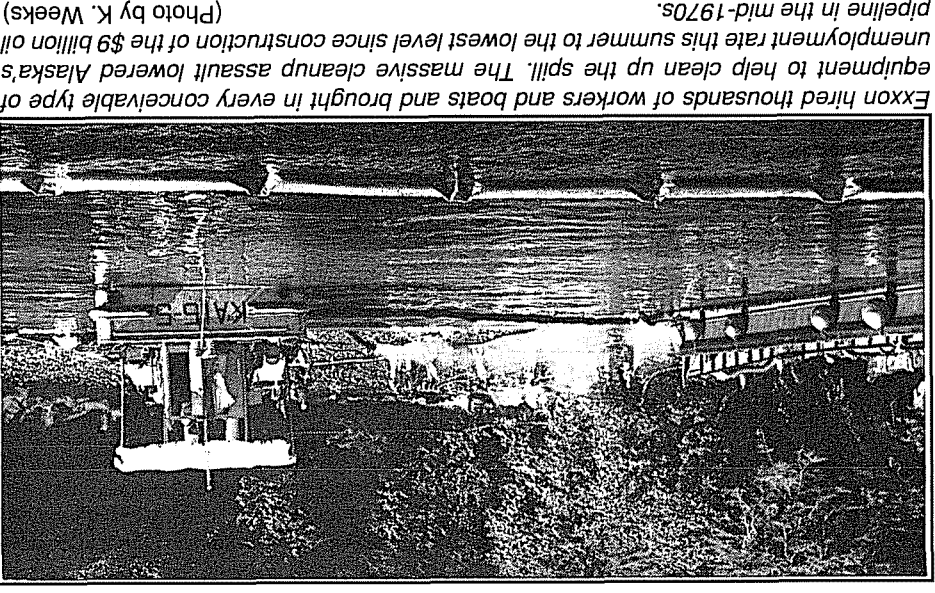
*While the oil spill hit some beaches in Prince William Sound very hard, others were spared. Overall, 90% of the Sound's coastline escaped the spill. Tourism thrived in the Sound and fishermen caught nearly twice as many fish as last year.*  
(Photo by Frank Flavin)

over 100 aircraft, is now being removed from this remote area that few Alaskans will ever visit. Over 22,000 tons of equipment will be stored for the winter.

It's like a D-Day Operation that has occurred without notice. Tens of thousands of details costing well over a billion dollars is difficult to comprehend. Sometimes we can get a perspective by focusing on just one small section of the whole. The hypothermia safety tape the crew watched is one such detail, a few ounces of videotape among 44 million pounds of equipment. It played a part in the greatest seen in Alaska since the pipeline was built.

Journal noted that Prudhoe's reduced flow would increase U.S. dependence on oil imports and in turn could add to the U.S. trade deficit.

For the past decade, Prudhoe has been a principal factor in offsetting nationwide declines, but now the huge Alaskan field has joined the others in a downward spiral.



*Exxon hired thousands of workers and boats and brought in every conceivable type of equipment to help clean up the spill. The massive cleanup assault lowered Alaska's unemployment rate this summer to the lowest level since construction of the \$9 billion oil pipeline in the mid-1970s.*  
(Photo by K. Weeks)

# Reserves...

(continued from page 3)

increase is due largely in part to new geological data from the Arctic National Wildlife Refuge, presently closed to exploration and development.

The grim report, which adds urgency to the need for action, emphasizes that Alaska is America's bright hope for freeing the nation from total reliance on foreign oil to meet its energy needs. However, a strong anti-oil attitude in Washington may eliminate or postpone the possible discovery and development of new Alaskan oil fields.

Meanwhile, the American Petroleum Institute has reported that oil imports totaled nearly 8.6 million barrels a day in August, up from 7.4 million a year earlier. API noted production for August averaged 7.5 million barrels a day, down from nearly 8.1 million barrels last August and the lowest figure in year and continue falling at between 4% and 10% a year through the 1990s.

The Wall Street Journal in September reported that the drop in Prudhoe Bay production underscores the seriousness of the deterioration of America's oil base. The Journal noted that Prudhoe's reduced flow would increase U.S. dependence on oil imports and in turn could add to the U.S. trade deficit.

For the past decade, Prudhoe has been a principal factor in offsetting nationwide declines, but now the huge Alaskan field has joined the others in a downward spiral.

# Salmon...

(continued from cover)

The oil spill did idle more than 1,000 fishing boats off the Southcentral coast this summer. Numerous fishing districts were closed to prevent harvesting of fish, which could have become contaminated with oil had they been harvested in waters where oil had been sighted. Instead, the fish passed beneath the oil and were harvested in zones free of floating oil. Some shore-based setnetters had a season of a lifetime.

Those fishermen idled by the spill have so far collected \$75 million from Exxon. Exxon paid an extra \$295 million to fishermen for help in cleaning up the spill. The company chartered 750 fishing boats and paid \$220 million for them.