

MINE TALK

July-August 1981

Vol.1 No.2

"We have lived here for many years, and a lot has changed. I used to be able to breathe here."

—Ben Lorenzo, Former Governor, Laguna Pueblo



IN THIS ISSUE: Crested Butte vs. AMAX Can Anaconda Reclaim Jackpile? Radiation and Birth Defects
CERT On An Energy Mission Mining the McDermitt Caldera State-by-State Reports

MINE TALK, published by Southwest Research and Information Center, is a bimonthly newsmagazine for keeping track of mining development, especially in the West, and its impacts on the people, their environment, and their health. We see multinational mining interests carving up the land, contaminating air and water, disrupting land-based communities—all in the name of ending U.S. dependence on foreign resources. We believe that we must act quickly to protect our future, and that effective action requires information and coordination. **MINE TALK** fills the information gap with up-to-date facts and figures about the mining industry across the country—its plans and projects—and the growing activity of grassroots organizers and government regulators. It is the goal of **MINE TALK** to provide useful information on mining technology, analyses of social, economic, and environmental threats, and insights into mining politics nationally and internationally. More important, we hope **MINE TALK** will be a further incentive for people to communicate and work with each other to preserve the land and vital resources. We welcome letters to the editor and editorial criticism.

Managing Editor: Eda Gordon
Contributing Editor: Paul Robinson

MINE TALK Correspondents: Chris Shuey—*Arizona*; David Broadwater and Tony Buffalo—*California*; Lisa Mocznski—*Colorado*; Lill Erickson—*Idaho*; Loni Kemp—*Minnesota*; Margaret MacDonald—*Montana*; Linda Sachs—*New Jersey*; Paul Robinson—*New Mexico*; Rose Spada—*New York*; Chris Platt and Bill Cook—*Oregon*; Jim Kellar—*South Dakota, East River*; Lili Jones—*South Dakota, West River*; Lone Star Alliance—*Texas*; Sandra D. Speiden—*Virginia*; Al Gedicks—*Wisconsin*; David Garrick—*Canada*

MINE TALK
PO Box 4524
Albuquerque, NM 87106

Subscription Rates: \$18 for individuals and nonprofit community groups; \$36 for government agencies and libraries; \$150 for private industry.

© 1981 Southwest Research and Information Center. All rights reserved.

Printed by Vanguard Printing Company

MINE TALK CONTENTS

MEMOS	3
Fifth Generation	7
by Lila Bird	
HEALTH & SAFETY	
What We Don't Know About Radiation and Birth Defects	8
by Evelyn Oden	
CERT ON AN ENERGY MISSION	
A Boon To Indians	10
by Marjane Ambler	
Doom For Indians	11
by Winona LaDuke	
Crested Butte vs. AMAX: A Little Town Takes On an Archaic Law	16
by George Riley	
Can Anaconda Reclaim Jackpile?	19
by Paul Robinson	
Fort McDermitt Reservation: Mining History Repeats Itself	21
by Lynne Lahr	
STATE-BY-STATE REPORTS	24
RESOURCES	46

Cover photograph by Deb Preusch
Lenore Sarracino near her home in Pagate, a Laguna Pueblo village on the rim of the Jackpile Mine, the largest open-pit uranium mine in the United States

MEMOS

The Stripping of the Strip Mine Act

Interior Secretary James Watt has finally played his hand on how he intends to gut the Surface Mining Control and Reclamation Act of 1977 (P.L. 95-87, 30 U.S.C. 1201 et seq.). The Act includes detailed environmental protection performance standards for surface coal mining, provisions for the states to assume primary responsibility to regulate surface coal mining on non-federal lands, subject to the approval of the Office of Surface Mining Reclamation and Enforcement (OSM), and authority for the Interior Secretary to implement a federal program for a state that fails to obtain approval or to maintain its program.

Under Watt's new "reorganization" plan, approximately 400 of the existing 1001 positions (primarily regional office personnel) will be terminated. The five regional offices will be abolished and replaced with two technical centers and 14 state offices for 31 coal states.

In addition, the inspection and enforcement divisions, which now have equal status with other divisions, will be relegated to subdivisions, with staff cut by 70%. There will be only 69 inspectors, total.

As all states within a particular region obtain a permanent program, their existing regional, district, and field offices will be terminated. Also, key policy personnel will be ousted and regulatory changes made to encourage the states to obtain primacy.

The impact of this reorganization is sweeping:

- † It will severely cripple OSM's enforcement ability.

- † It will change OSM from a regulatory agency to a technical information service bureau.

- † It will centralize OSM's policy-making process in Washington, diminishing citizen capability to influence policy.

- † It will significantly curtail OSM's inspection capability by isolating inspectors in remote state offices.

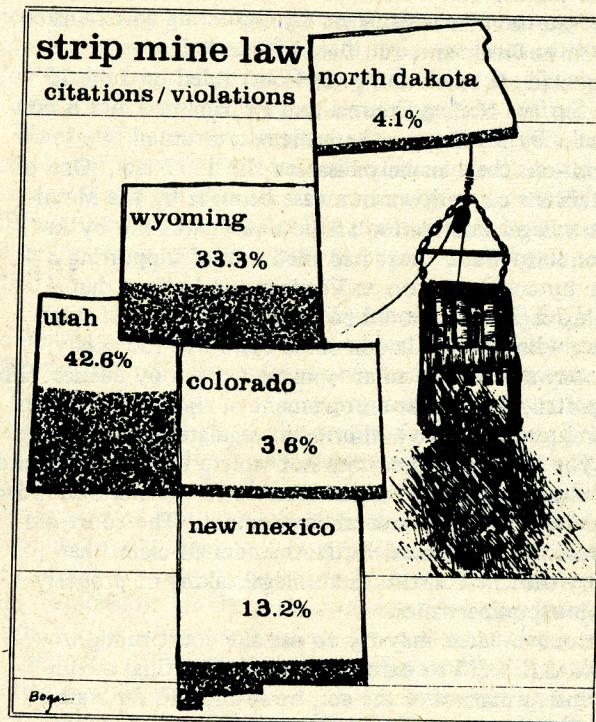
- † It will once again allow the coal industry, which has significant financial and political resources, to inequitably influence state policy.

- † It will allow for the continuation of traditionally weak programs in certain coal states.

- † It will make the effectiveness of new policies (initiated to carry out the permanent regulatory program) impossible for OSM to evaluate.

The Department of Interior is also looking to terminate outstanding litigation against OSM by seeking out-of-court settlements with industry.

Secretary Watt has ordered that OSM's regulatory program be rewritten to reduce the response of the states, lessen the environmental protection requirements on the industry, and limit citizen participation. One change would revise rules on the "state window" regulations which require states to submit alternative approaches to OSM rules based on local agricultural or environmental conditions. OSM is proposing to require that alternatives be as effective as OSM rules in meeting the intent of the Surface Mining Act. If the state can show its proposal is as effective, OSM can approve it.



Percentages reflect the number of citations issued relative to the number of violations of federal stripmine laws observed by state agencies and OSM at selected mines from June 11, 1979 through August 10, 1980.

A 1980 report by the Public Lands Institute of Denver charged that the Office of Surface Mining and five western states have failed to police stripmine reclamation properly under the Surface Mining Control and Reclamation Act. The report, "Stripping the Law on Coal," said: "Far from over-zealous enforcement, the agencies are under-regulating." The Institute made it clear, however, that the report was not an attempt to undermine OSM but to show the necessity for a strong federal presence to oversee state reclamation programs. OSM, it said, performed better than any of the states in meeting the law's requirements.

The draft revisions would also amend the rules requiring a mining company to post a bond for reclamation purposes. Now, if the land is not reclaimed, the bond would be forfeited and the money used for reclaiming the mined land. The draft, published in the April 17 Federal Register, changes the form and amount of the performance bonds, the terms and conditions, and the requirements for bond release.

Another change would relax the rule on ordering the closing of a mine if a violation is not corrected within 90 days of the notice. As outlined in the April 22 Federal Register, the 90-day period would be extended (1) when correcting the violation in 90 days would cause more environmental damage than if corrected at a later date; (2) when the operator cannot obtain a mining permit renewal or other approval because of regulatory delay; (3) when the permittee would violate a court or administrative order, thus risking contempt proceedings.

The proposed changes would give permittees the necessary time to correct the violations, but would also require permittees to apply interim measures effectively to prevent or lessen environmental damage. In requesting an extension, the permittee must establish that it is needed.

Meanwhile, the U.S. Supreme Court ruled on June 15 that the Surface Mining Control and Reclamation Act is constitutional. By a 9-0 vote, the justices overturned two lower court decisions that partially disabled the 1977 law. One of those decisions came down in a case brought by the Mountain States Legal Foundation at the time it was run by Interior Secretary Watt. Watt had filed a brief supporting a challenge by coal operators in Virginia and Indiana that stripmining regulation should be administered by the states and that abiding by the law in some cases was too costly.

The Supreme Court, in an opinion written by Justice Thurgood Marshall, found that enforcement of the law fell under the federal government's authority to regulate interstate commerce. The law, therefore, does not violate the Tenth Amendment of the Constitution, which reserves to the states all powers not delegated to the federal government. The court did not address the companies' Fifth Amendment claim that abiding by the law constitutes an illegal taking of property without just compensation.

Environmentalists may try to use the court ruling to force Watt and OSM to enforce the act. The final administrative interpretation of the act, however, falls on Watt.

The Environmental Policy Center of Washington, D.C. is building a united front against the OSM reorganization and urges widespread protest. What can be done?

† Write a letter to Secretary Watt, voicing outrage that citizens will be cut out of the policy-making process and that the reorganization will intensify mining abuses that the Act designates OSM to prevent.

† Write to congresspeople on the House Interior Committee, the Senate Energy Committee, and in your state delegation, asking for oversight hearings.

† Attend oversight hearings in Washington to lobby and testify, or submit written testimony to the committees so that they can be part of the record.

For further information on the reorganization or on concerned citizen and agriculture groups, contact the Environmental Policy Center, 317 Pennsylvania Ave. SE, Washington, D.C. 20003, 202-544-2600.



Akwesasne Notes / Spring 1979

Clean Air Vs. Coal Power

The Environmental Protection Agency's new visibility standards could bar the building of coal-fired power plants in most of the West. The proposed standards require that Class 1 (pristine) air quality must be maintained not only inside all national parks, but also within the "integral vistas"—the areas from lookout points in the parks to distant landmarks visible on a clear day outside the park boundaries.

A recent report of the National Coal Association forecasting coal use in the 1980s draws circles around each mandatory Class 1 area at a radius of 71 miles, then 143 miles. The maps show areas of possible Class 1 protection outside the parks in which coal-fired power plants might be excluded, depending on the length of integral vistas.

With 143-mile protection around each Class 1 area, all lands of the western states, except for small isolated areas, would be off-limits to coal-fired power plants, according to the association's map. With 71-mile protection, such plants still would be prohibited in a large proportion of the West, including all of Utah, except the northwest one-third of the state.

In sharp contrast to the reported decline in the demand for coal and electricity, NCA forecasts that U.S. coal production will increase from 776 million tons in 1979 to 1.02 billion in 1985 and 1.34 billion in 1990. The total increase will be almost equally divided between the East and West, with the electric utility market continuing to be the largest user of coal. The utility market for coal, says the NCA report, will climb from 527 million tons in 1979 to 935 million tons in 1990.

On the legal side of the issue, the Ninth Circuit Court of Appeals has confirmed the right of Indian tribes to protect the Class 1 air quality over their reservations. The court rejected a challenge by several coal companies, a Montana utility and the Crow Indian Tribe to the Class 1 designation sought by the Northern Cheyenne Reservation. The Northern Cheyenne asked in 1977 for designation as a Class 1 area under the Prevention of Significant Deterioration (PSD) section of the Clean Air Act; it is the first governmental entity to seek that strictest air quality standard.

Most of the petitioners who brought the challenge fear the U.S. Environmental Protection Agency (EPA) will prohibit mine dust from degrading the reservation's air quality. Such dust is not now included in the PSD regulations, but it may be added soon. The court agreed that while EPA did not consider the effects of the Class 1 designation on area stripmines, the agency was not negligent, and lawfully redesignated the reservation air.

The petitioners included MONTCO, Marcus L. Nance, Westmoreland Resources, and Montana Power Co. MONTCO is planning a mine on the Nance ranch east of the Cheyenne reservation (see Montana state report); Westmoreland now mines Crow-owned coal to the north; and Montana Power operates the Colstrip coal-fired power plant to the north.

At least three other tribal governments are now considering Class 1 applications—the Flathead and Fort Peck reservations in Montana and the Colville Confederated Tribes in Washington.

Demand for coal is slacking off. At a June 12, 1980 oversight hearing on the Federal Coal Leasing Program, former Assistant Interior Secretary Guy Martin testified that of the 400 and some coal leases, only 99 were in production. "I think the first thing to say about the additional leases which cover a tremendous volume of coal is that the main reason that they are not under production at the present time probably relates to a demand for the coal reserves that they would produce. ...There is not a market for the coal on those leases," Martin told the Senate Committee on Energy and Natural Resources.

Western stripmines are plagued by excess capacity, draglines are idle, and miners are out of work. Because of the lack of demand for electricity, fostered by public commitment to conservation, plans for coal-fired power plants are being scrapped. Plans for synfuels plants are also dim, given the cloudy future of federal subsidies. The picture is not promising; rather, it appears that the demand for coal will be lower than expected for some time to come.

Billions of tons of federal coal leased during the last 25 years are still undeveloped because there is no market. It would be logical, then, that the U.S. government would be calling for *less* new federal coal leasing than they had previously thought necessary. But they are not.

The Department of Energy, which sets productions goals, and the Department of Interior, which is in charge of leasing federal coal, are planning for *more* new federal coal leasing—much more. The DOE production goals call for "more than doubling...national coal production from 1979 to 1990" (see

Table I). According to DOE, "approximately two-thirds of this production growth is expected to occur in the West, the largest growth comes from the western northern Great Plains region which includes western (sic) Montana, Wyoming and northwestern and eastern Colorado. Coal production in this region triples from 1979 to 1990 and more than quintuples by 1995 under medium demand conditions."

The goals are even higher than previous DOE forecasts, because DOE increased its projections for the amount of coal for synfuels and for exports to foreign countries (see Table II). DOE predicts that the United States will export as much as 400 million tons by 1995—more than ten times the exports in 1979.

The northern Great Plains would bear most of the burden of doubling national coal production, under DOE's scenario. DOE expects production of as much as 412 million tons from the Powder River Basin in 1990—approximately four times the actual production in all of Montana and Wyoming in 1979.

The huge DOE figures are more than just numbers spit out by a computer. The Interior Department is using the figures to calculate how much federal coal will be leased in the upcoming Powder River and Fort Union Coal Lease Sales. At its March 10 meeting, the Powder River Regional Coal Team, responsible for the sales, recommended that Interior Secretary Watt adopt a 1.5 billion ton coal lease target for the 1982 sale. The coal team was undeterred by comments pointing out the unreliability of DOE's production figures, or the billions of tons of federal coal under lease, but undeveloped, in the Powder River region. This is ironic, since the massive, uncontrolled leasing of federal coal during the 1960s and early 1970s was the principal reason that the Department of Interior stopped leasing and created the new Federal Coal Management Program—and the regional coal teams—in the first place. Instead of correcting past abuses, the Interior Department seems to be bent on covering them up—and adding to them.

Leaching Microbes

Researchers at New Mexico Institute of Mining and Technology in Socorro have begun to study ways to eliminate microbes which can grow in in-situ leaching wells. The microbes feed and grow on the oxygen contained in the leaching fluid injected into the ground in the in-situ process. Microbial growth can clog the pumps submersed in the wells and may also fill pores in the ore zone—thus reducing the effectiveness of mineral production.

When similar microbial problems are found in oil and gas wells, antibiotics or bacteriocides are used to kill the microbes. However, since some in-situ ore zones are in drinking water aquifers, like the Westwater Canyon member of the Morrison Formation in northwestern New Mexico, other safer technology is being developed.

The research is being conducted by Carole and James Brierly and Marylynne Yates with at \$19,772 grant from the U.S. Bureau of Mines.

TABLE I
DEPARTMENT OF ENERGY PRODUCTION GOALS
(in millions of tons)
"Medium" Demand Assumptions

1979 Actual Production	1985	1990	1995
781.2	1,120	1,620	2,210

TABLE II
DEPARTMENT OF ENERGY PROJECTIONS FOR COAL EXPORTS
(in millions of tons)

Actual 1979	1985			1990			1995		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
66.0	117.2	125.2	161.8	159.9	178.2	258.6	225.8	286.6	408.5

TABLE III
DEPARTMENT OF ENERGY PRODUCTION GOALS
Northern Great Plains
(in millions of tons)

Powder River Basin	1985			1990			1995		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Montana	53.9	56.6	79.3	57.2	109.4	176.4	98.4	211.3	385.0
Wyoming	133.5	136.6	142.3	148.6	185.1	235.8	161.0	279.5	388.8
TOTAL	187.4	193.2	221.6	205.8	294.5	412.2	259.4	490.8	773.8
Rest of Wyoming	55.3	57.8	66.7	59.5	71.4	81.6	74.1	104.4	130.1
Fort Union	29.3	29.3	29.3	34.6	51.1	60.0	53.9	87.8	105.9

More On Mill Tailings Regulation

The U.S. House of Representatives has tried to pull the rug out from under the Uranium Mill Tailings Radiation Control Act (UMTRCA). Rep. Samuel Stratton (D-NY) sponsored a successful amendment to the appropriation bill for the Nuclear Regulatory Commission (NRC) which allows "no funds to be used in the implementation of UMTRCA." This amendment could eliminate NRC licensing of uranium mill tailings as a regulated byproduct material.

Meanwhile, on the Senate side, the nuclear industry and the state of New Mexico have called upon Sen. Pete Domenici (R-NM) to weaken UMTRCA criteria and deadlines. As a result, the Senate Subcommittee on Nuclear Regulations (a subcommittee of the Environment and Public Works Committee) held hearings on the Act on June 16, 1981. The NRC, Environmental Protection Agency (EPA), the states of New Mexico and Colorado, industry representatives, and the National Wildlife Federation and Southwest Research and Information Center testified before the subcommittee. Since the hearing, the subcommittee has circulated a set of draft amendments which (1) allow states to set standards to comply with their agreements under the Atomic Energy Act, (2) continues EPA's role in setting standards without funding the standards program, and (3) gives states more time to meet "equivalence" (to NRC) standards. The Senate may try to attach the Domenici amendments to the NRC authorization bill, now under congressional review.

Some progress has been made on the first remedial action project for an inactive tailings site in Durango, Colorado, but the NRC program to address active sites is under strong attack.

The Department of Energy, which manages the Uranium Mill Tailings Remedial Action Program (UMTRAP) for inactive sites from its Albuquerque operations office, has begun to schedule scoping meetings at inactive tailings sites. These public meetings are held to gather citizen input on the range of issues, or scope, of an Environmental Impact Statement (EIS) being prepared on the remedial action project. They are an important early step in the EIS process.

Scoping meetings were held in Durango, Colorado, Salt Lake City, Utah, Cannonsburg, Pennsylvania, and Riverton, Wyoming. For a report on the Durango scoping meeting, see the Colorado state report.

The uranium industry appears to be preparing a legal challenge to EPA's inactive site standards. On behalf of the American Mining Congress, Bob Beverly of Union Carbide Corp. criticized the EPA standards as too costly, not based on public health concerns and unsupported by EPA's record. Similar complaints were made by Beverly and others at the NRC's public hearing on the Draft Generic Environmental Impact Statement on Uranium Milling (GEIS). Since then, several industry lawsuits have been filed against the NRC's rule making supported in the GEIS.

The DOE is nevertheless proceeding with remedial action programs for inactive sites before the EPA has finalized its programmatic standards and despite a growing industry campaign against those standards.

The active mill tailings industry is well into its legal and

political strategy to delay implementation of UMTRCA, also. Active mill tailings sites around the country contain some 120 million tons of low-level radioactive waste and are growing at over 8 million tons per year. The legal challenge to the NRC's active site criteria, *Kerr McGee v. NRC*, continues even though the industry motion to stay the effectiveness of the NRC rule prior to a full court hearing has been denied (see MINE TALK, May-June 1981, p. 16).

On June 11, 1981, New Mexico held hearings on amendments proposed by the state Environmental Improvement Division (EID) to make the state radiation regulations comply with the UMTRCA November 8, 1981 deadline. Unfortunately, the state did not prepare a detailed defense of its proposed rules, leaving the NRC and citizen groups to support the state's proposal against industry attack. The record on that hearing closed August 1, and a decision by the New Mexico Environmental Improvement Board may come as early as its August 14, 1981 meeting.

They Fired Dr. Johnson

On May 15, Dr. Carl Johnson, reluctantly resigned as director of the Jefferson County (Colorado) Department of Health. Pressured by the health board, he chose, as he put it, "the ax instead of the stake."

For many, the sacking was the inevitable result of what they view as Johnson's opinionated obstinance, his indifferent administrative abilities, and his spending too much time speaking and presenting scientific papers about the biological hazards of low-level ionizing radiation.

For others, the health board's action was just one more example of how thoroughly developer interests control Colorado's most populous county and how little they care about the possible perils of plutonium contamination in the soil downwind of the Rocky Flats Nuclear Weapons Plant that Johnson kept bringing to people's attention.

Johnson's research began in late 1974 to forestall the Jefferson County Commission from rezoning as residential a square mile of agricultural land just east of the Rocky Flats bomb-trigger plant. Powerful critics honed in on Johnson. It was the beginning of what was to become standard operating procedure: Johnson would announce findings of a new study and experts from Rocky Flats, the Department of Energy and the state would dispute his methods and expertise, despite his medical degree and master's in science.

His concern about nuclear hazards does not stop at his backyard. After the massive tailings spill at the United Nuclear-Churchrock mill in July 1979, Johnson was quick to review the volumes of data and challenge the Center for Disease Control's estimate of radiation exposure from the spill.

Dr. Johnson will not be silenced by his dismissal. He plans to transfer his \$10,000 grant to the University of Colorado Medical School, where he holds an associate professorship, and complete the cancer study by next year. And in January, Johnson will present to the annual meeting of the American Association for the Advancement of Science two sessions on the health effects of low-level radiation.

Fifth Generation

Now it can be done
to fly with that high cloud eagle
and dance the earth
to travel rainbows high over canyons
and to speak with them from deep within
rock and jade
to run with roadrunner way down south
to bathe in rain and pray for corn
for our children to grow in mind
as far as it can take you on
This mind is beginning to feel
like an ocean
a mountain
a deer
its circle is winding far into the future
to generations of people far ahead
it's going back to ancient prophecies
of hope and direction
and now
walking inside libraries of mind
touching voices of sound and vibration
patterns of lines and waves, dots and words
from blackened city streets
to gullies and streams
following up all people's dreams
of the Coming World
Can't you see?
New waters are lapping at our feet
On the edge of an Old World dying
falling, panicking
and a New One Rising
swiftly, fearlessly
It's dawn and we stand here
humbly watching
treading rocky edge
soaring the horizon
as sun goes down
moon's high in clear night
and the red sun is coming.



I'll watch river's motion
and wait
I'll climb starhill
to wait and see
but I'll fight Old World's
grasp on the people
its last deadening reach
for minds and money
for minerals and profits
To Be Free!
to travel lightly
into Sixth Sun
with bright faces
and clear thoughts
to be alive then
and see the children laugh
and learn
clear ideas of truth
of sisters and brothers
of future sun's coming
Sixth World people
will build and learn and love.

© Lila Bird

What We Don't Know About Radiation And Birth Defects

Evelyn Oden

Evelyn Oden was staff pediatrician at the Shiprock Indian Hospital from July 1978 to July 1979. She came to Shiprock after a three-year residency at Children's Medical Hospital in Detroit. Her experiences were surprisingly similar:

"I was astonished that the pace at a small Indian hospital like Shiprock, which serves a population of 30,000, was the same as at the larger, metropolitan hospital. Even the incidence and severity of infant and childhood illness was comparable. What amazed me most, however, was the seemingly high number of infants born with birth defects. Some of these infants had extremely rare defects, including Kneist Syndrome, causing dwarfism and heart and lung malfunction, and Polysplenia Syndrome, an extremely rare form of cyanotic congenital heart disease. Within six months, two infants were born with gastroschisis (protruding intestines from an opening in the abdominal wall). Some of these infants died from defective hearts. Others were small at birth with smaller than normal heads, and failed to grow and develop normally. None were born to women who drank alcohol or took drugs during their pregnancy.

"These were personal observations over a relatively short period of time. At this point, they are not backed by a scientific, controlled study, but there should be controlled studies to verify or discount these observations. I believe that this high incidence of birth defects may be related to the higher than background levels of radiation in the Shiprock area from uranium mining and milling. My views are shared by pediatricians and other medical staff, past and present, at the Shiprock Indian Hospital."



Cosmic rays, sunlight, and radioactive materials in the earth's crust produce background radiation. Although associated with spontaneous instances of cancer, leukemia, birth defects, and aging, it is considered low-level radiation, and a natural phenomenon.

Since the atomic age, however, we have been exposed to additional low levels of man-made radiation from fallout, medical and dental X-rays, nuclear plant emissions, and wastes from uranium mining and milling. These added doses compound the threat from radiation exposure. In fact, there have been increases in leukemia and cancer deaths as well as a higher incidence of birth defects from levels of radiation once thought to be relatively safe.

Casualties from uranium-bearing ore were noted as long ago as 1557, when an unusually high number of miners died from lung disease.¹ Investigations of deaths in European uranium miners showed lung cancer as a predominant cause. These findings were subsequently documented in the 1960s in uranium miners in the United States; their incidence of lung cancer has reached epidemic proportions.² The miners are exposed to radon gas and toxic radioactive decay products polonium, lead, and bismuth, whose carcinogenic effects may not show for 5 to 40 years.

Significant concentrations of uranium decay products (U^{238} , U^{234} , Th^{230} , Ra^{226} , and Pb^{210}) are also released into the air in the milling process,² which at one mill site produced a four-fold increase in cancer of the lymphatic system among mill workers.³ A larger survey will be conducted by the National Institute of Occupational Safety and Health (NIOSH) to confirm the risk to mill workers.⁴

The potential health hazards associated with uranium development throughout the fuel chain — from mining and milling through waste discharge and disposal — are blatant.

Most severe is the contamination of the environment by mining wastes and mill tailings. Contamination begins with the venting of mine air into surrounding communities. Often the vents are located near homes, schools, and public gathering places. For instance, levels of radon gas near exhaust ducts at a post office and trailer park in Grants, New Mexico — the self-proclaimed Uranium Capital of the World — were found to be as much as six times the level recommended for the general population by the Environmental Protection Agency.⁵

The water supplies of surrounding communities can also become a casualty of mining development. As a part of underground mining, as much as 4,000 gallons of water per minute are pumped from underground aquifers into arroyos or used for mill process water, never to be reclaimed. Besides depleting the groundwater, mining also has been responsible for drying up public and private water systems. The groundwater may also become contaminated from seepage of radioactive tailings piles, left exposed to the elements, to be carried off by wind and rain. In the semi-arid environment of the Southwest, loss of water is loss of life.

There are 70 million tons of radioactive tailings in New Mexico alone. In the town of Shiprock, for example, on the Navajo Reservation, 2 million tons of tailings sit approximately one mile from the public school and housing project, abandoned by Kerr-McGee after it shut down its uranium mine and mill in 1968. In the past, uranium mine and mill tailings were used in Shiprock as landfill for industrial and residential building sites and in the actual construction of Indian homes.⁶ Families have thus been exposed to higher than recommended levels of gamma and alpha radiation, and, as reported in the *Albuquerque Tribune* (May 5, 1981), among their children and grandchildren there is a high incidence of birth defects.

There is now increasing evidence that exposure to low levels of radiation is responsible for an excess of birth defects. Studies have shown a higher incidence of chromosomal abnormalities among residents in areas of high background radiation from thorium-bearing sands.⁷ Also, a study in New York state showed that infants born in areas of abnormally high background radiation (corresponding to uranium and thorium content in the rock) had a higher rate of mortality from birth defects — some 20% to 40% greater than in areas with lowest activity.⁸

Joseph Wagoner, the noted epidemiologist and radiation biologist, has presented preliminary data from birth certificates that compare the rate of congenital anomalies (birth defects) in high-density uranium mining areas (by state and by county) to corresponding populations where there is no uranium activity. Specific findings were:

1) An increase in the rate of congenital anomalies (no./100,000 live births) in states with a high density of uranium activity when contrasted with the entire United States, i.e., Utah (935.6), Colorado (986.8), New Mexico (995.4), and Arizona (1,005.0) vs. U.S. (846.8).

2) A doubling of the rate of congenital anomalies (no./1,000 live births) in Utah counties with a high density of uranium mines when contrasted with the rest of Utah, i.e., 25.2/1,000 vs. 11.3/1,000.

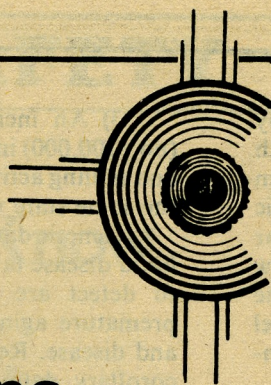
3) An increase in the rate of congenital anomalies (no./100,000) in New Mexico counties with uranium mining and milling activities when contrasted with other counties in the same state where there is no uranium mining.⁹

Genetic damage responsible for birth defects and childhood disease takes a generation or longer to appear. Harder to detect are the more subtle effects of radiation — premature aging and increased susceptibility to infection and disease. Research and population studies do not offer corollary data, but a relationship appears to exist. Dr. Rosalie Bertell, a cancer researcher formerly with Roswell Memorial Cancer Institute in Buffalo, New York, noted an accelerated aging process, i.e., lower resistance to illness, increase in heart problems and infectious diseases, in persons exposed to low-level radiation from X-rays.¹⁰

So often, the exposure of a population to levels of radiation "slightly" higher than background is thought to be safe. However, in areas of uranium mining and milling, not only background radiation but the total exposure from all sources should be considered — including fallout, contaminated drinking water, uptake of radioactive elements by plants and animals, airborne radioactive elements from ventilation shafts and tailings piles. It is also important to consider the constant daily exposure to this "low" level radiation. The recently discovered increase in birth defects in mining areas may soon show that a "safe" level of radiation does not exist, that the health and well-being of future generations is being threatened by taking too lightly the very harmful effects of protracted exposure to low-level radiation.

FOOTNOTES

1. Wagoner, J.K., "An Assessment of the Adverse Health Effects and Environmental Consequences of Mining, Milling and Waste Discharge Practices in the Uranium Production Industry: The North American Experience as a Basis for Decision Making in the Pleutajokk Project." Presented to the Municipality of Arjeplog, Sweden, April 1981, p. 8.
2. Wagoner, J.K., "Uranium — The U.S. Experience: A Lesson in History," February 1980. Presented at the British Columbia Royal Inquiry on Uranium Mining and Milling.
3. Archer, V.E., et al., "Cancer Mortality Among Uranium Mill Workers," *Journal of Occupational Medicine*, 1973.
4. Ambler, Marjane, "Uranium Mill Workers Seek Compensation for Ill Effects of Radiation Exposure," *NIHB Health Reporter*, Vol. 2, No. 7, September 1980, p. 10.
5. Wagoner, J.K., "An Assessment of the Adverse Health and Environmental Consequences . . .", p. 13.
6. "Community Summary Report for Radiation Surveys, Shiprock, New Mexico," U.S. Environmental Protection Agency, Office of Radiation Programs, National Environmental Research Center, Las Vegas, Nev.
7. Barčinski, Marcello et al., "Cytogenic Investigations in a Brazilian Population Living in an Area of High Natural Radioactivity," *American Journal of Human Genetics*, 27, p. 802.
8. Sternglass, E.J., Chapter 15: "Radioactivity" from *Environmental Chemistry*, Plenum Press, 1977, p. 491.
9. Wagoner, J.K., "An Assessment of the Adverse Health and Environmental Consequences . . .", 1981, p. 13.
10. Bertell, Rosalie, "X-Ray Exposure and Premature Aging," *Journal of Surgical Oncology*, Vol. 9, 1977, pp. 379-391.



CERT On An

A Boon To Indians

Marjane Ambler

Five years ago the 25 major energy tribes of the West created the Council of Energy Resource Tribes (CERT).

With a bravado that soon backfired, the organization compared itself with OPEC, reporting that the tribes owned one-third of the West's low-sulphur coal, one-half of the nation's privately owned uranium, and huge reserves of oil, gas, and oil shale.

What the tribes really wanted was not cartel powers but equitable financial return and the opportunity to develop or not to develop according to their people's goals. Besieged daily with development proposals, they lacked confidence in the federal government's advice, which had betrayed them in the past.

No one ever thought it would be easy to bring together two dozen tribes, who are traditionally wary of each other, of energy corporations, and of the federal government. Nor would it be easy to get federal funding and plunge into tribal development choices involving billions of dollars.

Now, five years later, most tribe members are proud of CERT's performance, saying that the staff of 60 — predominantly non-Indians — and their Indian board have boosted the tribes' management capacity and their image.

However, just when CERT needs solidarity most, one can hear rumbling in the ranks. Four tribes recently withdrew — the Cheyenne River Sioux of South Dakota, convinced CERT would force them to mine their uranium; the Colville Confederated Tribes of Washington, upset with CERT's abrasive public relations tactics; and the Shoshone and Arapahoe Tribes of the Wind River Reservation in Wyoming, skeptical that CERT had any special expertise to offer.

While some representatives of the four tribes have opposed the decisions to withdraw, and five other tribes have joined to take their places, the defections hurt. They come at a time when the federal government, which supplies almost all of the organization's funds, is scrutinizing CERT. The General Accounting Office, which is the investigative arm of Congress, is looking into how the federal government spends its money on Indian energy programs.

According to the critics, CERT has courted controversy, too, through inflammatory comparisons with OPEC, attacks on the Bureau of Indian Affairs, and interference with the nomination of Tom Fredericks as assistant secre-

tary of Interior. Meanwhile, it has sidestepped some internal controversies, such as criticism from traditional Indian groups who oppose development, from advocates for individual Indian mineral owners, and from former employees.

With the GAO investigation, CERT is being forced to address some of its problems directly. Whatever the results of the study, such close scrutiny is bound to bring some changes, if only in the Indian board members' laissez faire involvement.

A favorite target is CERT's financial base. Critics of CERT raise philosophical questions why government funds should be used and ethical and legal questions of how the funds are used.

This year CERT is seeking \$2.9 million from four federal agencies and \$1 million from member tribes and other contracts. This \$3.9 million represents 0.2% of the total \$1.862 billion Congress appropriated for Indian programs for fiscal 1981.

Critics question whether CERT should depend so heavily upon federal funds, largely because of the effect on its credibility. Since a large share of the money comes from the Department of Energy, some critics and some staff members think CERT is biased toward expediting development of nonrenewable energy, such as fossil fuels and uranium. CERT's funding proposal to DOE lends credence to this argument since it highlights accomplishments favoring development of synthetic fuels, coal-fired power plants and mines on reservations, sometimes exaggerating their actual likelihood.

Ken Fredericks (Mandan-Hidatsa), national director of real estate for the BIA, and others in the agency believe that giving so much money to CERT limits the Bureau's ability to fulfill its responsibility to the tribes. In effect, these critics said, the BIA is transferring its responsibility to serve all energy tribes to the shoulders of a private organization that serves only its members. Fredericks admitted that the BIA, which has been trustee for the Indian resources for 150 years, "obviously" has not carried out that responsibility adequately. But, he said, with more money the BIA could improve.

On the other hand, if the BIA had been providing
BOON, continued on page 14

Energy Mission

Doom For Indians

Winona LaDuke

"Your mission, should you choose to accept it, is to strive for the prudent management of Indian resources, to protect, preserve, and develop, according to the wishes of Indian tribes. You will be pitted against the most powerful interests in the world — multinational energy corporations whose executives make more annually than the entire financial assets of many reservations. You will be confronted with the government's National Energy Policy, the intentions of which are to develop all resources within the continental United States, through any and all means possible. If you are powerless, these interests will attempt to mow you over; if you gain power, these forces will attempt to co-opt you and win your favor. The goal of your organization, to be called the Council of Energy Resource Tribes (CERT), shall be to advise tribes on the technical, economic, and environmental consequences of energy development. Your organization shall self-destruct when informed decision making for Indian self-determination has returned to the reservation."¹

The founding meeting of the Council of Energy Resource Tribes may not have opened with such rousing words, but the CERT mission in 1975 was clearcut: To be politically strong, Indian tribes must be economically strong. Indian resources must be exploited to develop an economic base.

Most CERT reservations have been the site of active energy development for over 50 years. Oil has been the primary resource, though on the Navajo and Spokane reservations and at Laguna Pueblo, there has been large-scale uranium production. CERT members share a bond with other Indian tribes: They have been locked into long-term leases negotiated by the Bureau of Indian Affairs at below-market prices. To reverse this history of bad deals and shape profitable development plans in Indian country, CERT was created in 1975 as "a nonprofit organization representing 25

Indian tribes owning a large share of the West's energy resources."²

According to John Foster, director of the Native American Natural Resource Development Federation (NANDRF), "the idea (for an organization) originated at a 1973 meeting held at the Fort Berthold Reservation. Over 100 Indian leaders came together to discuss water rights and realized, in the wake of the Arab oil embargo, there was much more at stake. . . ."³ From this meeting of tribal officials, Indian organization leaders, and a few Bureau representatives came the push for a coherent plan for reservation development. NANDRF was formed, working with 24 tribes on all aspects of development, including timber and agriculture, but within a year, CERT was destined to be *the* Indian development organization.

CERT has since undergone some transformations. In the beginning, the outfit was called "the Indian OPEC." CERT representatives, led by Navajo Tribal Chairman Peter MacDonald and LaDonna Harris, president of Americans for Indian Opportunity (AIO), courted the image of self-determination OPEC-style. Rumors of meetings with OPEC leaders and the hiring of Ahmed Kooros, the former Deputy Minister of Oil in Iran, as top economic adviser, clinched the image: CERT tribal chairmen and the organization of advisers were out to get a better deal for Indian energy resources.

The idea of Indians conferring in the Middle East raised a few eyebrows in Washington. Before long, federal officials began to take notice of CERT and the resource-rich reservations of the West. By 1979, CERT's budget had been substantially increased by a host of federal agencies, the Department of Energy leading the list. From just under \$3 million in 1978, the budget jumped to over \$24 million in 1979, and CERT began to play a fuller role in western energy management and development.

Two offices of the organization are now open, in Washington and another in Denver, now dubbed the "Energy Capital of the World." The ranks of CERT personnel are swelling. Almost a hundred bright, well-educated Americans, mostly from the East, are busy advising the tribal chairmen. They are confident that this advice will become policy.

DOOM, continued on page 12

The Hard Sell

CERT board meetings are an occasion to open up the dialogue between the energy-rich tribes and the energy generals coveting those resources and the water to exploit them. In December 1979 the gathering place was the prestigious Adams Hotel in Phoenix. The admission was \$250 for corporate representatives and \$100 for individuals.

At the initiative of CERT, governors from the newly formed Western Governors Policy Office (WESTPO) had breakfast with some CERT board members. A joint statement issued by the two organizations affirmed a commitment to energy concerns: "The time has come for the elected heads of states and tribes to join hands in responding to federal energy programs which apparently assume the consent and cooperation of the West. . . ."

The CERT board met after the breakfast. Addressing the assembly were: Robert O. Anderson, chairman of ARCO; David S. Freeman, of Tennessee Valley Authority (TVA); John F. O'Leary, former Deputy Secretary of Energy; and other energy officials.

For the oil companies, the CERT board meeting was a prime time to approach the tribal chairmen. To smooth over any ruffles in negotiations, a "reception" — another name for several well-stocked bars — was available to the energy and Indian representatives. The tab was picked up by five corporations — Gulf Oil, Consolidated Coal, and General Electric providing the bulk of the money.

While attendance at the meeting was purported to be in the best interests of Indian people, a few tribal chairmen found themselves in compromising positions. Leonard Burch, chairman of the Southern Ute Reservation in Colorado, sat quietly at the conference table. As Geoffry O'Gara reported in *High Country News* (December 14, 1979): "A tall man in a gray suit, an oil company executive, leaned toward him. . . . 'If a few of us could get together with you,' he was saying. 'But we're down here, we're interested in what's happening here, and if you have the time. . . .' Burch quietly agreed to a later meeting."

Although no traditional Indian people were allowed to speak from the platform at the CERT meeting, a delegation of traditional people from the Big Mountain Dine (Navajo) Nation issued a press release (December 9, 1979) in response to the CERT meeting:

"We maintain that CERT is claiming to represent individuals of diverse intertribal groups that, in fact, they do not represent. . . . We have come here in an observer capacity and can testify as individuals who live in, and whose livelihood is being affected in, the land areas in contention. Through our observation here at the CERT meeting, we have witnessed that no testimony has been allowed to reflect the voice of indigenous people who will be affected by the decisions made here. . . . We urge that the indigenous members of CERT realize their traditional and spiritual ways of survival and their responsibility to the earth and to their people to help assure their survival. . . ."

The message from the reservation was clear: The wealth of Indian people is measured in other than economic terms.

Opposition to the policy of "economic development

based on energy development" is sprouting on several reservations. Alan Rowland, tribal chairman of Northern Cheyenne, stated in an interview what a San Francisco journalist, "The uranium stays in the ground where it can't hurt anyone. No cancer, no bombs, period."⁴

Ted Smith, director of planning in the Denver CERT office, insists that CERT is "not in the business of selling Indian resources." In an interview with the author in May 1980, he said CERT's sole responsibility is to advise the tribal chairmen on energy projects. The question remains: With federal funding and close affinities with corporate energy executives, can CERT resist the pressure to push the tribes toward development? Or, is CERT becoming a convenient mechanism for implementing a national energy policy on the reservations?

A Dangerous Adventure

CERT has a long list of questionable allies. Hobnobbing with Tennessee Valley Authority, Anaconda, Equitable Life Assurance, and the Colorado National Bank could prove a dangerous adventure, especially when the interests of CERT's new-found friends are clearly aimed at development with a capital D.

Tennessee Valley Authority Director David Freeman addressed the CERT board meeting in Phoenix. While Freeman publicly complains about corporate control of energy resources and pricing in the United States — he even testified at the Senate Hearings on Anti-Trust and Monopolies — one should not overlook that Freeman represents a huge consumer of energy resources.

TVA, the federal corporate utility, operates in the Southeast. Its massive network of power plants and dams consumes 36 million tons of coal annually and expects uranium consumption to be at least 6 million pounds a year by the late 1980s, if it is successful in constructing 17 nuclear power plants now in the planning.

TVA is also the single largest buyer of coal from Peabody Coal Company, which, in turn, owns over one-third of all Indian land under coal lease. The utility, in addition, is heavily involved in a controversial in-situ mining project at Dalton Pass on the Navajo Reservation. At this site, in cooperation with United Nuclear and Mobil Oil, TVA hopes to produce huge quantities of uranium by leaching the uranium from underground deposits. The chemicals used in the leaching process threaten to contaminate aquifers for miles.

Equitable Life Assurance of New York, according to *Business Week* (March 23, 1980), has agreed to "help the Crows get the \$900 million in financing needed to build their 800-megawatt project. Says an Equitable official: 'Energy developments owned by Indian tribes have the potential to become excellent investment opportunities.' Equitable should know. Aside from being part-owner of the Peabody Coal Company, which incidentally has leased 11,000 acres on the Crow Reservation, Equitable is a major stockholder in almost every energy corporation in the United States. It is No. 1 stockholder in Southern California Edison and No. 4 in Continental Oil Company and ARCO. Equitable Chairman and Chief Executive Officer Coy Ecklund also sits on the board of directors of Americans for Indian

Opportunity, the bastion of LaDonna Harris, who is called the "Mother of CERT."

Colorado National Bank President Bruce Rockwell has been recruited to head up the fundraising drive for the Indian Energy Education Institute — CERT's next attempt to develop an Indian professional workforce to meet the industry's needs. According to Ted Smith, between 93,000 and 157,000 energy workers will be needed in the West by 1985, and as many as 374,000 by 2000.

Rockwell — a director of Burlington Northern, the single largest owner of coal reserves in Montana aside from the Crow and Northern Cheyenne nations — is one of the new powerbrokers of the West, cooperating with Anaconda, AMAX, Homestake, and other energy corporations and banking institutions to exploit the West's mineral wealth. Rockwell is also a leader of the Western Regional Council, a coalition of corporate and governmental entities formed in Utah in 1977 as a backlash to opposition over coal development in the Kaiparowits plateau. Like its counterparts, the California Business Roundtable and the National Business Roundtable, WRC is bent on building a strong lobby to protect its members' banking and mining interests in the West. The target of WRC's attentions are the governors of intermountain states and the Indian tribes, who have moved closer toward regional interdependence and farther from Washington. At stake are 445 energy projects in the West, 164 of which will be on the reservations.

The priorities of the Western Regional Council, according to journalists Bob Gottlieb and Peter Wiley of *Straight Creek Journal*, include:

- To insure that the Clean Air Act is not applied in any way to impede energy development.

- To institute new leasing regulations for publicly owned coal.

- To influence the implementation of federal energy proposals, especially the synfuels program.

- To influence a federal water policy and to participate in a legal suit against the Sierra Club concerning water values in southern Utah and Northern Arizona.⁵

The role for CERT, as well as WESTPO, is evident. They are the most likely negotiators for WRC to call upon to mesh corporate plans with western policy making.

Who Profits?

For Indian people, the pawns in this strategy game, the issue is, who profits? CERT staff and pro-development Indian leaders like Peter MacDonald and LaDonna Harris seem to believe that the Indians are getting the best of their powerful "friends." The stakes, either way, are high. We may be on the verge of what one environmentalist terms "technological testing on the reservations."

Not surprisingly, the deck is stacked with coal and nuclear projects that respect neither the land nor the life of America's indigenous peoples. The Department of Energy and other agencies bankrolling CERT have targeted only token funding for development of "renewable" or "alternative" energy resources. An estimated \$300,000 of the \$24 million budget in 1980 was destined for feasibility studies and educational expenses in alternative sources of energy.⁶

CERT, like the Department of Energy, has promoted large-scale, capital-intensive development — synthetic fuels facilities, coal gasification, coal liquefaction, oil shale, and the like. Several "feasibility" studies are underway on CERT reservations for these projects, and CERT Chairman Peter MacDonald announced the possibility of the "first operating synfuels facility" on the Navajo Reservation — the "CERT contribution" to the National Energy Policy under the Carter Administration.⁷

A Hidden Agenda?

CERT's designs on Indian country may merely be development with a capital D, but a recent statement by Ahmed Kooros at the Fort Berthold Reservation in North Dakota raises more fundamental questions. Kooros told the people of Fort Berthold that to facilitate mining development the tribe may have to consider streamlining its tribal government. Does such advice from CERT's top economic advisor presage that CERT has new business at hand? Does its agenda include undermining tribal government in addition to mining tribal lands? CERT could easily become a tool for "termination" — the U.S. Indian policy of the '50s, which today would undoubtedly win the hearty support of corporate America, as well as CERT's many states rights allies.

Who is CERT and who does it represent? Many government and industry interests believe that CERT represents western Indian tribes. In reality, CERT is made up only of the tribal chairmen of those tribes, operating independently, with no accountability to the reservation people, and sometimes not even with the advice and consent of the tribal councils. The organization charter, in fact, legally binds CERT staff to restrict their consultation to tribal chairmen.⁸

This reality is not lost on traditional Indian people, used to consensus decision making. As one woman from the Southern Ute Reservation remarked after the CERT board meeting in Phoenix: "What kind of meeting is this? The plans have already been talked about, and the decisions made before we even came here."

Like most missionaries in Indian country, CERT has left a trail of nonbelievers.

Winona LaDuke is a Chippewa from Minnesota who has done extensive research and writing about corporate energy development on Indian lands for the International Indian Treaty Council, Women of All Red Nations, and community organizations in the Northern Plains and the Southwest.

FOOTNOTES

1. The introductory quote was fabricated by the author.
2. CERT Profile, 1978.
3. Telephone interview with John Foster, April 16, 1980.
4. Christopher McLeod, "Indian OPEC Laid to Rest," *Pacific News Service*, December 1979.
5. Gottlieb, Bob and Peter Wiley, "The Powerbrokers Who Are Dividing Up the West," *Straight Creek Journal*, March 24, 1980.
6. Interview with Ron Zee, CERT Appropriate Technology Director, April 17, 1980.
7. "What the Indians Hope to Build," *Business Week*, March 24, 1980.
8. Telephone interview with Chandler Smith, CERT Denver staff, April 21, 1980.

technical services to the tribes, they would not have needed CERT so much. If it is going to continue to perform this role, the money must come from somewhere. CERT cannot depend upon money from energy companies when it is reviewing contracts and negotiating for tribes, and the tribes don't have the money now to support CERT.

Some former employees of CERT have suggested giving the federal money directly to the tribes, who could then choose between CERT and other consultants for technical services. However, the tribes generally disagree with this approach. Hugh Baker (Mandan-Hidatsa), director of energy for the Three Affiliated Tribes on the Fort Berthold Reservation in North Dakota, said that CERT has helped the tribes realize the need for comprehensive government planning and has helped to find federal money for it. CERT has also helped to establish energy offices on several reservations which will gradually be taking over many of the functions that CERT now provides. The organization is finding funding for a national training institute for Indian science and business students. But, until such efforts to improve tribal management capacity succeed, CERT tribes believe that they are not ready to live without CERT nor do they feel that the funds should go directly to them rather than to CERT. Ed Gabriel, executive director of CERT, expects CERT tribes to manage their own resources without the organization's help by 1987. He foresees closing CERT's Denver technical resource office and maintaining a small lobbying staff in Washington, D.C., funded completely by the tribes. By the end of 1982, 70% of CERT employees will be Indian. Now 40% are Indian, according to Gabriel.

As for the question of representing energy tribes adequately, Gabriel said CERT tribes control 95% of the Indian energy resource base.

But virtually ignored throughout the debate are the individual Indian mineral owners. These individuals, known as allottees, may actually own from 40% to 75% of the energy CERT is claiming in the northern states, according to recent BIA figures. These allottees inherited land and mineral rights as a result of the General Allotment Act of 1887 when parcels of land were signed over to tribal members. Congress hoped at that time to end the Indians' special relationship with the federal government. Although the policy was later reversed, more than 80% of some northern CERT tribes' reservations is allotted.

According to the BIA, the tribal councils have no authority to negotiate for minerals on these lands. And as many as 100 may own one 160-acre parcel, making it sometimes impossible for a consensus to be reached on development questions.

Gabriel said CERT gives technical assistance to allottees if their tribal council requests it. However, according to attorney Carol Connor, often there is a conflict of interest between the tribe and the individual if, for instance, they own adjacent lands and differ on whether to mine coal. A member of the Assiniboine Tribe from the Fort Peck Reservation in Montana and an attorney, she often represents her tribe at CERT board meetings. She believes the CERT staff is ignoring the allottee question. "We don't need to destroy the people to save the tribes," she said.

Gabriel, however, said his staff is glad to serve allottees and even tribes who do not belong to CERT upon request. "How can we turn them down when their only option is going through the BIA?" Gabriel asked.

Such a jab at the BIA is typical of CERT's attitude, and the feeling is mutual. The animosity between the two has created problems for some tribes, who must work with both. Ernie Clark, a councilman for the Colville Tribes in Washington, said he thinks CERT is needed, and he doesn't want to hurt the organization. However, his tribe withdrew from CERT because of the group's public statements attacking the BIA and comparing CERT with OPEC. "It looked too much like propaganda," he said.

BIA officials' resentment of CERT seems to be partly a reaction to CERT's attitude, partly a genuine concern for tribes who are not members, and partly jealousy of CERT's accomplishments.

One of the CERT board members, Caleb Shields (Sioux) of the Fort Peck Tribal Council in Montana said, "In three years, CERT has established a better track record than the whole history of the BIA."

In 1977, about the same time that CERT opened its offices, the BIA decided to open a minerals technical assistance center in Denver. Three years later, in January 1981, only five people had been hired. Because of federal funding limitations and the uncertainty caused by the change in administration, 12 positions were still unfulfilled.

In the same amount of time, CERT had developed a staff of about 40 at its technical assistance center in Denver, including many people with doctoral and masters degrees in natural sciences or economics, as well as extensive industrial and government experience.

While the BIA center staff said it takes about a year before they can respond to a request for a mineral inventory, CERT claims its staff can begin work within six weeks on an average major project. On at least one occasion, a tribe has turned to CERT for help interpreting a BIA mineral inventory.

Defending CERT, Rick Stone, assistant to former Secretary of Energy Charles Duncan, said CERT has helped tribes get millions of dollars. "The money goes to those who produce good paper describing what they want to do. The paper CERT had produced on behalf of the tribes has been of consistently good quality," he said.

Gabriel said CERT has leveraged \$17 million in loans and grants from federal agencies and private industry that would not have otherwise been available.

Beyond the question of where CERT's money comes from are questions of how it is spent. Five former staff members — Paul Epley, Barbara Nagel, Bill Roberts, Bill Nagle and Mahmood Rana, who worked for CERT in 1978 and 1979 — feel the organization was squandering public funds. They asked not to be identified individually.

They told of a three-day staff retreat held at the Keystone resort in Colorado in 1979 where little work was accomplished, but meals and lodging in condominiums were provided for staff and at least one spouse. They said when Gabriel came to Denver for meetings, he frequently stayed at the Brown Palace, an exclusive luxury hotel.

In reply, Gabriel said the retreats were management training seminars, that the Washington staff who attended

were in Denver for other business too, and that a banking institution contributed \$3,000 to cover the lodging, meals and conference rooms.

CERT abides by federal per diem limitations on food and lodging, Gabriel said, even though it is not legally required to do so. He does sometimes stay at the Brown Palace and other luxury hotels across the country, he said, adding, "It's my lifestyle — but I pay the difference out of my pocket."

The five former staff members are bitter. All hired by the same man, who was forced to resign later, they gave up more lucrative jobs to work for CERT. They criticized CERT's performance, partly because they think CERT should do more to expedite energy development. They were excited about the prospect of being involved in the development of the biggest unexploited reserves in the country and upset that CERT advocated an "anti-corporate attitude" among the tribes. "They told the tribes that every company in the United States was trying to rip them off," one said.

They said that when their technical reports were reviewed by nonscientists on the Washington, D.C., staff, they were changed to "justify certain preconceived notions" before being given to the tribes.

One said that as a scientist, he was upset when CERT distorted facts for political purposes. Figures on the size of tribal resources are "grossly exaggerated," he said, since many are not commercially attractive or won't be developed for philosophical reasons.

A staff member from one of the CERT tribes, who asked not to be identified, said the biggest problem is that tribes are given the illusion that they are competing with industry's expertise on equal ground. While he feels CERT has produced some very excellent work, at times the CERT staff seemed to him to be ignorant of certain facts, and other times they seemed to be deliberately manipulating the tribe.

However, representatives of most of the CERT tribes who were contacted had not noticed such problems. Of the 10 tribes contacted, six expressed unequivocal satisfaction with the technical assistance they had received.

Cheyenne River Sioux energy director Joe Troisi, a non-Indian, said he was very satisfied with CERT's help preparing a draft oil and gas agreement. He thinks the organization fills a vital role. His tribal council might not have withdrawn from CERT if the members had consulted with Troisi, who was one of the two official representatives to CERT board meetings from the reservation. While the tribal council thought CERT was trying to force them to develop their own uranium, Troisi said it was not. In fact, the tribe doesn't have a developable reserve of uranium, he said.

Troisi found CERT less helpful on a geothermal project, saying the staff has more expertise in oil, gas, coal and uranium. However, he thinks this bias is understandable since the tribes, who feel pressure from the BIA and the energy companies, have emphasized management of nonrenewable resources.

The Hopi Tribe, one of the country's largest resource owners, has been an inactive member of CERT. Hopi Chairman Abbott Sekaquaptewa said the tribe will continue its

membership — if it can avoid getting "locked into a CERT development plan" and still have CERT technical services on request. However, he is concerned that the organization is being used by a couple of Indian leaders for political leverage against the federal government.

The Assiniboine-Sioux Tribe of the Fort Peck Reservation in Montana considered withdrawing from CERT following an article in a national Indian newspaper saying the organization was not accountable to the tribes. The full board of tribal chairmen meets less than twice a year, and resolutions pass with little or no discussion. Most of the tribal chairmen do not get deeply involved because they are responsible first to the priorities of their constituents on the reservations. The executive committee of seven board members meets only four times a year and talks occasionally by conference calls.

As an example of the organization overstepping the board's direction, sources in several agencies and congressional offices claim that CERT helped block the confirmation of Tom Fredericks (Mandan-Hidatsa) as assistant secretary of Interior for Indian Affairs although at least five of CERT's members had endorsed Fredericks' nomination. The confirmation was blocked until the presidential election when it became moot because President-elect Ronald Reagan was expected to appoint someone else. While Gabriel has been feuding with Fredericks for years, he swears "on a stack of Bibles" that neither the CERT staff nor the board interfered.

Rather than withdrawing from CERT Caleb Shields said Fort Peck decided to get more deeply involved and attack any problems within the organization directly. He thinks CERT needs to communicate better with tribal councils and with other Indian organizations, such as the traditional Indians who staged a protest at the 1979 board meeting in Phoenix, Arizona, and were not allowed to address the board. As Shields expected, CERT has avoided a recurrence of this embarrassing incident by scheduling subsequent board meetings in Washington, D.C., and New York City — far from the CERT reservations. "You can never resolve anything by ignoring it," he said.

Hugh Baker of the Fort Berthold Reservation said that tribal involvement is the best way to make the organization work. "People who have problems with CERT should think of the concept behind forming it. I continually remind the CERT staff, 'You're here to put yourselves out of business by teaching me. When we get rich on oil and gas, maybe you can come work for us. Until then, help us get rich.'"

"Some tribes are losing sight of why CERT was set up. They think of CERT as another desk of the Department of Energy. You can't just hand over an assignment and forget it. Your responsibility is to stay on it," he said.

While the tribal members of CERT realize the organization has problems, they believe it can help them gain control over energy development on their reservations. They are alarmed at the cutbacks the Reagan administration has proposed for Indian energy programs, and hope Congress will see the need to continue CERT's funding.

Marjane Ambler, a former editor of High Country News, spent a year studying Indian energy development under a fellowship from the Alicia Patterson Foundation.

Crested Butte vs. AMAX:

A Little Town Takes On An Archaic Law

George Riley

Crested Butte is a survivor. For a hundred years this little town in western Colorado has endured the severe boom-to-bust cycles wrought by the lure of mineral wealth. From gold to coal to lead and zinc, the community never surrendered to the forces that made ghost towns out of neighboring places.

A new cycle may have begun for Crested Butte, one that most of the 1,200 townspeople fear will leave this national historic site irreparably changed if not destroyed. The mineral is molybdenum, known to some as "moly-b-damned," to others simply "moly." The miner is AMAX, one of the largest metal producers in the world.

Since engineers from AMAX discovered the molybdenum deposit four years ago, the citizens of Crested Butte have waged a sophisticated struggle against the proposed mine. They elected a mayor, William Mitchell, who brings considerable talent and ingenuity to his campaign against the mine. With able legal assistance from some East Coast emigrants, the townspeople have fought the company at every point in the state's environmental permit process. The town council, after unanimously declaring its opposition to the project, passed an ordinance to protect the area's watershed. If sustained by the courts, the law could greatly impair or even halt the operation.

The proposed mine which has attracted this determined opposition is targeted for Mount Emmons, called "Red Lady" by the locals. The mountain rises up 11,000 feet in the town's backyard; much of the mining will occur near the site of the defunct Keystone coal mine, about two miles from Main Street.

The project will be immense. Its combined operations will cover about 5,000 acres — 50 times the size of Crested Butte. Over the next 30 to 40 years, AMAX plans to extract 155 million tons of ore, but because this ore contains only .44% concentration of molybdenum disulfide, only one million tons will be recovered as usable molybdenum. AMAX will dump the remaining 154 million tons of waste — along with other debris — into a nearby creek basin. Held in check by a dam 400 feet high and one-half mile long, the tailings pond will eventually engulf 3,000 acres of national forest land with caustic sludge.

Much depends on the outcome of this confrontation between town and company. For AMAX, the deposit inside

Mount Emmons is one of the biggest in the world, estimated to be worth at least \$7 billion. Although world markets for moly are soft at the moment, the future looks bright; the "grey gold" makes steel stronger and lighter, making it a key element in modern weaponry.

Opponents of the mine see more than serious threats to the environment and watershed. Mayor Mitchell estimates that the mine will bring in 10,000 people and the attendant social evils of a sudden population explosion. The project also poses considerable risks to the survival of the tourist and recreation industry which the town had cultivated to sever its dependence on mining.

But issues larger than the town's future hang in the balance. The citizens of Crested Butte are taking on not just a company with sales that double the state's budget. They are challenging the operation of an archaic law that has often made opposition to mining seem fruitless.

"It's a tremendous indictment of the system if a place like Crested Butte is devastated because of an old mining law," said Mayor Mitchell in reference to the 1872 Mining Law. Like the town itself, the law is a product of the gold rush days and the pressures to promote settlement of the western frontier. The mining technology and the assumptions regarding the best use of public lands have changed drastically since that era, but the law continues to govern critical minerals in the public domain. For Crested Butte this involves several thousand acres of federally owned national forest land.

What confounds the citizens of Crested Butte is that the law is interpreted to give all miners a right to enter and extract minerals on federal lands. All other decisions about land use must accommodate this entitlement. In an age when one must buy a permit to gather nuts in national forests or pay an entrance fee at national parks, the law's special treatment of miners is, at best, anomalous.

The right to mine is found in the first paragraph of the law: "Except as otherwise provided, all valuable mineral deposits belonging to the United States shall be free and open to exploration and purchase . . ."

At one time these words governed *all* minerals on federal lands. But waste and monopoly led Congress in 1920 to exempt oil, natural gas, coal, and certain phosphates from the land and place them under a competitive leasing

system, set forth in the Mineral Leasing Act. Later, gravel, sand, and other common construction materials were also placed under a different statute. Today, the 1872 Mining Law controls the so-called "hardrock" minerals such as copper, lead, uranium, gold, silver, and molybdenum.

The act refers to the "purchase" of mineral deposits, but Congress never set a price on the mineral rights. Hence, the resources are free for the taking; a miner need only file a claim with the state land agency. Not until 1976 were miners required to report claims to a federal agency, the Bureau of Land Management (BLM).

Unlike coal, oil, or even gravel found on federal lands, no royalty, tax or fee is charged on minerals extracted under the 1872 Mining Law. A claim can be held indefinitely as long as \$100 worth of work is done on it every year. And if that is not enough of a bargain, a miner can buy the surface and mineral rights for only \$2.50 to \$5 an acre — the same prices established 108 years ago. Land purchased in this manner passes forever out of federal control; property obtained at these low prices has been used for purposes unrelated to mining, such as shopping centers, trailer parks, and even a few brothels.

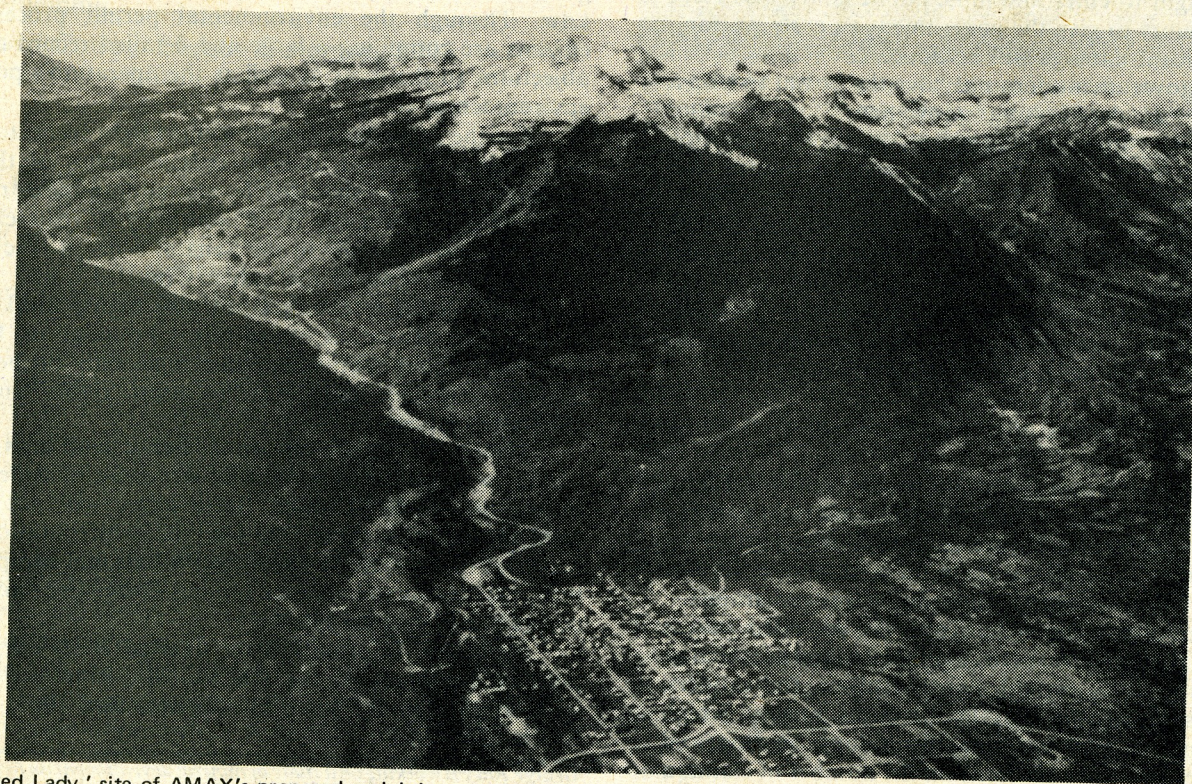
The rationale for this remarkable law is found in congressional debates on the 1866 Lode Law, the precursor of the 1872 Mining Law. Mining on public lands had gone on before, during and after the war, but the prospectors were technically trespassers. Western senators, led by William Stewart of Nevada, sought to enshrine the status quo as law in recognition of the miners' contribution to the war-time economy. These legislators also argued that open mining would encourage settlement of the West and inflate the economy, devaluing the war debt.

Three assumptions emerge from the debate on the law. First, according to Stewart, the western lands would be worthless but for the efforts of the trespassing miners and "this system of free mining fostered by our neglect and perfected by our generous inaction." Second, the minerals were inexhaustible: "There is room for every prospector who wishes to try his luck in hunting for mines and yet there will be plenty of mines undiscovered," Stewart told his colleagues. Finally, the intended beneficiaries were the pioneer prospectors who, armed with pick and shovel, "devote three-fourths of their aggregate labor to exploration and consequently are, and ever will remain, poor. . . ."

The notion that federal lands are to be valued only for their mineral endowment would no longer be seriously entertained in a national debate. We also understand that there are limitations on the exploitation of these resources, both those imposed by nature as well as those created by other equally valuable uses. Today the lone prospector has all but vanished, and small mining outfits make only a marginal contribution to an industry dominated by large corporations.

Antiquated But Active

Although its underlying assumptions may be fully discredited, the 1872 Mining Law continues to determine critical decisions about mineral development. The law has successfully resisted a number of attempts at reform, the most recent coming from Cecil Andrus, Carter's Secretary of Interior. "The Mining Law of 1872 served its purposes well," Andrus told the House Subcommittee on Mines and Mining in 1977, "but it has outlived its day." With Carter's



'The Red Lady,' site of AMAX's proposed molybdenum mine. The town of Crested Butte is in the foreground. Photo by Ray Manley

support, Andrus sought to replace the law with a leasing system giving the Department of Interior discretionary power over hardrock mining. Heavy pressure from mining interests buried the law in committee; a similar fate has met every reform effort since 1949.

Defenders of the law argue that it does not undermine environmental protection because courts and agencies have continually refined its operations. "All the law does," contends an AMAX official, "is give property rights to build something. It encourages people to find the needle in the haystack."

Providing incentives for exploration has not been a problem with minerals that are sold or leased under other laws. The 1920 leasing law protects a miner's investment in exploration for energy resources while insuring the U.S. Treasury a return on the use of public property. These lands, moreover, are not given away or sold at indefensibly low prices. During and after the mining, the land remains part of the public domain.

Out of deference to the miners' claimed "rights," the two principal guardians of federal lands, the Bureau of Land Management in the Department of Interior and the Forest Service in the Department of Agriculture, have taken a hands-off attitude toward mining. Only in 1974 did the Forest Service implement surface mining regulations intended to reduce harm to the environment caused by mining in the national forests. Oddly enough, the Forest Service claimed authority to do so under the 1897 Organic Administration Act. Last November, the BLM finally issued similar regulations after four years of hearings and revisions.

The new regulations recognize that miners have an undeniable right to enter and mine public lands. The rules require operators to give the government an early warning only if significant damage will be done.

But the government does not have the power to stop a mine. After a decade-long movement for a more environmentally conscious land policy, the government now may only try to protect public lands against "undue and unnecessary degradation." The 1976 Federal Land Policy and Management Act declares it a policy of the United States to retain and manage public lands to protect their scenic, scientific, and ecological values. Even with this mandate, federal agents have no independent authority to issue citations or fines; they must first convince a federal court to issue an injunction against a violator.

Crested Butte's Claims

Lawyers for Crested Butte, led by attorney Wes Light, argue that the federal government does have a right to halt a proposed mine. They maintain that provisions in the law are so twisted, that the right to mine on a modern scale has become a privilege subject to environmental constraints.

To encourage settlement, Congress provided that a miner could purchase five acres of mill-site land adjacent to a claim. Five acres would hardly suffice for modern operations such as the Mount Emmons project which require thousands of acres of land for milling, hauling, and dumping ore. There are no limits on the number of claims a miner can file, but the law does require "present use and

occupancy" of adjoining surface. Light argues that only overly generous interpretation of this clause would permit large-scale operations, an interpretation certainly not mandated by the law itself.

Another area that requires considerable interpretation and judgment is the granting of access routes to the mine. The 1872 Mining Law is silent on this point. But mine operators, backed by lawyers like James Watt, contend that denying access is tantamount to taking property. Light and his colleagues counter by citing laws that require such grants to be made in the public interest.

Light also contends that a legal challenge to the 1872 Mining Law can be fashioned out of the first provision of the act. The law provides that "valuable deposits" shall be open to mining and purchase. The meaning of this phrase has been critical in cases where ersatz miners wanted land at bargain prices for purposes other than mining. Over time, the test for a valuable mineral deposit has been narrowed by court and administrative decisions to a commercial marketability standard. Light argues that this test should be changed, given the environmental laws passed in the last decade. A proper calculation would include a project's negative environmental consequences as well as other uses of land are foregone because of a mine. "An independent assessment of what constitutes a valuable mineral deposit," says Light, "would include all costs, and if the costs outweigh the benefits, the miner does not have a valuable deposit and cannot mine."

A Test Case

Many environmental lawyers see Crested Butte as a good test case of the current operation of the 1872 Mining Law. Through the environmental permit process, the citizens are compiling a large and detailed record of their objections to the mine as well as the operation's potential environmental costs.

For the immediate future, a court fight seems to be the best way to stop, or at least reduce, abuse of the law. Congress has been shackled by the mining industry. Last year a bill to grant the BLM authority to issue citations passed overwhelmingly in the Senate. When it reached the House, the servants of the industry bottled it up.

Administrative changes are also highly unlikely. As head of the Mountain States Legal Foundation, Interior Secretary James Watt intervened repeatedly on behalf of mining companies that wanted to assert "rights" under the 1872 Mining Law.

History shows that reform of public land laws usually comes in response to a crisis or exposure of widespread, outrageous abuse. Crested Butte alone will not be the catalyst for major reform, but the confrontation over Mount Emmons could spearhead a national campaign to bring rationality to hardrock mining. Otherwise reform, if it comes at all, may be too late.

For more information on Crested Butte's legal and political challenge of the AMAX Mt. Emmons project, write High Country Citizens Alliance, Box 1066, Crested Butte, CO 81224.

George Riley is working on a study of mineral development on federal lands for the Public Interest Research Group in Washington, D.C.

Can Anaconda Reclaim Jackpile?

Paul Robinson

Through 1975, Laguna provided 14% of the country's uranium supply, but we're finding some conflicts. We've had some severe effects on the quality of our air and water. The village of Paguate is just 150 yards from the boundaries of the open pit mines and has suffered from noise and dust pollution. In severe weather, radioactive materials may be flowing downstream from the area. But without any regulations, we are in a dilemma.

—Floyd Correa, Laguna Governor, 1978

On February 28, 1981, Anaconda Company halted operations at its Jackpile-Paguate mine at Laguna Pueblo, the largest open-pit uranium mine in North America. The company, an ARCO subsidiary, had initially proposed a 1984 closing date but escalated its schedule when uranium prices fell.

Under conditions of the lease, Anaconda cannot leave the scene without completing a mine reclamation plan, to be assessed by the U.S. Geological Survey (USGS) and the Bureau of Indian Affairs (BIA). The agencies' joint Environmental Statement will evaluate the plan's impact on the environment and surrounding Pueblo communities and weigh appropriate reclamation alternatives. The Anaconda plan will be the first attempt to reclaim an open-pit uranium mine in the United States.

The mine site covers 5,000 acres of Laguna Pueblo land in northwestern New Mexico, including 3,000 acres (4.7 square miles) of open pits, with waste piles and buildings, two active and three inactive underground mines, and a widespread exploration drilling network. The pits cross the Rio Paguate and Rio Moquino — the main streams in the northern part of Laguna Pueblo.



Jackpile Mine—5,000 acres of open pits and waste piles that dwarf the railroad line. The mine drainage stream flows toward the village of Paguate and pueblo grazing areas. Photo by John Liebendorfer

The area was first leased by Anaconda in 1951, after a company geologist, while flying over the region, noted high aerial radiation readings which were later interpreted by surface examination and core drilling as a huge uranium ore body. The original leasehold was expanded westward to Paguate, to exploit additional ore veins.

Continuous operation of the mine through 1980 has resulted in the excavation of more than 100 million tons of material, including about 15 million tons of ore. Most of this rock is at the mine in waste piles, low-grade ore stockpiles, or ore piles awaiting shipment to the mill. The Jackpile ore processed at Anaconda's mill in Bluewater, New Mexico has created a 400-acre landscape of mill tailings piles and evaporation ponds.

The scale and complexity of the reclamation job translates into a five- to ten-year program. Marc Nelson, USGS project coordinator, anticipates an 18-month EIS study process, followed by five years of earth moving, revegetation, and fencing work. If things go well, after two or three years of study and some reworking, reclamation will be complete.

The mechanics of this timetable should be clearer after



Laguna miners at Jackpile. Photo by Tom Barry

It used to be all peaches, wheat and corn in the valley. The irrigation water came from the mountains by way of a series of dams.

—Franklin Lewis, a retired Laguna miner

increases in Radium-226, a radioactive decay product of uranium. Groundwater samples range from 0.17 pCi/l (picocuries per liter) upstream of the mine to 3.7 pCi/l on the southwest side of the mine. Surface water samples downstream of the mine were up to 4.8 pCi/l in 1975.

The U.S. Public Health Service limits the Radium-226 in drinking water to 5 pCi/l. (The rate of radioactive decay is measured in picocuries per liter. 1 pCi/l equals about two decays per minute.)

The numbers are of concern for several reasons. The groundwater samples were collected where people use water, and indicate trends of increasing radioactivity in subsurface water supplies. The surface water samples with high radium content were taken upstream of a main Laguna grazing area. There is also evidence of increased radium contamination of streambeds below the Jackpile mine since mining began. This increase could mean there will be long-term radioactive releases from the mine sites.

Selective Reclamation

Meanwhile, Anaconda has extensive plans for surface reclamation, but is relatively silent on the issue of restoring water quality. What receives most attention in the Jackpile plan is the restoration of mined land. Anaconda has proposed changing the contour of parts of the mine but otherwise leaving "over-steep" embankments and highwalls amidst the wide "previous reclamation" areas. Highwalls are especially difficult to maintain against erosion and severely impede grazing use. The "previous reclamation" was done without performance criteria or monitoring, and often does not meet current standards. In addition, Anaconda has a large expanse of unreclaimed drill sites which it has not even proposed to reclaim. Until regraded, resoiled, and replanted, these will be sites of increasing erosion and diminishing vegetation.

The next year and a half will be an important period to refine the Jackpile reclamation plan. There will inevitably be changes that reflect criticisms of the USGS, the BIA, the Laguna Pueblo, and other concerned people, as well as the advances in reclamation technology.

The final plan — a pioneer effort in open-pit mining — will set the standard for the uranium industry. It should be closely monitored as it is being formulated and implemented. A series of public meetings during the development of the EIS will allow people to make recommendations to the USGS and BIA and also to keep up to date with Anaconda's proposals. Documents on the plan will be available for review through Marc Nelson, USGS, 505 Marquette NW, Albuquerque, NM 87102.

Paul Robinson is program director and environmental analyst at Southwest Research and Information Center in Albuquerque.

People dry their meat outside and the dust settles on it, especially when it's really blowing. The uranium gets into our lungs and into the food on our tables. We don't know what it's doing to our health, to our kids, and later on their babies.

—Frank Aragon, an Anaconda employee

publication of the EIS. However, there is no question that it will be a long time before the land can be put to its original use as grazing and farming areas.

A key concern of the people of Laguna is the quality of their water, which was contaminated by the mining process. Water flowing through the mine, both surface and groundwater, is used for stock watering, irrigation, and domestic supplies.

Little sampling has been done in the area, but the few samples taken, by the Environmental Protection Agency in 1975 and the Indian Health Service in 1979, show consistent

Fort McDermitt Reservation

Mining History Repeats Itself

Lynne Lahr

Between 1850 and 1864 pioneers moved across the prairies and deserts in the name of Manifest Destiny, seeking land, gold, and anything else that symbolized profit and a new life. Their movement dealt specific blows to the Northern Paiute people and their way of life, although the government gave little thought to the original inhabitants in its eagerness to open up the American West.

Now, more than 100 years later, history is repeating itself with a renewed assault on remaining Indian resources. Uranium exploitation is not only a threat to the cultural aspects of a people's past, but to the future of generations of unborn.

The People

For more than 4,000 years,¹ indigenous peoples lived in harmony with the land in the area we know as the McDermitt Caldera of southeastern Oregon and northern Nevada. These people were a group of Shoshonean-speaking Indians, along with the Ute, Western Shoshone, Goshute, Bannock, Paviotso and others.² They lived in small groups and isolated kinship bands which were necessary to survival in the environment. They used the McDermitt Caldera area (also known as the Quinn River Basin) as a wintering site.

Their social structure consisted of family units, comprised primarily of the core people, mother, father and child, who provided for their own needs and subsistence. This social structure has remained prominent on the Fort McDermitt Reservation throughout the history of the Northern Paiute people there because of "cultural persistence and because of a continued adaptation to an environment of limited resources."³ The way of learning and respect for the earth meant the continued existence of all the people.

The Land

The survival of the people depended upon hunting deer, antelope and mountain sheep, and gathering roots and seeds native to the region. These included *yapa* (wild carrot), *atsa* (tansy mustard) and *camas*.⁴ The land was dry — now classified as desert since rainfall averages about 10 inches or less — and did not yield abundant vegetation or other food sources, but for centuries the people cared for the earth and used it wisely, and the land provided well.

Water came from the Quinn River mainly, which rose out of the Santa Rosa Mountains east and south of the town of McDermitt, Nevada.⁵ There were other streams and rivers, although the strain on sparse water supplies from agriculture and mining needs since the time of white contact has made them virtually nonexistent.

To the west of the Quinn River Basin lie the Trout Creek Mountains, "...a gentle rolling fault block range rising up to 8,500 feet. Because of abundant water and shelter the mountains provide habitat for many species of wildlife."⁶

Both the Santa Rosa Mountains and Trout Creek Mountains catch rain and snow to supply the surface streams and underground water table (aquifer). People living in the region today meet most of their needs from water pumped from the aquifer. The threat to this water supply by mining plans in and around the Fort McDermitt area is critical, since water is the life sustaining resource, and a precious commodity in this arid climate.

Reservation Life Today

Under the Dawes Act, land allotments were doled out to the Indian people in 1892, after the military post of Fort McDermitt was abolished. A series of land sales since 1975 have further reduced the Northern Paiute territory, resulting in the loss of the majority of the reservation lands to Oregon. In her first study of the Fort McDermitt Reservation community, Ruth Houghton documents in detail the land exchange which created the reservation the Northern Paiute live on today, and the socioeconomic impacts to the Fort McDermitt people.⁷

Her research uncovered amazing facts about reservation life as compared to the white community in the area, including the disparity between the county's poor and well-off. The average household income for 1970 (81 households) was \$3,100 with earned and welfare income added together. The same 1970 census shows households of Humboldt County averaging \$10,000 annual income and a per capita income of \$3,005.⁸

Employment on the reservation — or off — is low for the residents. The main sources of income are cattle ranching or welfare. The mercury mine and mill complex which Placer-Amex Corporation operates in the area — known as the McDermitt Mine — employs nearly 100 workers. Only five or six are Fort McDermitt Indians.⁹

The 1980 census figures, like the 1970 figures from which Ruth Houghton yielded much of her information, should contain interesting information to document the continued poverty and repression of Fort McDermitt residents, which is likely to increase with the impacts of uranium mining and milling.

The Resources

Although the Fort McDermitt people never signed a treaty since they were established under the Indian Reorganization Act (IRA), they gave away much of their land by agreeing to reservation status. They also gave away the resources, and therefore their only key to survival, even though the agreement made with the government never stated this. As America faces the depletion of oil reserves worldwide, however, it turns to coal and uranium. A large percentage of these resources happen to lay on Native American land.

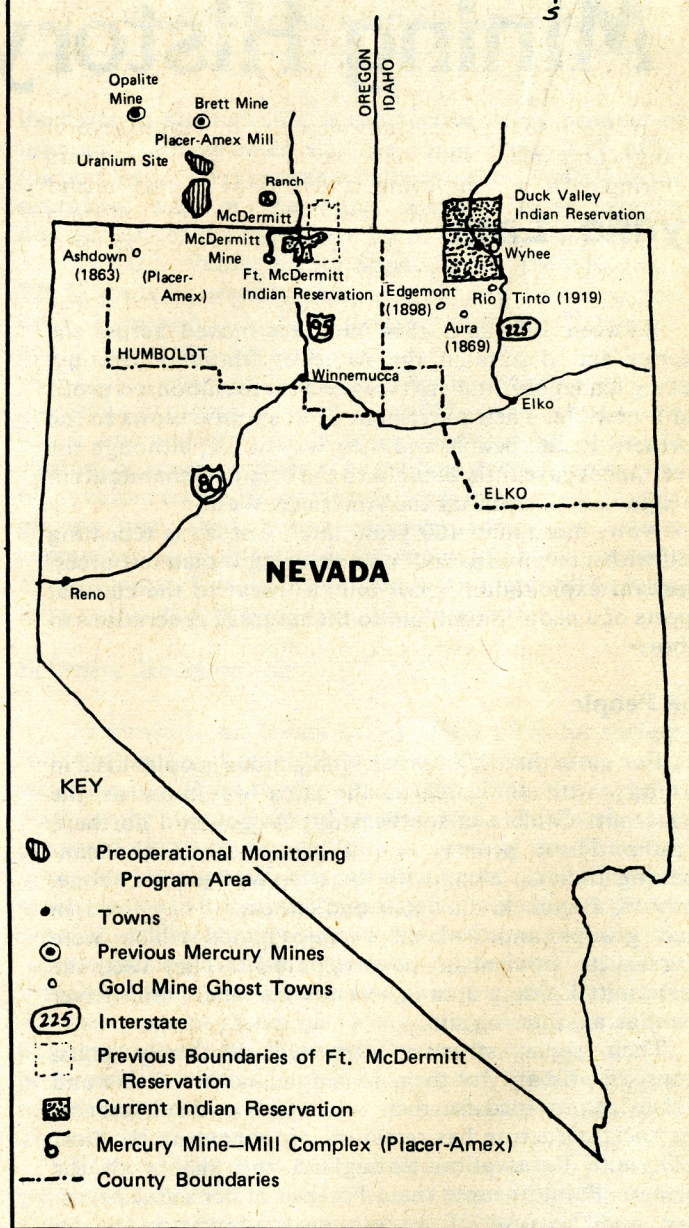
Resource exploitation in the case of Native Americans has always followed a rather predictable pattern. The land once used for hunting and gathering no longer yielded the game or plants as the drilling rigs, mines or livestock (owned by white ranchers and farmers) moved in; the people were moved to smaller and smaller land bases for larger and larger corporate and government projects; very little or inadequate programs got implemented to carry out "assimilation" into the culture for which the projects were being carried out in the first place, and finally, alcoholism, sterilization for the women, prison for the men, high unemployment rates, and associated problems signalled the end of the people.

The resource exploited first in the Fort McDermitt area was the land itself, which was essential to getting across the prairies and establishing ranches to feed new settlers. Today most of the Quinn River Valley residents are involved in ranching and agriculture — including the Northern Paiute of the reservation. Contrary to their original culture and way of life, cattle ranching came via the Bureau of Indian Affairs (BIA) who gave and loaned cattle to the newly formed Fort McDermitt Reservation (incorporated under the terms of the IRA in 1936). Cattle are now the fundamental resource for the people, yet no ranches are owned or operated by Indians. Instead, Indian cattle owners work cooperatively on reservation lands.¹⁰

The other major resource — minerals — has varied over time in terms of exploitation. The history extends as far back as 1870, when a few mines existed in the area.¹¹ No mention is made of the type of mines operating at this time, but most whites doing prospecting were looking for gold in the region. A number of small gold mine ghost towns dot tourist maps of Nevada, particularly east of McDermitt in what is now Elko County.

Mining for hardrock minerals actually began in earnest during WWII, when several mercury mines went into operation. These underground mercury mines operated in the area until approximately 15 to 20 years ago.¹² They employed non-Indians — unfortunate for the economy of reservation residents, but fortunate for those who would have been mining underground in shafts which were neither well-ventilated nor safe.¹³ The mines in the McDermitt area

URANIUM DEPOSIT AREA Sites of Claims Staked



were the Brett Mine and the Opalite Mine. The area is known and referred to as the Opalite Mining district.

The NURE Program

Another resource is uranium, used in nuclear power plants and nuclear weapons. Prospecting for uranium has been going on since the completion of a government mineral survey program in southeastern Oregon. In 1976 the United States government, through the Department of Energy (DOE), began the National Uranium Resource Evaluation (NURE) program to study the uranium potential of U.S. lands. Dividing regions into quadrangles, the DOE has

designated high priority status to 116 quadrangles out of 621 surveyed in the U.S.¹⁴ Fort McDermitt happens to be located in a high priority quadrangle. The resource survey of the area was done in 1977 and was titled "Preliminary Study of Uranium Favorability of Malheur County, Oregon." More than 15 million pounds of uranium were located in Malheur and Harney Counties in Oregon, worth about \$750 million. The results of this study were the impetus to several mining companies, who have spent the last two years exploring, drilling, surveying, and staking claims in and around the Fort McDermitt area. The claims extend from the town of McDermitt west of a proposed uranium mine and mill complex sited seven miles away.

Some of this uranium exploration has occurred on the Fort McDermitt Reservation itself, but most has been off. In the case of uranium, however, the effects of mining are never isolated and will be impacting reservation residents from seven miles away as much as if the operations were on the reservation.

NURE is essentially an inexpensive way for companies who do uranium mining and milling for profit to find out where the uranium resources are. The United States government is spending taxpayer dollars to identify the sites, while the results of the studies are distributed to mining corporations. The program is in keeping with corporate and government plans for energy development in the west.

The Plan

In the three-year period since the NURE study of southeastern Oregon, more than 4,000 uranium claims in Malheur County and 500 in Harney County have been made.¹⁵ Anaconda, Chevron Resources, Inc. (Standard Oil of California), Shell Oil, and others have sent their prospectors into the area, and the majority of claims staked occurred last summer on BLM land. There was one report, not yet proven, that a company had asked for permission to explore within the boundaries of the Fort McDermitt Reservation and was denied by the tribal council. The company was later seen operating a drill rig on the reservation but no action had been taken.¹⁶

Whatever the method of exploration, no mining will be done in the area until a uranium mill is built to accommodate and treat the mined ore. Placer-Amex, the subsidiary of a Canadian corporation called Placer Development Ltd., conducted a Preoperational Monitoring Program to determine the feasibility of placing a mill on the Oregon side of the border (about seven miles outside the town of McDermitt), but has deferred plans to apply for a siting permit. The program plan was submitted to the Oregon Department of Energy (ODOE) and the Energy Facility Siting Council (EFSC) in July, agencies which have jurisdiction over siting mills in Oregon. In January 1980, a supplement plan was submitted to the ODOE and EFSC for review. The site under study is directly on the McDermitt Creek which flows through the Fort McDermitt Indian Reservation.

For the other corporations interested in mining uranium in the area, not much can be done to stop their plans. Mining on BLM land is governed by the 1872 Mining

Law — an act that is completely inadequate in terms of protecting the environment. The only recourse is a state requirement for a reclamation plan to be filed by the company for a permit. Hearings on amendments to the requirement for filing a reclamation plan were held in January 1980 in Oregon. While mining corporations, including Placer-Amex, were represented in full force, residents of impacted areas had no notice.

Meanwhile, two area residents have died within the past eight months of cancer, and one tribal chairperson has undergone a mastectomy from breast cancer within the past year.¹⁷ Radioactive contamination of the aquifer might have occurred with the operation of the mercury mines 15 years ago. The mines were underground and pierced the water tables in the same location as extensive uranium exploration and mineral deposits.

No medical studies are being conducted of the people in the McDermitt area to determine the threat to their lives as well as to the land. No doubt Placer-Amex considers a study of the environment more "economically feasible."

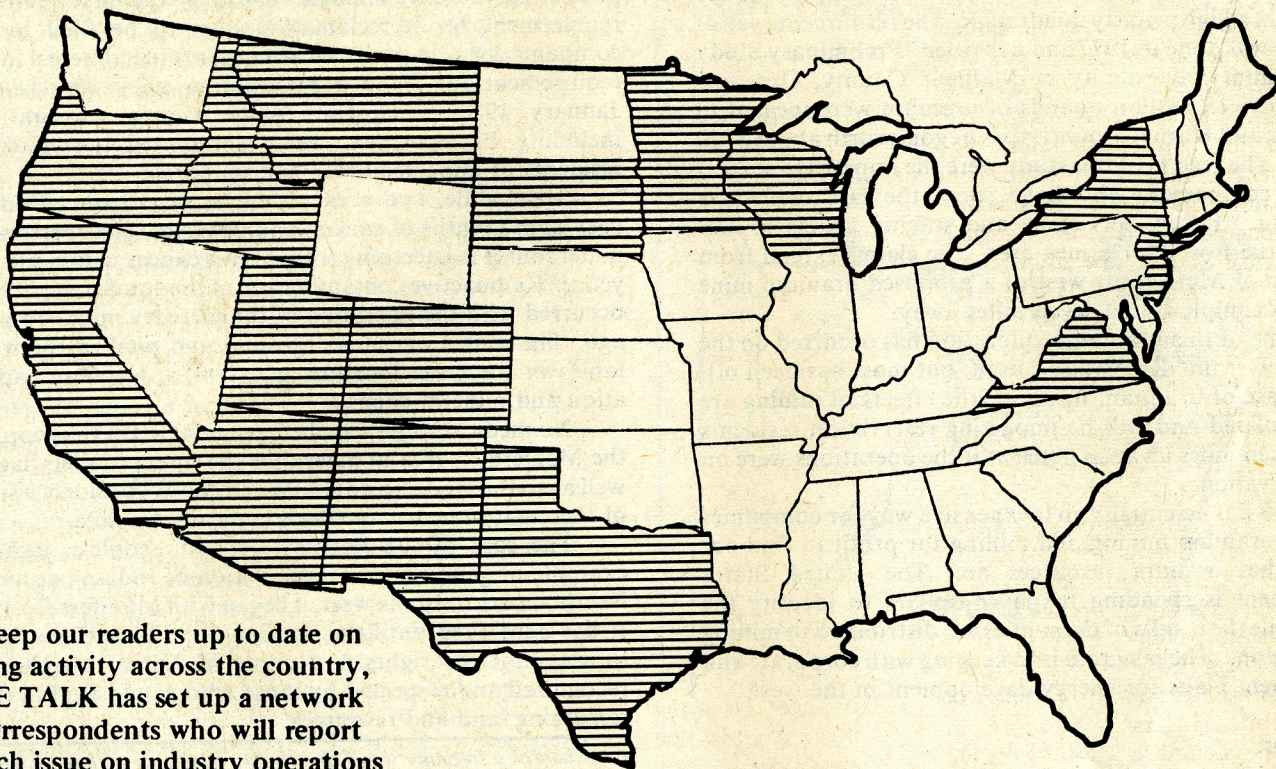
The case of the Fort McDermitt people is another example of genocide and annihilation of Indian nations of North America. In the west, it began with Manifest Destiny. It has continued until the present. It will continue in the future until the rights and needs of Native peoples are recognized and respected by those who would exploit their remaining land and resources.

Lynn Lahr is a freelance writer and former researcher with the Uranium Resistance Coalition in Oregon.

FOOTNOTES

1. Houghton, Ruth Meserve, *Adaptive Strategies in an American Indian Reservation Community: The War on Poverty, 1965-1971*, A Dissertation, Department of Anthropology — University of Oregon, September, 1973, p. 28.
2. Deetz, Fisher and Owen, *The North American Indians — A Sourcebook*, Introduction to Section IV: The Basin-Plateau, MacMillan Publishing Co., 1967, p. 29.
3. Houghton, p. 77.
4. Houghton, Ruth Meserve, *The Fort McDermitt Indian Reservation: Social Structure and the Distribution of Political and Economic Power*, Masters Abstract, University of Oregon — Department of Anthropology, 1969, p. 3.
5. *Ibid.*, p. 1.
6. Oregon Wilderness Coalition, "Conservationists Propose Wilderness Study Areas, *Wild Oregon*, March-April 1980, p. 7.
7. Houghton, *Adaptive Strategies*, p. 26.
8. Houghton, *Adaptive Strategies*, pp. 188-190.
9. Estimates from February 17 conversations with Louise Grover and Jan Borham, McDermitt school teachers and area residents for 2 and 5 to 6 years, respectively.
10. Houghton, *Adaptive Strategies*, p. 27.
11. Houghton, *The Fort McDermitt Indian Reservation*, p. 6.
12. February 16 conversation with security guard at McDermitt Mine, who worked in the Brett Mine and others in the area until they closed. He also has lung cancer.
13. February 16 conversation cited above.
14. Redhouse, John, *The Nuclear Fuel Cycle and Its Impacts on Nevada Indian Tribes*, A Working Paper, December, 1979, p. 3.
15. Burns Times-Herald, "Uranium Strike in South End," October 4, 1979.
16. Conversation with Lorraine S. Dyer, former tribal chairperson of the Fort McDermitt Indian Reservation, now a council member, February 17, 1980.
17. Conversation cited above.

STATE-BY-STATE REPORTS



To keep our readers up to date on mining activity across the country, MINE TALK has set up a network of correspondents who will report in each issue on industry operations and citizen action in target states.

ARIZONA

Chris Shuey

Arizonans for Better Environment

The newest and largest uranium-ore producing project in Arizona has Indian groups and environmentalists worried that a vast expanse of high-desert north of the Grand Canyon could face widespread energy development in the 80s.

The region, known as the Arizona Strip, currently is host to a Denver company operating two underground mines in Hack Canyon, about 12 miles north of the Grand Canyon and 30 miles southwest of Fredonia, Arizona. Energy Fuels Nuclear, Inc. (EFNI) began production in late 1980 and is reported to have reached full production from its Hack Canyon II mine this summer.

The ore grades in the two Hack mines are unusually high: Some estimates place the ore grade in the EFNI project as high as .5% uranium, although Energy Fuels itself claims the grade is lower, between .2% and .3% uranium.

The company anticipates recoverable ore to be between 250,000 and 500,000 tons for both mines, with yellowcake production running between 2.5 million and 3 million pounds.

The high ore grades are allowing the company to haul ore some 350 miles for processing into yellowcake at its Blanding, Utah mill. The grades also are attracting several major energy firms on the lookout for economically recoverable reserves. Exxon has leased several hundred-thousand acres of mineral claims in the Strip, and, according to one state official, is considering some type of solution mining on those claims. EFNI is leasing the Hack site from Western Nuclear, Inc., which also has extensive holdings in the region.

Both Hack mine shafts open at the base of the canyon some 1000 feet below the top of the canyon. The shafts lift upward about 200 feet to the ore body, which consists of breccia formations—a common geologic occurrence in the Arizona Strip and Colorado Plateau, where Coconino sandstone and other unconsolidated sedimentary rocks collapsed into depleted aquifers. Mining

is commencing downward from this point, primarily by means of underhand stoping.

Radon vents have been sunk to the shafts from the top of the canyon, and radiological monitoring devices installed in and around the mine adits.

Ore brought to the mine adits is temporarily deposited on an ore pad before loading into trucks. The company has constructed the pad on a man-made plateau above the flash-flood line of the canyon.

Upon completion of mining activities in four to eight years, EFNI says it will seal the mine entrances and remove the ore pad, either by shipment to the Blanding mill for processing or backfilling into the mines before they are closed. The company also promises continuous radiological monitoring after operations until such monitoring is deemed not to be necessary; soil and erosion monitoring; and extensive revegetation.

Indian and environmental groups have demanded that the Bureau of Land Management halt operations in

Hack Canyon until an environmental impact statement is prepared. The Indian groups, including the Thunder River League, contend that the hauling of ore by truck across three miles of highway on the Kaibab-Paiute Reservation around Fredonia and through areas sacred to the Paiutes constitutes a significant environmental and socio-economic impact to the region. In a series of petitions submitted to the Kaibab-Paiute Tribal Council last fall, the groups said that the "Paiute culture is not a thing of the past" and warned that uranium development in the area would work to uproot their culture, as it has on other Indian lands in the West.

The tribal council, however, agreed to permit EFNI to use reservation roads to haul ore provided that the company commit to pay all costs of road improvements connected with the haulage route and cover all ore trucks with canvas to prevent the blowing of ore dust. EFNI also agreed to pay the tribe \$10,000 annually through the life of the project, with \$3,000 of the yearly payment going toward a scholarship fund.

Environmentalists, meanwhile, including the Southwest Resource Council in Hurricane, Utah and the American Rivers Conservation Council in Washington, D.C., point to the potential for irreparable damage to the fragile canyon environments in and around the Hack site. An intermittent stream flows through the canyon and intersects with Kanab Creek, a major tributary of the Colorado River in Grand Canyon. Kanab Creek is considered a prime trout habitat and Kanab Canyon, through which the stream flows, is a popular hiking and backpacking location. Additionally, some 72,000 acres of Wilderness Study Area about the Hack project boundaries, and the entire Strip is dotted with wilderness areas.

The National Wildlife Federation's Natural Resource Clinic in Boulder, Colorado dispatched their staff engineer Ben Harding to the Hack site to review the EFNI mining plan firsthand. Among his findings is the canyon's great potential for flash flooding, though there is no sign of recent flooding at or above the ore pad. EFNI, nonetheless, has agreed to Harding's recommendation to provide more extensive riprapping of the pad berms, an extra layer of imper-

meable rock under the pad, and an overall lifting of the pad itself to assure greater protection from flooding.

All this concern has left BLM District Manager Billy Templeton puzzled. Templeton told MINE TALK he cannot understand the level of opposition since no ore is being processed on site and as yet no mine water is being discharged into local streams.

(Energy Fuels claims that the breccia ore body is virtually absent of fluids and therefore no discharge into the canyon waterway is anticipated from the mining. Yet, EFNI has received state and federal permits for the discharge of up to 19 cubic meters of mine water, which federal officials say were granted so that the company would be allowed to discharge fluids, if necessary.)

According to Templeton, Energy Fuels has cooperated extensively in dealing with environmental concerns and has complied with additional requirements he has imposed on the project. "These people are bringing a lot of their environmental expertise in coal mining into this operation and they've been very conscientious about trying to do a good job," he said. "Really, I'm glad we've got these guys and not somebody else."

When the project was first proposed, EFNI submitted a mine plan to the BLM for review. Under the applicable federal regulations covering hardrock mining at the time, nothing else was necessary. Templeton said Energy Fuels had a valid mining claim and was exercising its "right" under the 1872 Mining Law to mine economically valuable minerals. His job, he said, was only to review the plan for environmental compatibility, "and not to judge if we should be making atom bombs or running reactors."

The laws require that all federal agencies dealing with lands and mining on them require a plan of operations of the mining company, and then, if necessary, perform an environmental assessment to be followed by an environmental impact statement, provided that a "major federal action" has been taken by the agencies.

Despite claims to the contrary from opponents to the mining, Templeton said that to date no "major federal action" has been taken in connection with the Hack Canyon project. He

said he has complied with the provisions of the Federal Land Policy and Management Act (FLPMA) by requiring a plan of operations. He does not see the need for an impact statement at this time, but he may require an environmental assessment. A decision is expected by the end of July, after EFNI rewrites the reclamation portion of its mining plan, as requested by the BLM.

Meanwhile, attorneys for the National Wildlife Federation are considering further legal action. In correspondence with Templeton last fall, attorney Robert Golten criticized what he called Templeton's "absolute" treatment of the company's "right to mine." Golten disagreed that the 1872 Mining Law bestows an absolute right to mine to companies with valid mineral claims and said that the BLM also has a responsibility to protect the environment.

Templeton denied that his was an absolutist stance, but said the issue is moot because of the new regulations. He doubts, however, that anticipated energy development in the area would be reason enough to require an environmental impact statement for the Hack project. He left open the question of whether a regional impact statement would be in order.

Energy Fuels' mining plan is currently under review by the District Office of the U.S. Bureau of Land Management in St. George, Utah. Changes in the plan could be made shortly. As it stands today, however, EFNI is operating without an approved mining plan and will continue to do so as long as the BLM review continues.

CALIFORNIA

David Broadwater
Oak Tree Alliance

Toby Buffalo
Red Wind Indian Community

Since 1978, Lomex Corporation, a subsidiary of Caithness Corporation of New York financed by Morgan Guaranty Trust and Citibank, N.A., has attempted to conduct extensive uranium exploration and mining in the La Panza area of the Los Padres

National Forest in San Luis Obispo County. Lomex is planning to construct a minimum-grade access road and core drill as many as 145 holes on or adjacent to three separate sites in the Los Padres Forest. All the sites are on ancient sacred Chumash Indian land.

Because of intense local opposition and the obvious threat to drinking and irrigation water upstream, the U.S. Forest Service finally agreed to prepare an environmental impact statement (EIS). The Lomex project is the "only uranium exploration project to date in which the Forest Service has been pressured into conducting an environmental impact statement," according to Black Hills Alliance attorney Andrew Reid.

"The case also has national significance because of the strong arguments being made by the community and a local congressman under the Federal Land Policy and Management Act (FLPMA) to effect a three-year moratorium and facilitate a comprehensive study free of jurisdictional disputes. If successful, it could impact similar struggles throughout the country," said Reid.

Letters from out-going Secretary of Interior Cecil Andrus and Secretary of Agriculture Bob Bergland in December 1980 indicate that the decision to implement FLPMA will wait until the Forest Service EIS is complete. The letters suggest that FLPMA cannot be implemented on already valid mining claims, only new ones.

All three sites targeted by Lomex are immediately adjacent to or directly on the Navajo, McGinnes, and Comatti creeks, which comprise a generous portion of the San Luis Obispo County watershed and flow into the Shandon and Salinas water basins. One of the proposed drilling sites is just a quarter of a mile from the Red Wind Community wells, the source of all their drinking and irrigation water, and on land where they hold a grazing permit.

The Red Wind Community water already shows low levels of radioactivity, according to tests completed in August 1980. Whether this is a consequence of earlier Lomex explorations in the general area or is "natural" is a matter of pure conjecture. No directly

relevant previous base-line hydrology data exist.

Not only is the Community's water supply in jeopardy, but the Lomex project also threatens to violate Indian religious practices and desecrate spiritual sites in the Black Mountain area, which is covered with sacred Chumash used by the Chumash and other Native peoples in their ceremonies.

The proposed mining area is also the home of endangered species and rare plants.

The San Luis Obispo Board of Supervisors has resolved to oppose any exploration unless granted equal participation and power over the project. To date, the Forest Service has granted the county "cooperating agency status" which does not empower the county to exercise any rights to permit or deny. The people of the county are still confronted with the prospects of contamination without representation.

Those who support the position that the county should be given equal participation and power—including state assemblywoman Carol Hallett, state senator Henry Mello, U.S. Representative Leon Panetta, the county health commission, the Atascadero Grange, the Santa Margarita and San Miguel Advisory Councils—are now calling for a permanent ban on uranium exploration and mining in the Los Padres Forest.

A packet of information, including the Oak Tree Alliance's challenges of the Forest Service based on the National Environmental Policy Act (NEPA) and the Forest Service Manual, is available from the Alliance, 6604 Portola Road, Atascadero, CA 93422, for \$7.



COLORADO

Lisa Moscznski

Colorado Open Space Council

Rocky Mountain Energy Corporation is planning the groundwork for a 500,000 ton per year stripmine to be in operation in Erie, Colorado, east of Boulder, by 1983. Residents of Erie have begun to organize against the proposed mine in their backyards under the name of Citizens Against a Ravaged Environment (CARE).

On April 22, members of CARE met with the company to discuss the project. The predominant question they wanted answered was whether the company would cancel its plans if the majority of Erie residents opposed the project. The group plans to be prepared when the company begins to file for the 12 county, state and federal permits it needs to operate the mine.

In the shadow of this project, Secretary of Interior James Watt handed down a proposal to decrease the regulation of stripmines and reorganize the Office of Surface Mining (OSM). The proposal to reorganize OSM and to dissolve the central Denver office received strong opposition June 5 at hearings held by U.S. Representative Patricia Schroeder of Colorado, chairperson of the House Subcommittee on Civil Service.

Witnesses and Representative Schroeder criticized the proposal to move the central office to Casper, Wyoming, citing the remoteness of the city to major coal companies and citizen input, the reluctance of staff to move to Casper, and the shortages of space and personnel to staff the Casper office. While Watt claims that the nationwide restructuring of OSM will save taxpayers \$2 million in operational costs alone, it is estimated that the move to Casper from Denver will cost \$1.4 million. Donald A. Crane, OSM regional director, stated, "There will be substantial depletion of the folks with the best technical expertise."

Conservationists from the Colorado Open Space Council (COSC), the Public Lands Institute, the Friends of the Earth, and the American Wilderness Alliance argued that this depletion will result in the gutting of the Surface Mining Control and Reclamation Act of 1977.

Without the technical expertise and the access to the public and coal companies that the office has had in Denver, the strength and enforcement of the law will decrease significantly.

Andrew Feinstein, the subcommittee's attorney, is sending a letter to Watt with a list of questions concerning issues raised at the hearing. Watt will be asked to respond to the questions at a hearing and to postpone the reorganization of the OSM until the issues have been resolved.

Oil Shale. The conference "Colorado Oil Shale: A Buried Threat?" drew 200 participants to Boulder on May 2, 1981. Cosponsored by the University of Colorado Environmental Center and COSC's Mining and Energy Development Project, the conference provided a forum for citizens, activists, and experts to discuss oil shale.

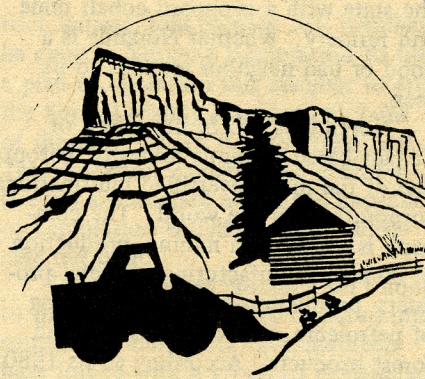
Workshops conducted in the morning on environmental, social, and economic impacts were followed by seminars on conflict management and on oil shale strategy tools for citizens.

Whether oil shale should be developed was the topic of a panel discussion in the afternoon. State representatives, consumer advocates, and conservationists debated this question and discussed the ways in which West Slope and Front Range citizens could cooperate to achieve sound development of the state's resources in relation to the needs of the nation.

The conference unanimously adopted resolutions proposed by participants of the strategy session. The resolutions advocate: a strong Clean Air Act; increased severance tax in Colorado; careful study of underground water supplies; development of alternative energy sources; an end to federal tax subsidies for oil shale development; a moratorium on oil shale development until it can be proven to be environmentally, socially, and economically sound.

A report on the conference, including a "Citizen's Oil Shale Action Handbook," will be published and available from COSC, 2239 E. Colfax, Denver, CO 80206.

Uranium. Throughout the nation the uranium industry has slowed to a standstill. The latest price of yellowcake was quoted by the *Mining Record* at \$25 per pound. This has severely affected the industry in Colorado.



Company after company has shut down or decreased their uranium production. Thirty dollars a pound is generally the break-even point for mining and milling of yellowcake. With the price at \$25, only the companies with long-term contracts at previously high market prices are able to survive. Consequently, most of the industry is in a depressed economic situation. Conservative industry forecasters expect this situation to continue into the mid-80s.

The people of San Miguel River Valley who live in the small towns of Uravan, Nucla, Naturita, and Norwood are also being hurt by the poor market. The sole industry in these towns has been uranium mining and milling. The West End Economic Adjustment Committee estimates that over 900 of the area's 1080 jobs in the uranium industry are now gone, and no one knows when they will be refilled. The bust cycle visiting the West End should serve as an example for others hoping for a bright economic future from Colorado's blossoming mining industries.

The Homestake Mining Company, meanwhile, has obtained all of the permits it needs to construct and operate a uranium processing mill in the Gunnison National Forest. Soon after the permits were granted, however, the company announced that construction of the mill is postponed indefinitely and mine production is being cut from three shifts to one by 1982.

Homestake and a group of Colorado citizen organizations and individuals recently signed a Mediation Agreement and a Statement of Understanding on the reclamation of Homestake's Pitch Mine in Gunnison National Forest. The parties—including the National Wildlife

Federation (NWF), Colorado Wildlife Federation, COSC, Colorado Mountain Club, Gunnison Valley Alliance, Marion Skinner, Committee on Mining and the Environment, and the High Country Citizens Alliance—agreed to a specific reclamation program for mine pits, a "best effort" to maintain water quality, measurement of reclamation success by soil loss calculation, among numerous other provisions. The Agreement affects only the current mine at Pitch and not the proposed mill. The documents are available from the National Wildlife Federation Natural Resources Law Clinic, Fleming Law Building, University of Colorado, Boulder, CO 80309 and COSC.

Reclaiming Durango Tailings. On June 30, the U.S. Department of Energy held a scoping meeting in Durango to get public input for the environmental impact statement (EIS) on the first reclamation of a uranium mill tailings pile. Durango currently has a 147-acre tailings site containing 1.6 million tons of partially vegetated uranium mill solid wastes. The proposed reclamation would be a federal action proscribed by the Uranium Mill Tailings Radiation Control Act, Title I: The Inactive Site Remedial Action Program.

Through the EIS, the DOE staff will evaluate ways to reduce the potential hazards of the tailings on site and the wastes in the vicinity of the site, to meet disposal standards set by the Environmental Protection Agency (EPA). Alternatives include: no DOE-funded reclamation; on-site reclamation; or transporting tailings to one of several possible disposal sites. It is projected that the process, from the EIS through the final disposal, will take six years.

The scoping meeting was conducted in the LaPlata County Exhibit Hall a few miles up Main Street from the present disposal site. In attendance were numerous DOE Remedial Action Program staff (led by Dick Campbell, who conducted the meeting), staff of Sandia National Laboratory, which is preparing the EIS for DOE, government consultants, members of the media, company representatives, and individual citizens.

Mayor Robert Hatfield, the city representative on the DOE Citizens Task Force, read a letter from the task force recommending disposal of the tailings

two and a half miles from the present site in Bodo Canyon, if the site passed geochemical review. The mayor also recommended a closed conveyor system to reduce exposure to the workers and general population during tailings transport.

Debra and Scott McCaffery of Citizens for Safe Tailings Management, a Durango citizen group, presented a list of buildings and lots in Durango with elevated levels of radioactivity copied from a 1972 EPA-contracted study by Lucius Pitkin, Inc. This study included over 100 homes which were built using tailings.

Paul Robinson, of Southwest Research and Information Center, recommended on behalf of CSTM that residual uranium and other minerals in the tailings pile be recovered to help fund the reclamation project and clean up and dispose of the raffinate (mill liquid waste) ponds along the main sand pile and the vicinity sites.

DOE will conduct the EIS analysis over the next year. To obtain a summary of the meeting or information on the DOE Remedial Action Program, and to make additional comments, people should write: A.L. Gonzales, UMTRCA Project Office, USDOE, PO Box 5400, Albuquerque, NM 87115.

IDAHO

Lill Erickson Idaho Conservation League

Idaho is noted as a friendly place, always welcoming new neighbors. One recently welcomed neighbor is the Noranda Mining Company, which has promised to bring economic prosperity to

the state with a proposed cobalt mine and refinery. Whether Noranda is a good or bad neighbor remains to be seen.

Noranda is a U.S. subsidiary of Canada-based Noranda Mines of Toronto, one of the most diversified multinational corporations in the world. The company is involved in mining, production of metals, manufacturing of metal products, production and manufacturing of petroleum, timber harvesting, and forest products. According to its 1980 annual report, the corporation's profits were \$408 million.

Noranda holds interests in Iran, the Dominican Republic, Australia, Colombia, Venezuela, Mexico, Nigeria, Brazil, and New Zealand. They own 19 mines in Canada, two in Ireland, one in the Republic of Guinea, one in the Philippines, one in Nevada, one in Alaska, and now one in Lemhi, Idaho.

Noranda also owns 19 mills and chemical plants which process forest products, 36 manufacturing plants and 7 refineries, all in Canada. If they get their way, Noranda will also soon own a cobalt refinery in Bingham County. Noranda mines a variety of ores, among them uranium, molybdenum, gold, copper, zinc, silver, potash, sodium sulphate, lead, mercury, aluminum, and now cobalt.

The Blackbird Mine Noranda bought in 1979, after several changes of hands, is 40 miles west of Salmon on Blackbird Mountain in the Salmon National Forest. It first produced copper and gold from 1899 to 1902. In 1917, under new ownership, the mine began producing cobalt concentrate. It closed in 1922 because of high transportation and refining costs. It was reopened later by another owner to produce gold, silver, and copper. Then World War II brought

metal shortages and a renewed interest in cobalt. Calera Mining Company, a division of Howe Sound, began mining cobalt ore in 1942. Record production was in 1957, when 1192 tons of cobalt and 3328 tons of copper were produced.

Currently, Noranda produces 300 tons of cobalt per day, as a pilot program approved in 1980 by an environmental assessment. The preparation of an environmental impact statement for full operation is underway. The draft EIS is due August 5, with the final EIS completed in November.

The draft EIS is eagerly awaited by concerned Salmon residents. Past cobalt mining contaminated Blackbird Creek and Panther Creek (Salmon River tributaries) with highly acidic water and heavy metals. The result was destruction of the anadromous fisheries. Members of the Salmon, Idaho Conservation League (ICL), ranchers, and outfitters and guides want to be sure the situation does not get worse.

In fulfillment of Forest Service requirements, Noranda has constructed a water treatment plant which captures highly acidic water from the mine. The water is treated with a lime solution which changes the pH level from 3 to 9 and a chemical flocculent which removes suspended solids. When the plant works, the water quality is greatly improved.

But the treatment plant does not always work. Since it began in December, malfunctions in the flocculation system on two occasions caused the spilling of red-orange suspended solids containing cobalt, iron, and copper into Blackbird Creek. A third incident occurred when an employee mistakenly dumped 2000 gallons of water into an incomplete sediment basin. The water found its way to Blackbird Creek. In



May a fourth and far more significant spill occurred. A landslide punctured a surface line containing diesel fuel. Approximately 2600 gallons of fuel flowed into Blackbird Creek, Panther Creek, and the Salmon River before it was contained.

During a tour of the Blackbird Mine, Noranda's environmental coordinator, Brent Bailey, told Salmon ICL members that the spills have taught them a lesson. An oil spill prevention plan is being developed, the water treatment plant carefully monitored, and surface lines buried.

Water quality isn't the only concern residents have. Noranda recently announced 460 employees would be needed to bring the operation into full swing. Some members of the Salmon Planning and Zoning Commission believe this number will result in the doubling of Salmon's population.

Noranda has refused to release information from a study prepared by private consultants on housing needs of the workforce and the impact on the community. Salmon's comprehensive growth plan, which took two years to prepare, used an earlier estimate of 250 employees. Now the estimate is 460. Bill Oldham, chairman of the Commission, said, "Noranda's lack of openness makes it difficult to plan for Salmon's future."

On March 5, Noranda reduced their workforce by 52 employees because of alleged increased costs and tight money. "How does hiring a person, letting them become dependent on the job and firing them without notice add to the economic stability of Salmon?" asked one Salmon resident.

Idaho should investigate thoroughly the economic stability of mining, said Brooks Montgomery, a Salmon businessman. "Anyone who looks at history of mining in the area can see how unstable it is. Why should we risk historically stable economies like recreation and agriculture for the big but short-lived monies of mining?"

Noranda admits only a 15-year supply of cobalt is known. They are quick to point out, however, that more cobalt could exist, and only exploration will reveal the deposits. A separate division of Noranda is involved in exploration. Jim Lancaster, Cobalt Dis-

trict Ranger, told Salmon ICL members he expects Noranda Exploration to file a plan of operation this summer to enter the Special Mining Management Zone of the River of No Return Wilderness. The recreation industry and conservationists are worried about the impacts of exploration activity on the wilderness resource.

The worry over Noranda isn't unique to the Salmon area. Two hundred miles south, ICL and Sierra Club members have joined with a group of determined Moreland farmers—Citizens Concerned for Cobalt Safety (CCCS)—in demanding answers from the company.

The questions stem from Noranda's proposal to build a cobalt refinery on 200 acres of privately owned productive cropland in Bingham County, ten miles west of Blackfoot. So far Noranda officials have been evasive in their answers and have relied on Bingham County Commissioners and the Greater Blackfoot Area Chamber of Commerce to champion their cause. In March Noranda asked for a zone change from Agricultural to Industrial Manufacturing for the land. Noranda proclaimed the benefits of 200 new jobs in an economically depressed area as a good reason to locate the refinery in Bingham County. Chamber members and the county commissioners echoed Noranda, pointing to the increased tax base and employment as reasons enough to welcome Noranda and grant the zone change.

But local opponents challenged these benefits and urged a thorough investigation of the new refining process proposed through an EIS, since the process has never been commercially tested. They want specific answers about the refinery's effect on the Snake River Aquifer, air and soil, and the socio-economic impacts of a 200-person workforce on Bingham County.

At a May 13 public hearing on the zone change, farmers and conservationists urged the county to require an EIS before granting the change. Noranda refused to prepare an EIS but did offer to sign the transcript of an earlier planning and zoning commission hearing, which the company said outlined its commitment to provide a safe industry for Bingham County.

"Funny thing about that transcript," said Blackfoot ICL member Charlotte Reid. "Not only does it not outline what Noranda's responsibilities are, but it also took CCCS's lawyer two and a half days to record all the deviations between what the tapes say and what was written in the transcript." When asked who prepared the transcript, Gary Love, a member of CCCS and farmer adjacent to the refinery site, said, "Noranda's lawyer, and I have a document to prove it."

On June 22, the Bingham County Commission granted the zoning change. The CCCS has asked its attorney to take the commission to court. "They leave us no choice," said Love.

So the fight goes on, as coalitions form in Salmon and Bingham County challenging Noranda's intentions and methods.

Mining Boom. The Salmon and Challis National Forests, in general, are experiencing an increase in claiming, leasing, and exploring for minerals, oil, and gas. Concern is growing over what a mining boom could do to the area. Questions are raised challenging the capabilities of even the best intentioned corporation to mitigate the impacts of doubling or even tripling the size of a community.

Particular skepticism is focused at Cyprus Mines Corporation, which is constructing an open-pit molybdenum mine a mile wide, a mile long and several feet deep in the Salmon River Range. Cyprus is a subsidiary of Standard Oil of Indiana, one of Environmental Action Foundation's "Filthy Five" polluters.

The mine, which got the go-ahead on December 22, 1980, with approval of the final EIS, is located approximately ten miles from the southeast boundary of the River of No Return Wilderness and 35 miles southwest of Challis. The bulk of the mine is located on patented property owned by Cyprus. The roads, mill site, tailings ponds, waste dumps, and overburden holding grounds are located on public land.

As of May 1, 120 million tons of overburden were being removed. The removal will take approximately two to three years. The mining will take 20 to 30 years. Cyprus anticipates mining 25,000 tons of ore each day, producing 50 tons of molybdenite concentrate.

Initially, the operation will require 600 to 700 workers. The mining stage will require 550 workers. Cyprus has agreed to hire locally as much as possible.

Today Challis is experiencing a huge influx of people looking for work at the project. With increases in population comes an increase in cash flow to the community, and an increase in problems, including sewage disposal, housing, law enforcement, road and bridge maintenance, utilities, and schools.

Attitudes toward the development vary. The new people are spending money. Merchants are doing a booming business. But not everyone is happy. Few of the citizens realized what the project would do to change the town. One city council member feels the "future is bright somewhere off in the distance," but it's not what she would have liked if she had a choice.

The bigger concern is with the mining activity in general. How Idaho deals with the impacts without a mineral severance tax, with a state legislature highly supportive of major mineral development, and with a federal administration wholeheartedly encouraging such development, seems the larger dilemma.

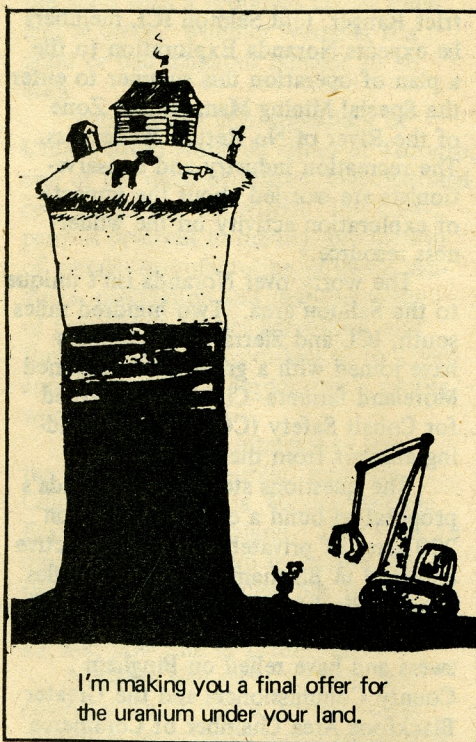
MINNESOTA

Loni Kemp The Ad Hoc Coalition On Uranium Mining

For the past year Exxon has been trying to get a foot in the door to explore for uranium in St. Louis County in northern Minnesota. But so far, they have run into local resistance everywhere they go.

In a surprise move on June 8, the St. Louis County Board of Commissioners voted six to one in favor of a resolution for a one-year moratorium on uranium exploration and mining in the county. Previously, the county planning commission had granted Exxon permission to drill two exploratory holes. The moratorium resolution will now go to the planning commission for a recommendation, then back to the county board for final approval.

Between the time the two drilling



I'm making you a final offer for the uranium under your land.

Mountain Life & Work

permits were granted and the county board's action, there had been a loud public outcry against uranium exploration.

One of the permitted drill sites is on the farm of Carole and Larry Lauseng in White Township. The Lausengs, who oppose the drilling, discovered that they did not own the mineral rights to their land. The mineral rights had been "severed" from the surface rights a few owners back; that is, they were kept by the seller when the land was sold. The owner of the severed mineral rights later leased them to Exxon for uranium exploration and mining.

The Lausengs fear radiation could be released into surrounding air or water if the drillers strike uranium. "We are farmers here," says Carole Lauseng. "We worry about the animals drinking water from the creek that runs through the land. Radiation is really scary—you can't see it; you can't smell it. But it can cause health problems for years to come."

"We have nothing against mining," adds Lauseng. "My husband works for Erie Mining, a big taconite company. We've had iron ore mining up here for years. But people aren't dying from iron ore. If this was another mineral,

it would be different. But uranium has the health factor. We are concerned for our four children. We don't want people dying in years to come."

In response to the Lausengs' problem, their state representative, Joseph Begich, had an amendment passed in the closing days of the legislature that puts a one-year moratorium on drilling for uranium in St. Louis, Aitkin, Kanabec, and Crow Wing counties, when the surface property owner does not grant permission. The effect of this amendment is to give the Lausengs some time to negotiate a solution and the state to take a more thorough look at the problem of severed mineral rights, which is extremely common in Minnesota.

There are thousands upon thousands of acres in Minnesota from which mineral rights have been severed, many dating back to the turn of the century when massive land grants were made to timber, mining, and railroad companies. The companies often used the land for a while, then sold it off while retaining the mineral rights.

The largest owner of severed mineral rights in Minnesota is the state government, mainly because of a 1975 law requiring that severed mineral rights be forfeited to the state, if they are not registered and if taxes on them have not been paid. It is estimated that the state owns over ten million acres of mineral rights, including those on public lands and those forfeited by private owners.

"We asked Exxon, why don't you go to the state and lease some of their minerals," recalls Carole Lauseng. "They said the state wasn't currently leasing, and implied there was just some red tape or something. They didn't say that the state wasn't leasing because people are worried about the effects of drilling and uranium mining on public land."

The moratorium on leasing of state lands for uranium exploration will end this summer, after completion of a study on the adequacy of the state's regulatory framework for uranium. It is possible, however, that the state will wait even longer to begin such leasing, since the Department of Natural Resources has contended that the uranium leasing regulations are out of date.

The issue remains a serious one

which the state should deal with.

Exxon moved quickly onto its second leasehold in St. Louis County. In June, before the county could take final action on the exploration moratorium, drilling began. But Exxon made a mistake; they were discovered within a 300-foot protective zone for streams. Exxon took the blame for the "misunderstanding" and immediately filled and capped the hole after drilling only 230 feet down. Exxon has left Minnesota for now, but they left behind much public concern and suspicion. The citizens of Minnesota are less confident than ever that uranium exploration can be conducted safely.

Local governments in St. Louis County took the lead in expressing residents' opposition to Exxon's uranium exploration. White Township passed a unanimous resolution opposing uranium exploration and mining at their annual meeting on May 26.

In nearby Colvin Township, residents decided last fall to stick together and refuse to lease their mineral rights to Exxon. In a strongly worded statement dated May 12, the Colvin Township Board of Supervisors requested that St. Louis County reverse the decision to let Exxon drill, and that they pass a moratorium, or preferably a total ban, on uranium exploration, mining, and milling. Reasons given included concerns about radioactive tailings and water quality, strong public opinion against uranium development, and the small number and hazardous nature of jobs that a uranium industry would provide.

Midway Township, located near Duluth, controls its own planning and zoning, and therefore was able to go even further. After turning down Exxon's request to drill an exploratory hole, they passed a two-year moratorium on all uranium exploration, and included a total ban on uranium mining in their zoning ordinance. Exxon appealed the permit denial, claiming that concerns expressed about uranium mining and nuclear power were separate from the issue of exploration, but the township stood by their decision.

Approximately 130,000 acres of private land in Minnesota have been leased by eight mining companies for uranium exploration and mining. So far, 123 test holes have been drilled,

primarily in Carlton, Pine, and Aitkin counties in east-central Minnesota, as well as in a half-dozen counties in the southwest corner of the state.

Marathon Oil Co. is attempting to obtain mineral rights from farms in Murphy County. Previously, they drilled 16 holes in the area under simple agreement with the landowner, without obtaining mineral rights.

Texas Gulf, Inc., is drilling three holes in Meeker County in the center of the state. They are drilling for "base metals" and state Department of Natural Resources officials feel it is "unlikely" they are looking for uranium. (Exxon also created similar confusion when they told some people they were drilling for uranium while telling others, including county officials, they were merely looking for base metals.) Neither state law nor mineral leases require disclosure of what mineral is being sought.

Phillips Uranium has terminated a joint venture with Energy Reserves Group to explore 15,000 acres ERG holds in Carlton and Pine counties in the Kettle River Valley of east central Minnesota. According to a Phillips representative, the company may be closing their Minnesota office.

One claim heard frequently from local governments is that the state of Minnesota does not have a policy on uranium development and is unprepared to regulate it. A law passed in 1980 does regulate drilling to some extent, but no rules exist to regulate more extensive exploration, mining, and milling. With the state unprepared to control further development, local governments are understandably reluctant to allow the first step of exploratory drilling.

The Minnesota Coalition on Uranium, a coalition of 24 citizen groups, is currently working to gain support for comprehensive uranium mining legislation. Drafted by the coalition, the bill has been introduced by Rep. Willard Munger and Sen. Chuck Davis. If passed, the bill would set in place a process for arriving at a state policy on uranium development, and forbids uranium exploration beyond the drilling phase until such a policy is developed and all appropriate rules are adopted. Hearings on the bill are expected some time this summer.

MONTANA

Margaret MacDonald Northern Plains Resource Council

Birney is an isolated ranching community in southeastern Montana, still largely untouched by the direct onslaught of coal development. Colstrip to the north and Decker to the south have borne the brunt of energy industrialization. But Birney as yet has no stripmines, no coal-hauling railroads, no power plants.

MONTCO, however, wants to change all that. It is proposing a 12 million ton per year stripmine just north of town, sandwiched between the Tongue River and the Northern Cheyenne Reservation on the west and the Custer National Forest on the east.

To transport coal from the mine to market, an independent railroad company has been formed by the partners in the mining venture—the Tongue River Railroad (TRRR). The railroad company's preferred route runs 82 miles down the Tongue River from the mine site to Miles City, where it would connect with either the main line of Burlington Northern for shipments east or west, or alternatively, the Milwaukee Road to points east. An alternative route, or a future loop, would extend from the railroad spur at Colstrip to the MONTCC mine site.

TRRR promoters have pointed to the area as a site for several other major stripmines being planned by MONTCO and Consolidation Coal. Consol has bought up a great deal of surface in the Otter Creek area and is negotiating with landowners for more.

In a document submitted to the state in the spring of 1980, TRRR estimated a minimum of 30 million tons per year production from the area for hauling on the proposed railroad by 1990. The 12 million ton per year mine that MONTCO proposes would sustain a daily traffic level of seven 100-car unit trains (including the empty trains returning for reloading). At 30 million tons annual production, TRRR would be carrying 17 units daily (again, including the returning empties).

MONTCO is a joint venture of ITT Resources (wholly owned by Interna-

TONGUE RIVER ENERGY DEVELOPMENT

Existing, Proposed and Possible Mines

Existing

Mine	Capacity (million tons per year)	Status
Decker East	6.6	Existing
Decker West	7.0	Existing
Spring Creek	7.0	Existing
Big Horn (WY)	4.0	Existing
Ash Creek	.5	Permitted, No Contracts, Transportation Difficulties
Welch	1.0	Permitted, No Contracts, Transportation Difficulties
Total Capacity Existing Mines:	26.1	

Proposed or Possible Mines in Basin Outside Petition Area

Mine	Capacity	Status
Decker North	2.5	Permit application on file
Consol CX Ranch	8.0	Preliminary Planning
PKS CX Ranch	4.0	Preliminary Planning
Shell Young's Creek	8.0	Preliminary Planning
Amoco	10.0	Preliminary Planning

Total Proposed Mines
Upstream from Petition
Area: 32.5

Proposed or Possible Mines Within Petition Area

Mine	Capacity	Status
Montco	12.0	Permit Application Filed (Nov. 1980)
Cook Mountain	10.0	Plans Hinge on Railroad
Otter Creek	5.0	Plans Hinge on Railroad
Coal Creek	5.0	Plans Hinge on Railroad

Total Proposed
or Expected: 32.0

Grand Total: 90.6 million tons per year in the 1990's.

tional Telephone and Telegraph), Thermal Energy Inc. (wholly owned by Washington Natural Gas), and WP Energy (wholly owned by Washington Water Power, a partner in Colstrip 3 and 4). In the spring of 1980, Diamond Shamrock, a multinational petrochemical company, joined MONTCO as a partner in the mining project.

The MONTCO mine filed in November 1980 an application for a permit to mine from the Montana Department of State Lands, but has not yet received the go-ahead. Meanwhile, the Northern Plains Resource Council (NPRC) and affiliate organizations, in an effort to

preserve the agricultural productivity of lands along the Tongue River, have petitioned the department and the federal Office of Surface Mining (OSM) to designate the area unsuitable for surface mining.

Large-scale stripmining on the Tongue River jeopardizes the viability of the water as a source for irrigation. Stripmining will increase the total dissolved solids and the presence of heavy metals (or trace elements) in the water. The extent of this degradation and the overall impact on agriculture must be thoroughly analyzed prior to any decision to open up the area to industrialization.

The petition will trigger this analysis process.

To circumvent the petition process, MONTCO and Wesco Resources, among others, sued the NPRC and three of its affiliates—the Tongue River Agricultural Protective Association, the Tri-County Ranchers Association, and the Rosebud Protective Association—as well as the federal government and the state of Montana. The suit, which was stayed in early June after heated negotiations, sought preliminary and permanent injunctions which would stop the state and federal agencies from “conducting investigations and studies concerning the allegations in the petition; accepting comments, testimony, and exhibits; issuing orders and opinions; and in any manner continuing with or proceeding with the unsuitability petition.”

The thrust of the plaintiffs' arguments is that the petition's allegations are frivolous, and that the petition represents an unconstitutional “taking” of the plaintiffs' property rights. (The “property” in question is prime river bottomland that the plaintiffs would have condemned for a railroad to serve their mine.)

Accepting the stay order was a face-saving move for the companies, according to NPRC. The suit was at the point that they would have had to show “injury” by the petition process—to substantiate their claim that a study initiated by the petition and the petition process itself would prevent negotiation of long-term contracts. The evidence of injury would be in their coal contracts, and the companies were certainly not about to open their contracts to the groups fighting coal development in the region.

The stay order allows the groups' lands unsuitability petition to proceed without interruption, and prevents the companies from picking up their suit until the Department of Interior has revised its regulations on the petition process. By that time, the petition will be litigated. According to the regulations, the petition process must be completed within a year of the filing. The petition was filed December 29, 1980; a draft evaluation is due in September, with a hearing in October. The agency then has 60 days to make a decision.

OSM, meanwhile, has indicated that instead of declaring the land unsuitable

for stripmining, it may set a threshold for mining, based on the cumulative effects on the hydrology in the Tongue River Basin.

The Tongue River Railroad is also trying to avoid scrutiny. Wesco Resources (which has a royalty interest in the MONTCO mine) has proposed an amendment to the Railroad Transportation Policy Act of 1979, which would exempt TRRR from the review process for a certificate of public convenience and necessity. The amendment would give the railroad the power of condemnation as a common carrier, while precluding Interstate Commerce Commission involvement in railroad acquisition and condemnation of land. It would also exclude the ICC from examining optimal engineering requirements, ranchland segmentation, drainage basin impacts, and disruption of wildlife habitats.

Many NRPC members, who ranch in the Colstrip area, do not relish the possibility of coal trains thundering through their property. In addition to the noise, fire hazard, and danger to livestock, a railroad could also make a ranch uneconomical to operate, particularly when the track bisects pastures that used to be efficient to operate as one unit. A railroad could cut off cattle from water and make access difficult between the two pastures. A railroad could also severely reduce productivity by cutting across hay meadows and bottomlands.

The Tongue River Basin could be producing as much as 90 million tons per year (or more) of coal in the 1990s. Right now it is producing or capable of producing from existing mines approximately 26.1 million tons per year. (Existing mines on the Tongue are not producing to their full capacity, as is the case in the state and the nation.)

The cumulative impacts of massive mining in the basin would not be observable until the damage is done, but would be a fact of life for generations after the mines ceased to operate. It is clear now, however, that the mines will take a heavy toll on agriculture in the valley. The recharge, transmission, and discharge of groundwater into the river will be deterred; the quality of the water in the river will be lowered (particularly with the tremendous increases

in mining upstream and the reduced streamflows from rising municipal and industrial demands); and the soil and overburden chemistry, along with the lack of suitable burial materials for highly sodic and saline elements combine to make reclamation technologically and economically infeasible.

Present plans are to begin construction of the stripmine and railroad in 1982. There is also talk of Circle East, a coal gasification venture in McCone County to convert lignite coal into synthetic gas.

NEW JERSEY

Linda Sachs

Morris County Safe Energy Alternatives Alliance

On May 4, 1981 New Jersey became the second state in the country to ban uranium exploration, mining, and milling. One year ago, Vermont passed a similar law blocking the uranium industry from that state.

The New Jersey ban, which took immediate effect with Governor Brendan T. Byrne's signature, expires in seven years. It is a compromise between a bill that would have banned uranium mining permanently and one that would have authorized the state to regulate it. It won the unanimous approval of the state legislature.

The New Jersey Coalition To Stop Uranium Mining, an ad hoc group of five citizen organizations, hailed enactment of the ban as "a real triumph for public health and safety."

"We have accepted the compromise of a sunset clause on the ban because we believe that within seven years the extreme hazards of this activity will become universally understood," said a coalition spokesperson.

"We are already burdened with the highest cancer rate in the country, the densest population and an enormous toxic waste problem that is taxing our financial and technical resources to their limit. It would be insanity to allow uranium mining in New Jersey."

The coalition's victory came only ten months after people became aware that oil companies were considering

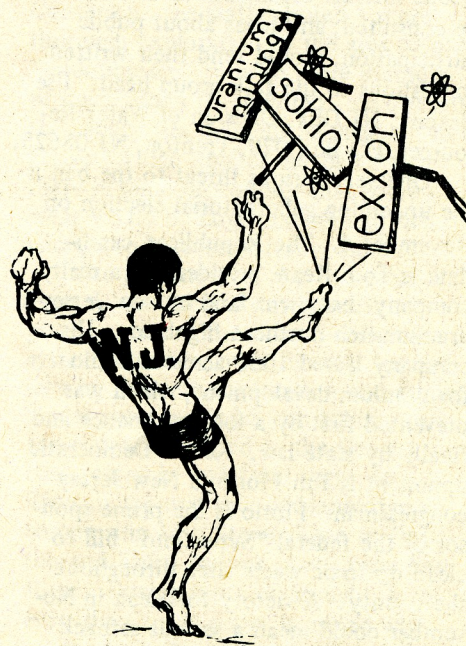
mining the rich uranium ore located in north Jersey. Residents organized statewide opposition to the proposed mining when they learned that water supplies in their drought-stricken state would be depleted and radioactively contaminated by uranium operations.

The coalition, which helped to persuade three key New Jersey legislators—Senator John Dorsey, Assemblyman Christopher Jackman, and Senator Pat Dodd—to sponsor the uranium moratorium, plans to continue a grassroots campaign for a permanent ban.

"The uranium companies in the Southwest constantly violate state and federal regulations and we refuse to become the sacrificial lambs for an industry that has a proven record of abuse."

The new law also directs the New Jersey Department of Environmental Protection (DEP) to "prepare and transmit to the governor and legislature a report concerning the dangers posed to the public health, safety, and welfare by the exploration, mining, or processing of any fissionable source material in this State." The report will include recommendations for future regulation or prohibition of uranium activities.

The DEP has six years to conduct a study. According to George Tyler, DEP Assistant Commissioner for Environmental Management, they are now scoping out the costs and assigning staff to the study task group. Tyler



Graphics by Sue Titus

listed the following DEP branches involved in the study: the Office of Cancer and Toxic Substances Research; the Bureau of Groundwater Management and Geologic Survey, both in the Division of Water Resources; the Division of Hazardous Waste Management; and the Bureau of Radiation Protection in the Division of Environmental Quality.

Tyler stressed that the study would be comprehensive and objective and would include visits to uranium mines and mills in the Southwest and consultation and peer review by federal agencies as well as by experts in the state.

The Morris County Medical Society, early outspoken opponents of the proposed mining, will be asked to participate, said Tyler. Local doctors gave testimony at public hearings and spoke at numerous public meetings about the health hazards of uranium mining. Their participation was crucial in winning the state ban. Physician participation in the study is important to ensure that health impacts are not minimized in the DEP's final report.

Public participation in the study will also be essential, according to Tyler. "The intense public opposition will be a factor on everyone's mind, ours as well as the companies'," Tyler said.

People with ideas about how the study should be done, i.e., specific aspects of the industry that should be examined; names of experts, agencies, or public interest organizations that should be consulted; and ideas about public participation, should send their written suggestions to the task group head: Ilse Heacox, NJ DEP, Division of Water Resources, PO Box 029, Trenton, NJ 08625.

One very serious threat to the ban is the upcoming gubernatorial election on November 4. The Republican candidate is Tom Kean, president of a realty company that owns land in New Jersey's uranium-rich northern highlands. His company leased 1000 acres to Sohio for uranium development, which was prevented first by a local ordinance and finally by state law. Kean's Democratic opponent is Jim Florio, a New Jersey congressman. Florio is the prime sponsor of the federal "Superfund" bill to clean up toxic waste sites throughout the county. A victory for Kean in November could mean a serious setback for the uranium opposition.

NEW MEXICO

Paul Robinson Southwest Research and Information Center

The Bureau of Land Management has released 2.7 million more acres of federal land east of Carlsbad, New Mexico for potash exploration. New Mexico currently leads the nation in the production of potash—a potassium mineral used mainly for agricultural fertilizers. The land release includes parts of Eddy County—a current mining site—and Chaves, Lea and Roosevelt counties in southeastern New Mexico.

AMAX, which now produces potash through AMAX Chemical Corp. already holds prospecting permits for sections of the land. Other potash miners including Kerr-McGee Corp., International Minerals and Chemical Corp., and National Potash Co., are also evaluating the potential properties but have yet to lease. The recent lease issuances are the first since August 1974, when the BLM, over industry protest, stopped approving exploration permits.

The potash zone surrounds the WIPP—Waste Isolation Pilot Plant—site under development for radioactive waste disposal. Though the potash layers extend under the WIPP site, these lands have not been leased, and no detailed drilling has been conducted to evaluate potential potash resources.

Changes in the Uranium Industry. Homestake Mining Company has paid United Nuclear Corporation \$23 million for its 70% share in the United Nuclear—Homestake Partnership uranium operation outside of Grants, New Mexico. Homestake acquired four mines, a 3500 ton per day mill, a 20 million ton active mill tailings pile, and a \$3 million yellowcake stockpile. Under the acquisition, UNC retains limited production royalties, while Homestake assumes all debts and liability for the old partnership. (The partnership does not include the UNC—Churchrock mill. Homestake, therefore, assumes no liability for the July 1979 tailings spill.)

Homestake believes the U.S. uranium industry will rebound after 1985, despite the fact that yellowcake prices have dropped over a third in the last two years.

Sohio Western Mining Company closed its 1600 ton per day uranium mill, at least through late 1982. The company attributed the closing to an insufficient yield of ore to operate economically. An on-site stockpile and new contracts may allow the facility to reopen at a later time. Sohio's J.J. No. 1 mine will continue operations at 1000 to 1200 tons of ore per day for stockpiling at the mill site. The mill site, licensed since 1975, includes an active tailings pile of more than two million tons.

Sohio is 53% owned by British Petroleum and operates the mine-mill complex for its partners, Reserve Oil and Minerals Corp. of New Mexico.

After a four-year shaft-sinking effort, Phillips Uranium Corp. has suspended mining at its Nose Rock project north of Crownpoint, New Mexico. Two shafts were blasted over 3200 feet deep before the mine was closed.

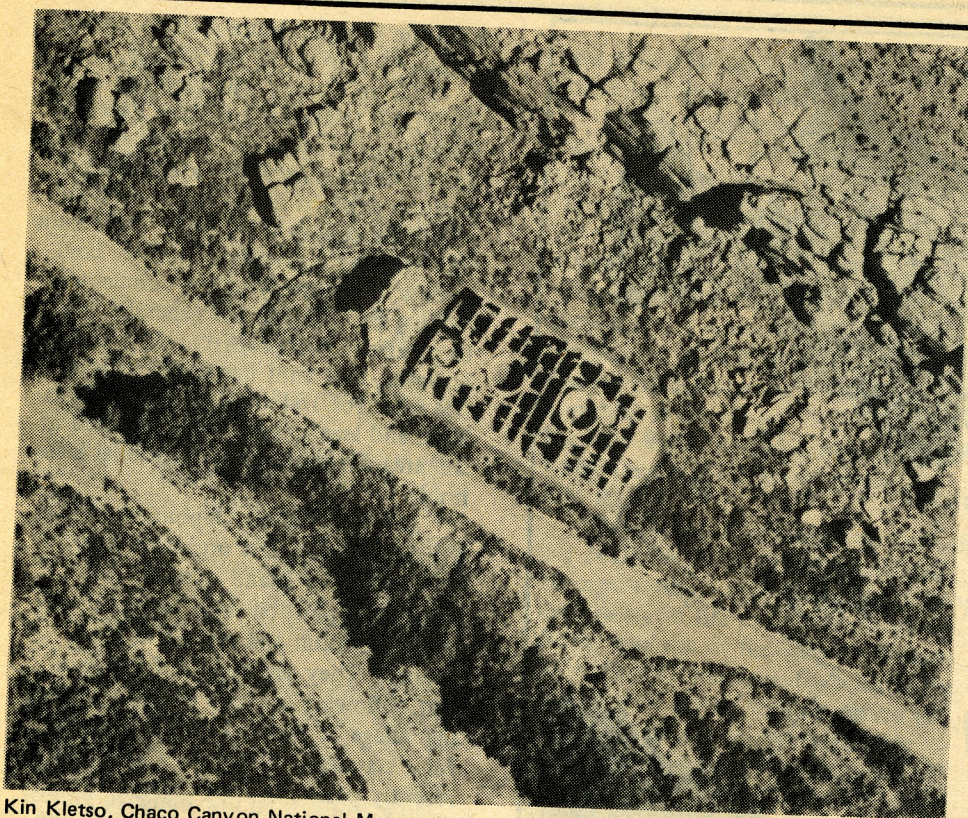
Phillips had contracts with Philadelphia Electric Co. for 6 million of the 24 million pound deposit at Nose Rock.

Tar Sands Pilot Project. Santa Rosa and Guadalupe counties in eastern New Mexico may see a tar sands mine and conversion plant in the next few years. The initial project would produce 20,000 barrels of oil per day and employ ten people. Developers Jim Young and Robert Stallworth believe a successful pilot operation could expand to 60 workers and continue through the century.

Chaco Coal Development. The San Juan/Chaco region has been targeted for federal and corporate takeover. The U.S. Department of Interior is proceeding with plans which will open up the region to massive energy exploitation of both uranium and coal.

Of its estimated 200 billion tons of coal reserves, 20 to 30 billion tons are publicly owned, with some 2 billion tons within 250 feet of the surface.

The region, surrounding Chaco Canyon National Park, is rich in archeological sites, fossil deposits, rare wildlife and vegetation, and other cultural resources. It is also the home of many Navajos, who have lived there, legally or through "occupancy," for generations. Some 150 families, most of them Indian shepherders who depend on the land



Kin Kletso, Chaco Canyon National Monument
From Photo Site Maps prepared for The Chaco Center, University of New Mexico

and water for their livelihood, would be forced to relocate if the development takes place as planned.

The federal government's plans include new mineral leasing strategies, land sale exchanges, and general avoidance of policies that "encumber" energy development in the region. One plan involves issuing 26 Preference Right Lease Applications (PRLAs) to mine coal. Under this plan, 75,510 acres of public, Indian, state, and private land overlying tons of federal coal will be offered for lease. About 50% of the acreage is suitable for stripmining.

Another proposal is to exchange about 12,850 acres of public lands in the Bisti area for 17,134 acres of private land near the Ute Mountain in northeastern New Mexico. The private owners, Public Service Company of New Mexico (PNM) and Franklin Land and Resources Co. (a subsidiary of El Paso Electric Company), want the land in the San Juan Basin for a proposed coal-fired generating station and a townsite near Bisti in San Juan County.

In the rush to adopt the various proposals, the BLM has made a mockery of public participation. They have declined to issue full environmental impact

statements, held "open houses" on formal proposals in lieu of public hearings, and accelerated processing of PRLA applications and other permits.

Legal questions have already been raised by their procedures. For example, of the estimated 1.5 billion tons of recoverable coal in the PRLA area, only 414 million tons are free of legal ambiguities relating to the improper filing of the applications. In addition, PNM and Paul Applegate, BLM's Albuquerque District Manager, signed an agreement in March of 1980 which cemented oral assurances that the Ute Mountain exchange would take place.

Many of the justifications for the massive energy development hinge on the need for the New Mexico Generating Station (NMGS), a four-unit coal-fired plant. PNM is having trouble proving the need for the electricity. Already PNM dropped plans for two of the units and canceled arrangements to sell electricity to southern California. The BLM has not revised its proposals in light of these recent events, nor taken into account that the Management Framework Plan (MFP) for the region relies on electricity and uranium demand projections made before 1977.

NEW YORK

Rose Spada Sullivan Nuclear Opponents

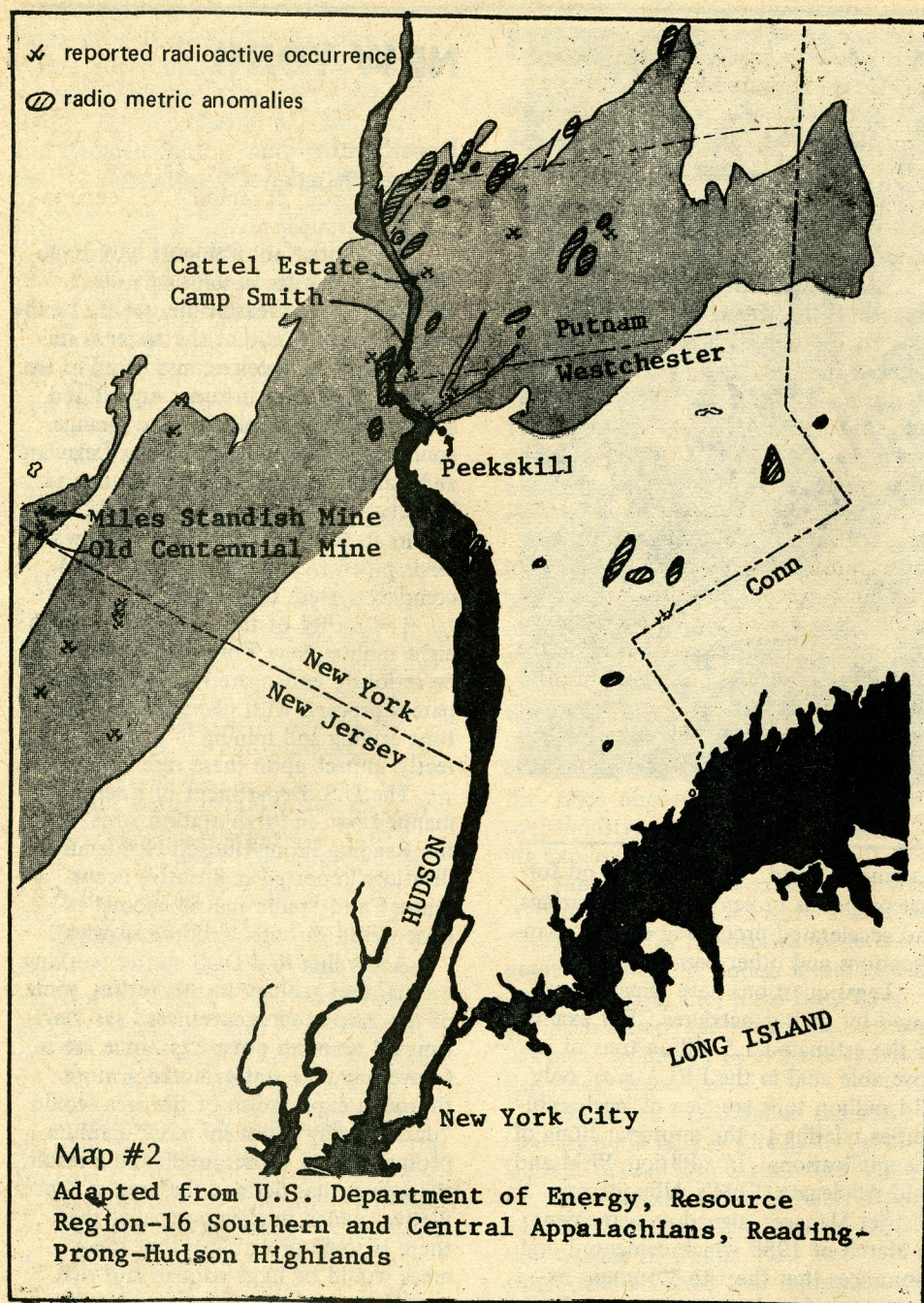
New York City residents have long been blessed with an unusually clean water supply. One reason the quality of the water is so high is that the water is imported from reservoirs constructed as far away as 125 miles in rural, unpolluted areas. Delaware, Sullivan, and Orange counties are the location of the Delaware and Catskill reservoirs and Putnam and Westchester, the location of the 12 reservoirs in the Croton system. The water is piped to the city residents via a complex system of aqueducts.

The purity of this system, on which eight million New Yorkers depend, could be seriously endangered if energy companies proceed with plans to do exploratory drilling and mining in areas that directly impact upon these reservoirs.

The U.S. Department of Energy has mapped out an "Exploration Area" in the Reading Prong-Hudson Highlands indicating "reported radioactive occurrences" and "radio metric anomalies" (discovered through airborne surveys).

According to a DOE staffer working on uranium geology in this region, some of the "reported occurrences" are "legitimate" uranium prospects; some are not. Conversely, the staffer noted a more thorough exploration of the area would "undoubtedly" turn up more uranium prospects than those noted. As a result, the agency has defined the area as "speculative—which implies our belief that there is some probability that some areas would be large enough and rich enough to be economically viable."

The proximity of the "speculative" areas to the Croton watershed is of grave concern. The Croton reservoir system would be most directly jeopardized by uranium exploration and mining. Under average rainfall conditions, Croton water is pumped to the Central Park reservoir, and from there, to a sliver of the east side of Manhattan encompassing 34th Street down to Houston and Third Avenue over to the East River. During times of drought, however, the Croton water is mixed with other city water and pumped to all areas of the city. New York City resi-



dents would do well, not only to think about where their water comes from, but where it goes to.

In Sullivan County exploration has already begun. Geological Service, a local survey company commissioned by ARCO, came into the small town of Calicone under the guise of looking for oil and gas. They set up operations on the side of the town road and when questioned by townspeople, blatantly lied about having an exploratory permit. The property owner adjacent to the drill site ran them off at shotgun

point when she found they had neither the county's nor the town's permission. Meanwhile, the company, using a "sounding" process to obtain preliminary geological data, had sent shock waves through the town that traveled some 40 miles away.

The shock waves were a grim reminder to county residents that they live on a fault that runs through New Jersey and could be activated by exploratory drilling and mining. Sullivan County is also shale country. The shale breaks easily and would allow radiation emitted

from the uranium-bearing strata during drilling to seep up to the surface.

Sullivan County was surveyed under the NURE (National Uranium Research Evaluation) program in November 1980. Aerial reconnaissance indicated possible uranium deposits in the Scranton quad, where the county is located. To circumvent growing resistance of private landowners, the strategy of the companies looking for uranium has generally been to go after town property. It is known, however, that Gulf has signed at least one lease for 164 acres of private farmland, and leasing agents are reported in the area negotiating for additional leaseholds.

Sullivan Nuclear Opponents (SNO), a citizens group first organized around the Three Mile Island accident, has launched a petition drive to ban uranium exploration and mining in the county. They are hopeful for a local ban, following the lead of the neighboring village of Warwick, and ultimately for a statewide moratorium like that recently passed in New Jersey.

OREGON

Chris Platt
Radiation Education Council

Bill Cook
Oregon Environmental Council

Two unreclaimed open-pit uranium mines scar the landscape around Lakeview, Oregon. The Radiation Education Council and 23 landowners who live within the drainage system of the streams flowing through the large ore piles and mines have requested that an ongoing monitoring program be established to determine if radioactive and other toxic minerals were being transferred by surface water from the mine areas into the valley below.

To coordinate a radiological air and water monitoring program, without duplication of efforts, the REC held a joint radiation workshop with the U.S. Forest Service. Invited to the workshop to explain their roles in monitoring and regulating radiological dangers in the Lakeview area were: Oregon Department of Energy, U.S. Depart-

ment of Energy, U.S. Forest Service, Department of Geology and Mineral Industries, Department of Environmental Quality, U.S. Environmental Protection Agency, Department of Health, Western Nuclear, and the REC.

From the workshop, a committee was formed to meet annually to review the results of the monitoring program. More detailed information about the program will be available at a later date from the REC.

The results of the program will be important for two reasons: First, to determine if the area is hazardous and should be cleaned up and fenced off to restrict animal and human access. Second, to establish base-line data of the area's radiological profile so that if mining resumes, the impact on air and surface water quality will be known immediately.

Western Nuclear has made public its intentions to return for the summer to explore for uranium on its many claims in the Lakeview area. The monitoring program will help detect what effect its activities have on the area. Although difficult and expensive, testing for groundwater contamination has not been ruled out as potential future action.

Meanwhile, Oregon Environmental Council has been monitoring the Office of Surface Mining's tortuous attempt to promulgate a federal program to regulate coal exploration in Oregon under the Surface Mining Control and Reclamation Act. The fitful starts and stops of the rule-making process, along with vague and contradictory signals from the new Interior Department hierarchy, have made for little progress toward federal regulation of coal mining in Oregon.

Late in 1980, OEC alerted the environmental community about a coal slurry/gasification/export complex proposed for Oregon. Northwest Pipeline Corporation wants to bring Powder River Basin coal from Wyoming via coal slurry pipeline to Boardman in eastern Oregon. There NWP hopes to build a gasification plant for turning some of the coal into synthetic gas. The rest of the coal slurry would be pumped farther west through the Columbia Gorge to a proposed coal export facility near Portland, where the

coal would be loaded on ships bound for Japan, Taiwan, and Korea.

Such a complicated project demands "mega-bucks" to get started. NWP applied to the U.S. Department of Energy for a grant to fund a feasibility study, but was refused, thus dealing the project a severe blow.

A further damper on the project's success is the virtual impossibility of acquiring the 20,000 acre feet of water needed from Wyoming (and legislative approval to export it). Wyoming is in the throes of a heated controversy over water for the ETSI slurry project in that state.

The Oregon Environmental Council is a coalition of 2400 individuals and 70 organizations dedicated to improving the quality of life in Oregon, while ensuring wise use of the state's resources. As such, OEC has recently been in the forefront of several mining-related issues as the potential for large-scale mineral development increases in Oregon. Their job, as they see it, is not to obstruct mine projects, but simply to ensure that mining does not ruin valuable resources, disrupt local communities, or damage viable economies.

All Oregonians—including farmers, ranchers, outdoors people, naturalists, and commercial fishermen—are invited to join the OEC effort to promote fair regulation of mineral and energy development in Oregon.

SOUTH DAKOTA— EAST RIVER

Jim Kellar

Families Against Radioactive Mining

Many voters were surprised and disappointed when the South Dakota legislature failed, once again, to pass any significant mining legislation in 1981. After the extremely close vote on the statewide Uranium Choice Initiative last fall, many were predicting that this year's legislative session would result in some stricter laws. Pro-mining legislators on at least one key committee were able to postpone any action on mining by referring the entire issue to a special interim study committee. The Select Committee on Mining is

taking testimony from all interested parties during the summer and will draft a new proposal to be introduced during the legislative session of 1982.

Some of the major areas of concern for both pro-mining and environmental groups are:

† Separation of mining and exploration under the permitting rules.

Industry representatives argue that mining and exploration are two separate and distinct processes, and should therefore be considered separately. The industry is also promoting the idea that bulk sampling—the removal of large samples of earth for analysis—is a function of the exploration rather than the mining process.

Families Against Radioactive Mining (FARM) believes exploration is merely the first step in the process we call mining. The land, especially farmland, should be carefully evaluated as to its suitability for mining before any exploration permits are granted. If the environmental qualities of the area do not make that area conducive to mining, the exploration for mineable ores is a waste of time and money and should not be permitted. FARM also believes that bulk sampling is mining, and should be considered under the rules for mining, not exploration.

† South Dakota's permitting process.

The Select Committee heard testimony from one mining representative who touted the Texas permitting process as ideal. Any company wishing to explore in Texas obtains aquifer locations, plugging regulations, and other pertinent information from the state engineer's office, gives that agency a map showing the approximate location of proposed drilling, and proceeds. Only after the project has been completed must the company apply for permission to drill, file a completion report, and a plugging report. The permission to drill is then given, as much as six months after the drilling has been completed.

Companies also asked, in testimony, for regulations extending the lifetime of an exploration permit. They asked that exploration permits be required only at the drilling and bulk sampling stages, instead of the present stricter permitting stages, and that permits be made transferable so that the original permittee is released from responsibility once the

permit has been transferred.

FARM, and many other citizen groups, feel that the procedures and requirements which are prerequisites for exploration should be direct, simple, strict, and clearly stated. Permission to enter a region and initiate *any* activity which could completely change the economic orientation, the environmental quality, and the agricultural potential of the area should never be automatic, transferrable, or lightly considered. People whose great-great-grandparents farmed land in southeastern South Dakota are, in many cases, still farming that land. The heritage and the lifestyle they have are precious, and not for sale. FARM supports restrictive permitting procedures which place the burden of proof on those who would come in and change the land, not on those whose ancestors homesteaded the land.

† **Confidentiality.** Energy representatives have testified that South Dakota's present requirements place sensitive information in the hands of state agents who may unwittingly or intentionally disclose secret locations to other energy interests. They seem to feel that they have such a tremendous investment in locating precious minerals that they could have their operations seriously compromised if information is inadvertently leaked. If word of a new operation is not kept quiet, the ability of one company to obtain enough land, cheaply enough, will be lost.

FARM has some sympathy with this argument; business confidentiality can be very important, especially when the competition is so keen. But several other factors enter into consideration. Energy companies, naturally, want to maximize their profits from each individual operation, and so try to buy leases as cheaply as possible. The people who are being "recruited" to sell long-term leases to their farmlands deserve to get the maximum profit from their land, too. If only one buyer is allowed to bid for the lease, the landowner is in a poor bargaining position. Independent leasing concerns can be very mercenary and can often drive the price of leases through the ceiling. This is a problem for everyone concerned.

There is another concern here that

perhaps distinguishes that argument. It is easy, under present statutes, for energy developers to hide behind the confidentiality provisions. If a group of landowners in a certain area wish to intervene in a particular proceeding, they must prove that the proposed activity will be dangerous to an aspect of the environment. This proof is very tough to come by when it is impossible to find out where the proposed activity is to take place. Inquiries inevitably run into a dead end, something like this:

"How can you tell us that this poses a threat to the water quality in your area? You don't even know what we're planning to do for sure, or where we plan to do it."

"Well, Mr. Energy Company, just what are you planning to do, now that you mention it? And where?"

"Sorry. That's confidential information which we can't disclose."

Perhaps the argument about competitors being able to take advantage of a company's expensive exploration expenditures would be easier to swallow if that privilege had not been abused and used as a smokescreen so many times when dealing with local citizens.

† **Distinguishing uranium from other minerals under the law.** One company spokesman in South Dakota is fond of saying that the uniqueness of a mine is not in what is mined, but how and where it is mined. Testimony has been adamant, on the part of the industry that there is no difference in a uranium mine and virtually any other mine and therefore uranium developers should not be singled out for special treatment. The industry representatives claim that federal regulations pertaining to uranium development are adequate.

FARM agrees with the many experts who have cautioned that uranium mining is very dangerous. Uranium is not petroleum, nor silver, nor iron ore. Uranium is a highly radioactive substance; its mining and milling produces thousands of tons of toxic wastes which must be carefully isolated from the environment for centuries. To imply that uranium is no different than other minerals and to ignore the dangers inherent in processing is irresponsible.

† **Landowner's rights.** Since many South Dakota farmers own the surface rights to their land but not the mineral

rights, the rights of landowners is a very important issue in the state. Present rules require landowner consent before any mineral developers enter private land, even if the developers do own a lease on the mineral estate. Some energy representatives (they are not unanimous in this respect) suggest that the landowner need not be consulted before the developer enters the land.

FARM's membership consists of almost 300 families, most of whom are farm dwellers. This issue is not negotiable with them. No trespassing without permission!

† **Right to intervene.** Energy representatives have testified that it is very easy, under present laws, to challenge their activities and hold up their operations. They are proposing severe limitations on who can intervene in the permitting process for exploration and mining. Those concerned about keeping the Black Hills beautiful and those from the eastern half of the state who want to preserve their farmland would no longer be able to intervene. Of course, this limiting of rights would provide an ideal opportunity for those who want to develop minerals in South Dakota.

Historically, the only environmental protection the people have gotten has been initiated by the people. Unfortunately, that legislation that has passed has had to be forced down the throats of the energy companies, or has been weak and designed to work to the advantage of the developers.

FARM feels that it is not a right, but a *duty*, to be involved in determining the destiny of one's area. If only one party in any adversary situation has access to the system, only one party will benefit from the system. Our rights as South Dakotans cannot be denied in the determination of the future development of our minerals. *No other aspect of this complex issue is quite so critical to local people.* South Dakota voters have the right to vote on any issue through initiatives and referendums, and if this right to intervene is weakened, it is a sure bet that the people will rectify the situation when the next general election rolls around.

It is also a sure bet that there will be some changes in South Dakota's laws concerning mining and mineral exploration. The only question still remaining

is who, and what, can make an impact on the Select Committee on Mining. One-third of the representatives on that panel are from areas of the state where mining is a prominent industry, and the entire panel seems more disposed to consider the wishes of the energy producers. No one can say, however, what will happen until they present their new proposal to the legislature.

Options for the future include: full support of the new proposals; attempts to amend during the passage process; alternative proposals; or another initiative attempt. It is commonly felt that another initiative would easily pass, but conservative groups like FARM are hoping the lawmakers will give us some decent legislation. The issue is not going to go away in South Dakota, and it will be interesting to see what develops as the law-making process continues.

SOUTH DAKOTA— WEST RIVER

Lilias Jones

The most talked-about mining project in the Black Hills area remains the proposed Energy Transportation Systems, Inc. (ETSI) coal slurry pipeline from Wyoming to Louisiana. The final Environmental Impact Statement (EIS) for the project, which would use over 20,000 acre feet of water a year from the Madison Formation, is due this summer. Citizens and officials from the area are anxiously awaiting the document. Few changes from the draft EIS are anticipated, and landholders in the Black Hills area are contemplating lawsuits to stop the project.

The most significant change in mining plans in the area has been the loss of momentum among companies who want to mine uranium. With the drop in uranium prices, and determined citizen resistance, no new exploration permits or permit renewals have been filed in the last few months. Several permits have expired without renewal, and no large-scale uranium mining is now expected in the area until at least 1983.

Legal battles over uranium development are still being waged, however.

The Custer County Commissioners'

claim against the state Conservation Commission over the location of exploration permit hearings ended when Circuit Judge Jeff Davis upheld the commission ruling that the county had requested a local hearing too late. At issue are permits sought by Gulf Minerals and Rexcon, Inc. A hearing was held in Custer County in February, however, on Tennessee Valley Authority's (TVA) exploration permit. The permit was granted, but a decision was made not to appeal that decision.

Union Carbide Corporation (UCC), which has been the focus of much uranium-related litigation, has closed its Black Hills office. Its public relations man, Dudley Blancke, has been promoted to handling UCC's public and governmental affairs for Utah, Wyoming, Colorado, and South Dakota.

UCC is still in court, however. Most of the litigation involves the proposed mine in Craven Canyon in the southern Black Hills. Despite the extensive testimony on the mine's effects given in January, Circuit Judge Robert Miller supported the state Conservation Commission's renewal of the project's permit. Judge Miller said that there was enough evidence to support the commission's decision and that there was no evidence that the project would cause environmental harm.

Two lawsuits have recently challenged the availability of information on mining activities. In a Freedom of Information Act suit between the U.S. Forest Service and the Black Hills Alliance, a stipulation is being negotiated whereby TVA drill hole locations will be given to the Alliance in exchange for dismissal of part of the suit. Data on UCC's drill sites have not been released and are still being pursued.

Discovery proceedings have begun in the lawsuit filed against the Forest Service and others by the Black Hills Alliance, among others. The suit attempts to get the agency to follow its own regulations in dealing with the Craven Canyon project and asks for a comprehensive EIS on uranium mining in the Black Hills area. So far, the Forest Service has refused to give out the locations of test holes, the geological reports on UCC's core samples, and other information key to understanding the effects uranium activities might

have on the environment.

An important change in the lawsuit took place in early June, when Indian religious leaders from Standing Rock Reservation agreed to join the Black Hills Alliance and other plaintiffs. The reservation leaders are joining under the Indian Freedom of Religion Act, which is designed to allow access to native religious sites. David Spotted Horse, spokesperson for the group, stated that the rock carvings, ceremonial herbs and plants, and golden eagles in Craven Canyon all hold religious significance for the Lakota people and are endangered by UCC's project.

Also under the Freedom of Religion Act, members of the Dakota American Indian Movement and their allies founded Yellow Thunder Camp about 12 miles from Rapid City in early April. The group, which hopes to become the first of many self-sufficient communities in the Black Hills, is also reclaiming the site under the 1868 Fort Laramie Treaty and an 1897 federal law (18 U.S.C. 479) allowing those who live near national forests to claim Forest Service land for church and school sites. The camp has applied to build permanent buildings on its 800-acre claim, and declared the claim off-limits to mining companies.

The Yellow Thunder Camp, according to Dakota AIM, is just the beginning of an effort to get back the 80% of the Black Hills that is under the jurisdiction of the U.S. Forest Service. "We have gone beyond the saying, The Black Hills Are Not For Sale!"

The Oglala Sioux Tribe, meanwhile, has lost its suit for the return of the Black Hills to Lakota control. In June 1980 the Supreme Court said that the Black Hills had been wrongfully taken from the Lakota nations and awarded them \$17 million, plus interest—a total of \$105 million. The Lakota people, however, continue to refuse a money settlement for their sacred Paha Sapa. The Oglala Sioux Tribe filed suit to stop the federal government from paying the money and to restore the Hills to Lakota control. The suit, which also sought damages for the mining done in the last 104 years and the suffering of the Lakota people during that period, was recently dismissed by the Eighth Circuit Court of Appeals. While the



Neil and Genevieve Brafford with their three children. Photo by Dick Banon

tribe plans to push forward with the suit, it registered its protest to the court decision by establishing Camp Crazy Horse in the Hills near Wind Cave National Monument.

The Brafford Suit. The Brafford family of Edgemont, South Dakota, in the southern Hills, has filed a \$40 million suit, seeking damages for injuries they suffered when exposed to extremely high levels of radon gas and radiation emanating from uranium mill tailings found underneath their home. The radioactive tailings were produced by the Denver-based Susquehanna Corporation at its Edgemont uranium mill and then placed under the house before the Braffords bought it.

As early as 1971, survey teams of the U.S. Environmental Protection Agency, the Atomic Energy Commission (now the Nuclear Regulatory Commission), the Tennessee Valley Authority, Susquehanna, and state officials discovered the excessive levels of radiation at the Brafford home, as well as dozens of others in Edgemont. No one, however, bothered to inform the citizens of Edgemont or the Braffords of the survey results until 1980. Edgemont

is a company town and refuses to recognize the industry dangers. Mayor Peter Ziemet has been superintendent of the mill since the 1960s and much of the city budget is funded through grants from TVA, which purchased the Susquehanna mill and uranium properties in 1974, and from Union Carbide, which has proposed over 20 new uranium mines and two uranium mills for the area.

Neil and Genevieve Brafford and their three children evacuated the family home in January 1980, after state officials notified them that the levels of radiation were dangerously high. They have left Edgemont, as the subdivision where they moved was so contaminated by tailings dust that individual homes could not be surveyed. The Braffords will have to avoid all future radiation exposure and watch closely for cancer, genetic defects, and illness in their children and grandchildren.

The South Dakota Department of Health proposed radiation control regulations early this year. The regulations omitted exploration and set no maximum levels for radiation exposure. At hearings in the end of February before the Board of Environmental Protection,

the regulations were so sharply criticized that they were sent back for re-drafting.

The Rapid Valley Water Company, two of whose wells were publicized in early October as being far over federal radiation standards, received a fourth test showing high radioactivity in January. Their well Number 3, which showed the highest readings, was shut down on January 19, due in part to citizen pressure. The company originally maintained that there was no danger.

Despite the slowdown in exploration, people in western South Dakota remain aware of the potential for uranium development. The future of the industry in the area depends on the nuclear industry as a whole, pending legislation, and the continuing activism of concerned residents.

Lilias Jones is a researcher for the Black Hills Alliance.

TEXAS

Lone Star Alliance

Not many people are aware that there is a uranium mining industry in Texas. Even fewer realize that Texas is third in the nation in uranium production. But it's true, and it's being going on for 20 years.

Texas' primary uranium deposits and all of its industry are concentrated in a small six-county area about 50 miles southeast of San Antonio. They are mostly near-surface, scattered, and of relatively low concentration (most deposits are only about 0.1% uranium).

Until relatively recently, all uranium mining in Texas was done by the open-pit method, using large conventional earth-moving equipment. The open pit is still used for close to half of all uranium extraction in the state.

The overburden is removed by power shovels, trucks, and rippers and piled near the mine. Bulldozers, draglines, and back hoes dig out the ore and load it onto trucks which carry the ore out of the pit to nearby stockpiles, where it is later loaded onto tractor rigs and hauled to the mill for processing. The hauling distance to the mill is some-

Table 1 OPEN PIT MINING OPERATIONS

Project Name	Size of Licensed Area (Acres)	Company	Counties
Conquista	12,344	Conoco Pioneer Nuclear	Karnes Live Oak Atascosa Bee Duval Gonzales
Exxon	1,514	Exxon	Live Oak
Jack Pump and Panna Maria	5,575	Chevron	Karnes
Anaconda (not yet open)	10,031	Anaconda	McMullen
TOTAL	29,464		

times up to 50 miles over county-maintained roads.

There are four open-pit mines in operation in Texas, covering almost 20,000 acres, and Anaconda has leased another 10,000 acres for a mine not yet open (see Table 1).

In recent years, in-situ mining methods have been used in lieu of the open-pit method. In the newer in-situ method, a chemical solution is pumped down an injection well into a deeper uranium deposit. The solution dissolves the uranium and other materials and is pumped out of separate extraction wells. The uranium-rich liquid is processed in a similar manner to uranium ore from open-pit mines.

The environmental hazards from in-situ uranium mining are different from those of open-pit mining. In-situ methods produce much less waste than open-pit methods. However, because most of the in-situ waste takes place below ground, in the leaching process, rather than above ground, the groundwater may be contaminated. There have been several cases in Texas and elsewhere of aquifer contamination from in-situ methods. Table 2 lists in-situ mining operations in Texas.

In Karnes County, open-pit uranium mining is going into its second decade. The operation, appropriately named "Conquista Project," is a joint venture of Pioneer Nuclear Gas and Continental Oil, and includes 27 permits. Farmers

in Karnes County have charged that their crops and forage have been damaged by the dust, and air pollution is so bad at times it is difficult to breathe. The dust not only from the mines but from the trucks hauling the ore can choke the air.

Organized resistance to the mining was first evident in 1975, when the Karnes County Land Association demanded and got an interview with lame-duck governor Dolph Briscoe. The landowners were there to find out why Briscoe would not sign the first uranium mining legislation in the state's history. Briscoe tried to refuse the interview, but as the foyer filled up with media, the governor could not deny the landowners—and, in fact, signed the bill that day.

The uranium mining district of south Texas has historically been a poor one. The land is not very productive as farmland goes, nor are there any other major industries in the area. The money that the uranium industry has brought into the area has been welcomed by the local populace. As a result, feelings are mixed about the damage the mining has wrought: sporadic molybdenosis (molybdenum poisoning) in cattle, dust, erosion, and water degradation. Other landowners have made large sums of money selling their mineral rights to companies which pay premium fees simply for the right to take core samples on the owners' land.

Table 2**IN SITU MINING OPERATIONS**

Currently Operating	Licensing Applications Filed
U.S. Steel	Texaco
Mobil	Sunoco
Wyoming	Conoco
Minerals	Aquitane
Intercontinental Energy	Caithness Urex
Union Carbide	
Everest	
URI	

As uranium prices have dropped from \$50 per pound to less than \$30, a proportionate amount of land is no longer economic to mine. Most of Texas' uranium deposits are marginal, low-grade bodies of ore. As the unstable uranium market fluctuates, so does the job market in the region. Conoco alone is laying off 200 to 300 people in south Texas this year due to decreased production.

Regulation of uranium mining in Texas has lagged behind the public knowledge about the hazards of mining and milling. Not until 1975 did the Texas legislature require the uranium producers in Texas to meet minimum standards of mine and mill reclamation. With the passage of the Texas Surface Mining and Reclamation Act, the Texas Railroad Commission assumed regulatory authority over surface mining in the state.

Passage of the act did not solve Texas' uranium mining problems. The law's "grandfather clause" allowed companies operating before the law became effective to continue to mine without practicing reclamation until a permit was approved or denied. Companies such as Conoco, which in 1976 applied to the Railroad Commission for surface mining permits for 34 mine sites covering an area of 4700 acres, continued to mine on these sites without a permit. Numerous local complaints and ill feelings arose against the Conoco operations as well as serious questions about the adequacy of their projected reclamation projects.

The Texas Department of Health has proposed a bill to the legislature

which would bring Texas into compliance with the federal Uranium Mill Tailings Radiation Control Act of 1978. The proposed bill expands the authority of the health department, increases penalties for violators of the Texas Radiation Control Act (which this bill amends), requires uranium companies to post security bonds for reclamation and decommissioning of their sites, and establishes an industry-supported perpetual care fund.

State environmental groups have expressed concern about the effectiveness of the proposed bill. The Department of Health's Radiation Control Division, charged with implementation of the legislation, has been seriously underfunded in the past and is incapable of performing even its present duties. Their staff includes only 32 people who are responsible for inspecting the 25,000 X-ray machines in the state (the Radiation Control Division only knows where 40% of them are) and who regulate the other 1500 licensed users of radioactive materials in the state. The department does not have a single full-time inspector for uranium mining and milling sites.

Consumer groups also have expressed concern that much of the regulatory and reclamation costs are being borne by the public rather than by the industry which is being regulated. In addition, they claim that loopholes in the bill may allow operators to escape posting their surety bond before opening their sites.

Lignite Mining. Uranium is not Texas' only mining controversy. Environmentalists also take issue with Texas Utilities' lignite operations in the state. Some 80% to 90% of Texas' near-surface lignite is on 800,000 acres of prime farmland. The incentives for Texas Utilities to use this lignite, rather than to purchase natural gas, are economic; TU got a real steal when they bought lignite mineral rights 30 years ago, and today their lignite costs only half the money that TU pays for natural gas.

Agricultural losses from land currently being mined are estimated at over \$100 million per year. This does not include losses from land which is not as productive after mining. Control of dust during mining operations uses 150 million gallons of water per year at a facility such as Monticello (1900 megawatts of capacity). As a

result, Texas' water rights are becoming more and more valuable as more people on farms and in cities compete for the same water as utilities and mining companies.

All Texas Utilities' lignite plants use lignite from the Wilcox Formation, which overlays the "Wilcox-Corrido Sand" aquifer. This major aquifer, which supplies municipal and industrial water to communities throughout east and central Texas, is near the surface and susceptible to interruption and damage by stripmining.

VIRGINIA

Sandra D. Speiden Piedmont Environmental Council

The Virginia Coal and Energy Commission, a standing 24-member body of the state general assembly, has been given the task of studying the environmental effects and possible hazards to citizen health, safety, and welfare from uranium exploration, mining, and milling. The mandate came in a resolution for a state uranium study, introduced in the Virginia General Assembly in January and passed in amended form. The commission is to report back to the general assembly by December 31, 1981, with any recommendations for legislation it deems appropriate.

The original resolution supported by Piedmont Environmental Council and sponsored by Senator Frederick C. Boucher, called for a joint legislative study, with three members of the Senate Committee on Agriculture, Conservation, and Natural Resources and five members of the Committee on Conservation and Natural Resources of the House of Delegates.

The Coal and Energy Commission has now held two public hearings in Richmond. Dr. Peter Montague of Princeton University, Paul Robinson of Southwest Research and Information Center, Dr. Joseph Wagoner of the National Institute for Occupational Safety and Health, a Virginia resident, and Charles Kenow of the Minnesota Environmental Quality Board have all given expert testimony on health, environmental, and regulatory aspects of

the uranium industry. The need for a statewide moratorium on further exploration and *any* mining, at least until base-line data can be collected and the state study is completed, has been stressed at the hearings by numerous groups and individuals, including physicians and local officials. Among these concerned citizenry was the city manager of Fredericksburg, a city located downstream from the area of potential activity.

Officials of Marline Uranium Corporation, the one company known to be leasing land in Virginia, claim that it would take several years for them to get to the mining stage, and that their exploration data are sufficient to serve as base-line data. They say there is therefore no need for a moratorium.

After the second hearing on June 1, the commission chairman set no date for another meeting. The commission claims they need time to study the material they have received.

On the local level, the Orange County Board of Supervisors have passed an amendment to the county zoning ordinance expressly including ground-disturbing exploration in the definition of mining. This amendment will forestall any doubts as to whether such exploration would require the granting of a special use permit from the board. Such a permit is required for mining in Orange County, and gives the local governing body at least some control over mining activity.

The success of the ordinance was undoubtedly a result of the increased education of local citizens. A slide presentation on exploration, mining, and milling put together by two residents of Orange County has been in great demand by civic, church, and other interested groups.

No known ground-disturbing exploration has been started to date in central Virginia, where Marline has managed to lease only about 1300 acres of a much larger area in which they are interested.

In Pittsylvania County on the southern border of the state, Marline has leased roughly 40,000 acres. Now in their third season of exploratory drilling there, Marline has reportedly brought in several drill rigs from Wisconsin. Test holes are said to be about 200 feet apart and reaching a depth of 1500 feet.

Al Gedicks

Center for Alternative Mining Development Policy

Will northern Wisconsin be transformed into a radioactive wasteland after mining companies finish mining and milling this area's uranium deposits? This question is being asked with increasing frequency by citizens in the 17 counties across northern Wisconsin that have been explored for uranium during the 1970s and are built upon hard granite rock that the Department of Energy hopes will be suitable for nuclear waste disposal.

The Center for Alternative Mining Development Policy first raised the issue of the hazards of uranium exploration drilling before a Wisconsin legislative mining committee in December 1979. Since that time, five Wisconsin counties, 12 town boards and two Indian tribal councils have adopted resolutions aimed at blocking all uranium exploration for five years or longer. An emerging tri-state (Michigan, Wisconsin, Minnesota) band of resistance was strengthened last summer when five counties in Michigan's Upper Peninsula approved moratoria on uranium exploration. Last January, Wisconsin Senator Tim Cullen introduced a bill calling for a seven-year moratorium on uranium mining in Wisconsin. Hearings on the bill have not yet been scheduled.

The occurrence of uranium deposits in Wisconsin has only recently become a public issue, although several "prospects" in the state were identified in the 1950s. A 1969 review by the Atomic Energy Commission concluded that those prospects "may contain important long-range, low-grade resources of thorium and uranium."

The Department of Energy has already spent over \$1 million trying to assess Wisconsin's uranium potential through the National Uranium Resources Evaluation (NURE) program. An October 1980 NURE report states: "Uranium anomalies detected in stream sediments and groundwater indicated the Wolf River batholith in the Green Bay quadrangle and Late Cambrian sandstone in the Rice quadrangle are favorable for

the occurrence of uranium" (see map).

Since 1978, exploratory drilling for uranium has been carried out in Florence, Forest, Waushara, Portage, Marinette, Langlade, Taylor, and Marathon counties. The Kerr-McGee Corp., the nation's largest uranium producer, has already leased more than 84,000 acres for uranium in Forest, Florence, Oneida, Langlade, and Vilas counties, and is negotiating to explore additional county forest lands in Langlade and Oneida counties.

Faced with growing corporate interest in uranium exploration throughout northern Wisconsin, the Legislative Council's Committee on Mining formed a special Subcommittee on Uranium Exploration Safety in May 1980. The subcommittee's assignment included a study of the drilling methods used by the mining companies to determine any personal health or environmental impacts from the release of radioactive contaminants during or after drilling. On June 6, 1980 state Senator Tim Cullen, co-chair of the mining committee, contacted seven corporations to request a one-year voluntary moratorium on all further exploratory drilling for uranium. Kerr-McGee was the only corporation to refuse the voluntary moratorium.

In response to citizen concern about the health and environmental hazards of uranium exploration and mining, the Wisconsin Department of Health and Social Services (DHSS) has devised a radiation monitoring program to measure radiation levels around exploratory drill holes. The Center reviewed the program when it was first proposed in June 1980 and pointed out that the inadequacies in the monitoring program would allow companies to later claim that radiation in the region of the mining and milling operations is natural background radiation. In addition to excluding major sources of radiation from the monitoring program, the DHSS design does not meet even the most minimal standards for monitoring as outlined by the Nuclear Regulatory Commission (NRC) in 1979. The Center concluded that the program was hastily put together to accommodate the drilling schedule of the mining companies, and was not designed to assess health and environmental hazards of uranium exploratory drilling.

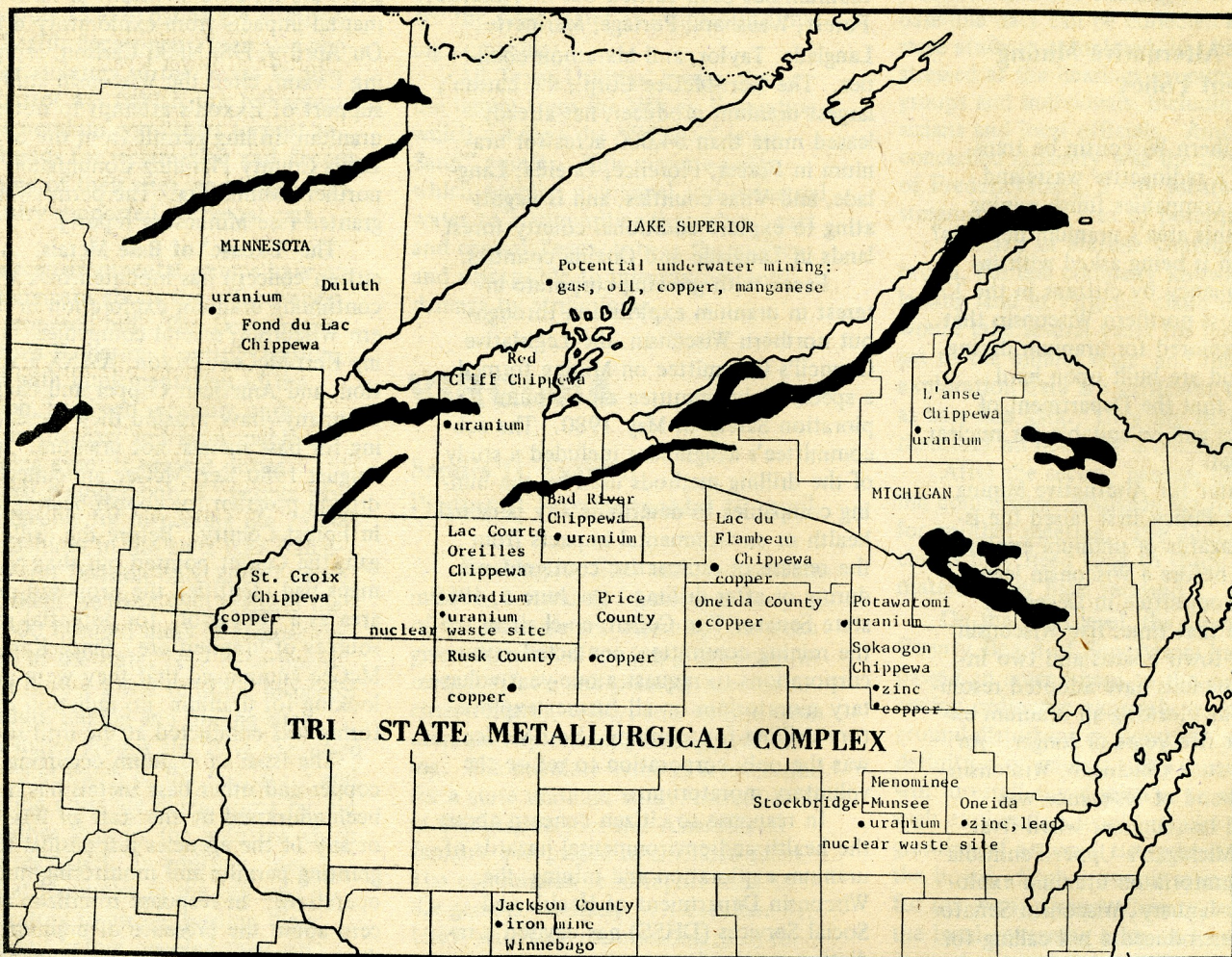
Despite the major flaws in the radiation monitoring program, the mining

industry has been citing the results of the program to support their claim that there are no adverse health or environmental impacts from exploratory drilling. On April 9, 1981 Nikki Carlson, representing Exxon, cited the Wisconsin study in support of Exxon's attempt to obtain a uranium drilling permit from the St. Louis County Planning Commission in northern Minnesota. The permit was granted (see Minnesota report).

The 'Excuse' of Base Metals. As citizen concern has mounted over the continuing uranium exploration in northern Wisconsin, several companies—including Kerr-McGee, Exxon, AMAX Exploration, and American Copper and Nickel Company—have insisted they are exploring for base metals, not uranium. In August 1980 Kerr-McGee announced a drilling program for copper-bearing ore in Forest County. Before the drilling began, the Center pointed out that NURE maps had identified the proposed drilling area as a "hot spot" for potential resources of uranium ore. Since Kerr-McGee announced that they were not looking for uranium, no radiation monitoring was conducted at the drill site.

The issue of uranium occurring with copper and other base metals has not been addressed by the state of Wisconsin or any of the agencies responsible for granting permits and monitoring mining operations. In response to citizen concern about the presence of uranium, radium, and other radioactive elements in Exxon's copper-zinc deposit near Crandon, the Wisconsin Department of Natural Resources (DNR) held a closed meeting with Exxon and other state officials on April 10, 1981. Exxon representatives repeated their claim that "uranium is not present in significant amounts in the Crandon orebody." Exxon offered to split prepared samples from the orebody for state inspection but noted that duplicate samples could not be obtained. Exxon refuses to turn over its core samples to the state for independent assessment.

Deborah Rogers, the former staff ecologist for the Center, has estimated the amount of uranium in the Exxon Crandon deposit by using numbers given in a letter from Exxon's Regulatory Affairs Manager to Exxon's lawyer in Madison. Rogers concludes that the Exxon deposit contains a substantial amount



from "The New Resource Wars, Part III, *CALA Newsletter*, Vol. 8, No. 3 (December 1980)

of uranium. Moreover, uranium production via byproduct extraction is technologically and economically feasible.

Without public access to Exxon's core samples, it is conceivable that the DNR could issue a mining permit to Exxon for copper-zinc with no mention of uranium mining. After the permit was issued, Exxon could then announce the "discovery" of trace amounts of uranium and apply directly to the NRC for a byproduct extraction license. The NRC has the option of not requiring an environmental impact statement.

During the course of public hearings on Exxon's preliminary plan for mining at the Crandon site last January 13, 1981, the issue was also raised of the possible use of the Exxon mine as a nuclear

waste repository after mining was completed. A recent DNR report states that "a repository will be briefly reviewed as a final alternative in Exxon's environmental impact statement."

The Department of Energy's Final Environmental Impact Statement on Management of Commercially Generated Radioactive Waste (October 1980) recommended the use of mined geologic repositories for high-level radioactive waste (HLW) disposal. Another report commissioned by the DOE stated that the granite bedrock of the Lake Superior region "is the most favorable region of crystalline rock in which to conduct future site selection studies."

Grassroots citizen groups are not to be daunted by the refusal of the mining

companies and the Department of Energy to acknowledge public opposition. Numerous resolutions have been passed in northern Wisconsin aimed to prevent uranium exploration and nuclear waste disposal. In last April's election, voters came out overwhelmingly against locating nuclear waste repositories in three northern Wisconsin counties.

On September 18-20, 1981, anti-uranium organizers from the tri-state area will meet outside of Superior, Wisconsin for an intensive training session and to plan future actions to stop uranium mining and nuclear waste disposal plans for the Lake Superior region. For more information on the conference, write the Center, 1121 University Avenue, Madison, WI 53715.

INTERNATIONAL REPORT

CANADA

David Garrick
The Society for Pollution
and Environmental Control

Climax Molybdenum Corporation of BC, Ltd., a subsidiary of American Metal Climax (AMAX), plans to begin mining and milling operations at the newly reopened Kitsault molybdenum mine site at the head of Alice Arm in northwest British Columbia. Climax proposes to dump the mine tailings from Kitsault directly into the ocean at Alice Arm. The new mill will pulverize over 10,000 tons of ore each day and discharge between 10,000 and 12,000 tons of toxic waste tailings into the ocean. According to Climax, there is a 26-year supply of mineable ore. Therefore, over 100 million tons of toxic waste tailings will be discharged into the ocean during the span of mining operations.

Alice Arm is a nine-mile long fjord that runs into Observatory Inlet, which in turn meets the mouth of Nass River, and runs out a longer fjord called the Portland Canal into the Pacific Ocean just north of Prince Rupert. Kitsault is about 140 miles northeast from Prince Rupert and 130 miles due east from Ketchikan, Alaska.

The Nishga Indian people are dependent on the Nass watershed and coastal fjords, including Alice Arm, for their livelihood. The Nishga Fisheries Resources come from these waters. More important, fish and fishing, the sea and the rivers have been essential to the Nishga since the beginning of time. Fish are not simply food to the Nishga, but are essential to the culture, to the society, and to the way of life.

Climax hired a consultant to carry out studies between 1974 and 1977 regarding the environmental consequences of dumping the tailings directly into the ocean. J.L. Littlepage, the consultant, concluded that the tailings would not harm the ocean life significantly, and that the Nishga were not so dependent on Alice Arm for fish resources.

The Nishga, however, were never consulted by Littlepage, and Climax did

not bother discussing their plan with Nishga residents.

On the basis of the Littlepage data, both the provincial and federal governments concluded that a special exemption from ordinary law could be made in the Climax case. On January 12, 1979, the British Columbia government issued a pollution control permit allowing Climax to discharge up to 400,000 mg/liter for suspended solids—8,000 times the rate recommended for other mines. The BC Pollution Control Board recommends 25 to 75 mg/liter as the maximum permitted discharge. The federal cabinet then amended the Fisheries Act to override the national discharge standard of 50 mg/liter, relying on Climax's assertion that the tailings would not move once they are deposited on the ocean floor.

The Nishga did not know about the tailings permits until they were granted. They are very concerned about the tailings plan.

Although neither Climax Molybdenum, the provincial government, nor the federal government has disclosed publicly the exact breakdown of elements in the tailings, it is certain that the pulverized ore contains a number of heavy metals of varying toxicity, as well as radioactive materials. The waste tailings are known to contain mercury, cadmium, lead, arsenic, zinc, and trace amounts of other dangerous metals. In addition, there is known to be Radium-226, uranium, and thorium in the ore in unknown quantities. These radioactive heavy metals are not only toxic but water soluble, so that when they are crushed up in a mill, and mixed with water, there is the problem of widespread contamination. Radium decays into deadly radon gas that ordinarily would be locked away in an undisturbed ore body long enough to decay into stable lead which bonds chemically with the ore. On the other hand, radon given off from tailings can percolate out and migrate great distances before decaying into stable lead.

Independent preliminary studies by oceanographers demonstrate that Alice Arm is completely flushed periodically. This means that tailings would not sit on the bottom. There is evidence of

large changes in salinity and oxygen saturation at lower levels.

Moreover, previous mining and milling activity has already caused some contamination from tailings dumped into Alice Arm at Lime Creek between 1968 and 1972 when BC Molybdenum Corp., Ltd., a subsidiary of Kennecott Copper Corp., operated the first mill at Kitsault. Unknown quantities of the deadly chemical PCB have also been leaked into Alice Arm.

In May a plume of suspected tailings was spotted at Alice Arm near the AMAX tailings pipe outfall which discharges mine tailings at a depth of 50 meters below the surface. Aerial inspection revealed that the tailings plume had spread throughout Alice Arm a distance of over ten kilometers, discoloring the entire fjord with a chalky, greenish gunk. It is suspected that the tailings have resurfaced—which is precisely what AMAX studies said would not occur.

Representatives of over 53 citizen groups, including Native organizations, environmentalists, labor unions, and churches, endorsed a call by the Nishga Tribal Council for a full public inquiry and a moratorium on further dumpings of molybdenum tailings into the fishery at Alice Arm. The groups also said they would boycott the so-called independent review panel, set up by the federal Fisheries Minister Romeo Leblanc. James Goswell, chief of the Nishga Tribal Council, said the review panel does not have a broad enough frame of reference to enable concerns to be raised about social and economic impacts of the AMAX dumping. Moreover, he said, there are no powers of subpoena so that vital documents and key scientific witnesses can be brought forward, nor can the public cross-examine witnesses.

Meanwhile, Borax Metals Corporation is watching developments at Alice Arm because it hopes to use the AMAX operation as an excuse to dump tailings directly into the ocean at Misty Fjord, Alaska. Borax, a wholly owned subsidiary of Rio Tinto Zinc, plans to open a much larger molybdenum stripmine at Quartz Hill, 40 miles west of the AMAX molybdenum operation.

RESOURCES

The following organizations are the beginnings of a resource list for information and communication about mining development in the United States, Canada, and Australia, and its impacts on local communities, their environment, and their health. We urge our readers to send us additional contacts we inadvertently missed to: **MINE TALK**, PO Box 4524, Albuquerque, NM 87106.

ARIZONA

Arizonans for a Better Environment
1336 E. Don Carlos
Tempe, AZ 85281
(602) 968-4735

Thunder River League
c/o Vivienne Jake
PO Box 68
Fredonia, AZ 86022

Nuclear Free State
c/o Edwina Vogan
1114 N. Rincon
Tucson, AZ 85719
(602) 622-8785

Palo Verde Truth Force
c/o John Stigner
1322 W. Roosevelt Street, No. 6
Phoenix, AZ 85007
or
c/o Chris Shuey
1110 W. Second Street
Tempe, AZ 85281
(602) 968-6623

Sacred Mountain Alliance
Rt. 3 PO Box 125
Flagstaff, AZ 86001
(602) 526-6170

CALIFORNIA

Stop Uranium Now (SUN)
PO Box 772
Ojai, CA 93023
(805) 646-3832

Oaktree Alliance
6604 Portola Road
Atascadero, CA 93422

Natural Resources Defense Council
25 Kearny Street
San Francisco, CA 94108
(415) 421-6561

Alliance for Survival
1473 Echo Park Avenue
Los Angeles, CA 90026

Red Wind Indian Community
PO Box G
Santa Margarita, CA 93453

COLORADO

Colorado Open Space Council
Uranium Information Network
2239 E. Colfax
Denver, CO 80206
(303) 321-6588

Twin Rivers Citizen Association
PO Box 2932
Grand Junction, CO 81502

Citizens for Safe Tailings Management
PO Box 2331
Durango, CO 81301
(303) 247-3471

Citizens for Safe Energy
309 Colorado
Pueblo, CO 81004
(303) 543-5340

High Country Citizens Alliance
Box 1066
Crested Butte, CO 81224
(303) 349-5640

National Wildlife Federation
Natural Resource Clinic
University of Colorado School of Law
Boulder, CO 80309
(303) 492-6552

Public Lands Institute
1740 High Street
Denver, CO 80218

Pikes Peak Justice & Peace Committee
235 E. Fountain Blvd.
Colorado Springs, CO 80903
(303) 632-6189

DISTRICT OF COLUMBIA

World Information Service of Energy
W.I.S.E.-U.S.A.
1536 16th Street NW
Washington, D.C. 20036

Environmental Policy Center
317 Pennsylvania SE
Washington, D.C. 20003
(202) 547-5330

IDAHO

Idaho Conservation League
Box 844
Boise, ID 83701
(208) 345-6933

MINNESOTA

The Minnesota Project
A Center for Public Policy Study and
Community Development
618 East 22nd Street
Minneapolis, MN 55404

Ad Hoc Coalition on Uranium Mining
Box 322
Barnum, MN 55707
or
618 East 22nd Street
Minneapolis, MN 55404
(612) 870-4700

Northern Sun Alliance
1519 E. Franklin
Minneapolis, MN 55404

MONTANA

Montana Environmental Information
Center
Box 1184
Helena, MT 59624
(406) 443-2520

Headwaters Alliance
Box 494
Bonner, MT 59823

Northern Plains Resource Council
419 Stapleton Building
Billings, MT 59101
(406) 248-1154

Northern Rockies Action Group
9 Placer Street
Helena, MT 59601
(406) 442-6615

NEVADA

Nevada Indian Environmental Research
Project
650 S. Rock Blvd. Suite 11
Reno, NV 89502
(702) 786-3128

NEW JERSEY

Morris County Safe Energy Alternatives
Alliance
Box 271
New Vernon, NJ 07976
(201) 538-6676

Stop Uranium Now
Box 34
Oak Ridge, NJ 07438
(201) 697-7542

Prevent Uranium Mining Alliance
c/o Mary and Gary Gitelson
Rural Rte. 3, Box 494
Hewitt, NJ 07421

NEW MEXICO

La Colectiva
PO Box 723
El Rito, NM 87530
(505) 581-4454

La Raza Unida Party
General Delivery
La Madera, NM 87539

Concerned Citizens of Cerrillos
Box 7
Cerrillos, NM 87010
(505) 471-4169

Sandoval Environmental Action
Community
PO Box 1220
Bernalillo, NM 87004
(505) 867-2046

American Indian Environmental Council
Mt. Taylor Alliance
PO Box 7082
Albuquerque, NM 87194
(505) 265-1509

Florencia Land Rights Coordinating
Council
Box 1326
Loving, NM 88256

Citizens Against Nuclear Threats
106 Girard SE Room 121C
Albuquerque, NM 87106
(505) 256-9473

Citizens for Alternatives to Radioactive
Dumping (CARD)
Box 555
Albuquerque, NM 87103
(505) 842-1194

NM Peace Conversion Project
2405 Meadow Road, SW
Albuquerque, NM 87105

NM People and Energy
Box 4726
Albuquerque, NM 87196
(505) 266-5009

New Mexicans for Clean Air & Water
113 Monte Rey Drive North
Pajarito Acres
Los Alamos, NM 87544

Save the Jemez
Box 4067
Albuquerque, NM 87106
(505) 842-9296

Sierra Club
338 E. DeVargas
Santa Fe, NM 87501
(505) 983-2703

Southwest Research & Information
Center
PO Box 4524
Albuquerque, NM 87106
(505) 262-1862

NM Physicians for Social Responsibility
PO Box 4096
Albuquerque, NM 87106
(505) 266-5646

Taos Environmental Association
PO Box 231
Arroyo Seco, NM 87514
(505) 776-8218

Taos Action for Survival Council
Box 3135
Taos, NM 87571
(505) 758-3108

Friends of the Earth
Rte. 7 Box 131
Santa Fe, NM 87501
(505) 982-0953

NEW YORK

Sullivan Nuclear Opponents
c/o Rose Spada
Star Rte. Box 15
S. Fallsburg, NY 12779
(914) 434-3088

RISE
c/o Dolores Carpentier
Rte. 3 Box 490
Warwick, NY 10990
(914) 986-2462

People for Safe Energy
c/o John Franceschi
Box 578
Carmel, NY 10512
(914) 279-4887

NORTH DAKOTA

Dakota Resource Council
PO Box 254
Dickinson, ND 58601
(701) 227-1851

OREGON

Radiation Information Council
PO Box 705
Lakeview, OR 97630

Oregon Wilderness Coalition
PO Box 3066
Eugene, OR 97403

Oregon Environmental Council
2637 SW Water Avenue
Portland, OR 97201

Pacific Northwest Research Center
University Station Box 3708
Eugene, OR 97403
(503) 686-5125

PENNSYLVANIA

Mobilization for Survival
3601 Locust Walk
Philadelphia, PA 19104
(215) 386-4875

SOUTH DAKOTA

Black Hills Alliance
PO Box 2508
Rapid City, SD 57709
(605) 342-5127

Black Hills Energy Coalition
Box 8092
Rapid City, SD 57709
(605) 343-8006

Families Against Radioactive Mining
c/o Jim Kellar
1503 Cedar
Yankton, SD 57078

TENNESSEE

Save Our Cumberland Mountains
Box 457
Jacksboro, TN 37757

TEXAS

Texas Mining Research Committee
PO Box 3472
Austin, TX 78764
(512) 258-6435

Lone Star Alliance
1022 W. 6th
Austin, TX 78703

UTAH

Southern Utah Resource Center
126 S. 1400 W
Cedar City, UT 89720

Southern Resource Council
PO Box 1182
Hurricane, UT 84737

Citizen's Call
1321 E. 400 S
Salt Lake City, UT 84102
(801) 583-2683

VERMONT

Vermont PIRG
43 State Street
Montpelier, VT 05602
(802) 223-5221

VIRGINIA

Piedmont Environmental Council
28-C Main Street
Warrenton, VA 22186
(703) 347-2334

Appalachian Coalition Against Strip Mining
c/o Rev. R.B. Lloyd
PO Box 1007
Blacksburgh, VA
(703) 522-3795

Council of Southern Mountains
Drawer N
Clintwood, VA
(703) 926-4495

WASHINGTON

Washington PIRG
FK-10 University of Washington
Seattle, WA 98195

Preservation of Mt. Tolman Alliance
PO Box 99
Inchelium, WA 99138

WEST VIRGINIA

Concerned Land and Natural Resources Owners
Rte. 2, Box 112
Bristol, W. Va. 26332

Save Our Mountains
Box 573
Hamlin, W. Va. 25523

Cheat Lake Environmental Conservancy
c/o Donald Strimbeck
Rockley Road
Morgantown, W. Va. 26505

Coal River Improvement Association
107 River Bend Blvd.
St. Albans, W. Va. 25177

Elk River Improvement Association
Buckhannon Pike
Nutter Fort, W. Va.

Save Our Mingo Mountains, Homes & Streams
Marrowbone Creek Area
c/o John and Michael Fanning
Box 611
Kermit, W. Va. 25674

Randolph County Strip Mine Resistance
120 Third Street
Elkins, W. Va. 26241

WISCONSIN

Center for Alternative Mining Development Policy
1121 University Avenue
Madison, WI 53715
(608) 251-7246

WYOMING

Wyoming Outdoor Council
Box 1365
Lander, WY 82520

Powder River Basin Resource Council
214 S. 4th Street
Douglas, WY 82633
(307) 358-5558

CANADA

South Okanagan Environmental Coalition
Box 188
Penticton, BC V2A 6K3

Scientific Pollution and Environmental Control Society (SPEC)
405-207 West Hastings
Vancouver, BC V6B 1H7
(604) 669-4554

Group for Survival
524 5th Avenue, North
Saskatoon, Sask. S7K 2R2
(306) 244-7911

Saskatoon Environmental Society
PO Box 1372
Saskatoon, Sask. S7K 3N9

Ontario PIRG—Peterborough
c/o Trent University
Peterborough, Ontario K9J 7B8

AUSTRALIA

Campaign Against Nuclear Power
PO Box 238
North Quay, Brisbane
Queensland 4000

International Nuclear News Service
Canberra & South-East Region
Environment Centre
PO Box 1875
Canberra City, ACT 2601



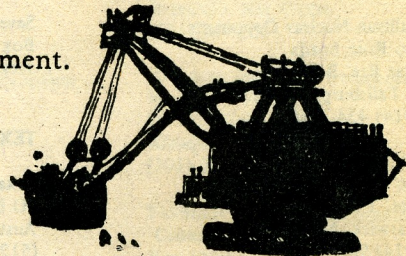
Introducing . . .

MINE TALK

A newsmagazine to help you keep track of what the mining industry is saying — and doing.

MINE TALK is a new source of independent, up-to-date information on:

- † the scope and methodology of U.S. mining and milling operations.
- † the social, economic, and environmental impacts of mining development.
- † the politics of national and international mineral exploitation.
- † the challenges of citizen groups around the country.



Subscribe!

_____ Please enter my subscription for six issues of MINE TALK. Enclosed is \$ _____.

_____ Individual/Nonprofit community group: \$18

_____ Government agency/Library: \$36

_____ Private industry: \$150

Make checks payable to MINE TALK, c/o Southwest Research and Information Center, PO Box 4524, Albuquerque, NM 87106.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

MINE TALK

Southwest Research and Information Center
PO Box 4524
Albuquerque, NM 87106

nonprofit organization
U.S. Postage
PAID
Albq., N.M.
Permit No. 553

ADDRESS CORRECTION REQUESTED