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The Environmental Bi-Weekly

High Country News

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Lander, Wyoming

Friday, Feb. 15, 1974

The Hidden Costs of Coal

Several of our readers, from different parts of the country, asked if we couldn't reprint the following article. It is written by the courageous leader of the United Mine Workers of America, Mr. Arnold Miller. We found Mr. Miller's discussion of the energy crisis and the coal industry so timely and cogent that we thought all of our readers should have opportunity to read it. Our thanks goes to the Center for the Study of Democratic Institutions for permission to reprint it here.

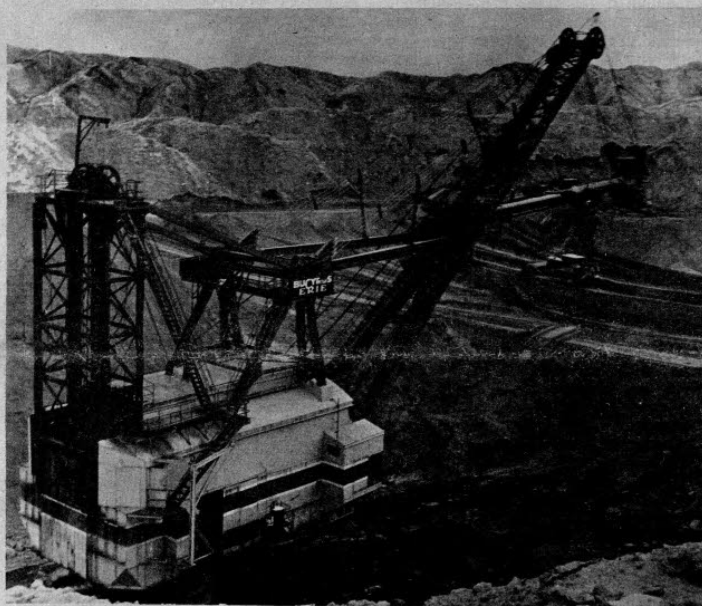
The editors.

by Arnold Miller

I was born in the mountains of West Virginia, and my views are the views of a coal miner. Coal mining is hard, dirty work, and when you have time to think on the job, you mainly think about your survival. I have spent most of my life just trying to survive, and what free time I had left over I spent on trying to reform the union I belonged to. That is hard work, too. So my views are generally geared to getting from one day to the next.

When I first began thinking about what I wanted to discuss at the Center, a number of possibilities struck me. I could concentrate on what it is like to try to run a union in the process of reforming itself. Or I could discuss coal miners and the energy crisis. Then I began thinking about your name — The Center for the Study of Democratic Institutions — and it occurred to me that coal miners don't have much opportunity to study democratic institutions, because there are so few such institutions where we live. Our union is only now getting serious about democracy. The industry we work for is totally undemocratic. The state legislatures that it controls pay lip service to democracy, but that is as far as they are willing to go. There are a few congressmen and senators from coal states who are a credit to democracy, but most of them are not interested in it unless the price is right. Then there is the White House. The people there are supposed to know about democracy and they also have a great deal to do with policies affecting coal miners. But based on what I have seen and heard from there, especially since Watergate, the idea of "democratic institutions" doesn't impress them much. So I come down to the idea that I would like to talk about democratic institutions if only because it is such an unfamiliar subject to me.

Of course it is too big a subject for anyone to handle. I know I ought to narrow it down. However when I was still working underground, long before I knew any people who called themselves environmentalists, I ran across what the founder of the Sierra Club, John Muir, said: "When we try to pick out anything by itself, we find it hitched to everything else in the uni-



The United States will produce around 600 million tons of coal in 1974. Much of it will still come from West Virginia and Kentucky. But the scene is shifting westward to huge easily-stripped deposits of low-sulfur coal. Here, near Colstrip, Montana, Peabody Coal Co. is producing over 1.5 million tons per year for use by Minnesota Power & Light, some 800 miles east.

verse." I think that is about as true as any idea I ever heard. You can't talk about energy without talking about oil. You can't talk about oil without talking about politics. You can't talk about politics without talking about corruption. You can't talk about corruption without talking about companies that are so big that they can give half a million dollars to a politician without its even showing up on their books. You can't talk about companies like that without talking about energy, because they supply it. And you can't talk about energy without talking about coal. So I will talk about all of these things, and if I wander around, you can blame it on the Sierra Club. That is what the coal industry does.

I still run into people who think that the coal industry died when railroads converted from steam locomotives to diesel. They are very surprised when I point out to them that their electrical appliances burn coal. They don't see it because it is delivered by wire. The steel that goes into their cars could not have been pro-

duced without coal. That is true even if they are driving a Japanese car, because it is exported American coal that the Japanese steel industry uses — and then sends back to us, at a comfortable profit. I am sure, though, that you all know enough about our economy to realize that coal is the basis of it. If we stopped digging coal in September, the country would shut down in October, after the stockpiles ran out. It is that simple.

We are producing, at this point, about 590 million tons of coal a year from twenty-four states. West Virginia and Kentucky are the leading producers. They account for about forty

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Friday, Feb. 15, 1974

HIGH COUNTRY

By Tom Bell

Here in Wyoming we have just lived through the trauma of another legislative session. It can only be described as trauma because no matter how high your expectations at the beginning, you are bound to be shocked by the finale.

This year's session was new and historic for Wyoming. It was the first annual budget session. Always before the budget and appropriations had to be considered along with regular legislative matters, every two years in 40 day's time. Now, through constitutional amendment, the off-year budget session of 20 days gives the legislature a chance to thoroughly review the budget and overhaul appropriations. In that respect, it is a good arrangement.

But 20 days are allowed not only for budget review but also for any emergency legislation which might be required. And there is where the hitch comes. It is in the area of emergency legislation that you find there are many worlds inhabited by diverse interests. Even so, you would think there would be some areas of concern that would draw a consensus of interest. Alas, not so!

Where there is a vacuum in leadership, there you will find also a vacuum in legislative imperative. Leadership in both Wyoming legislative bodies was all but nonexistent. And leadership in the governor's office leaves much to be desired. To Gov. Stanley K. Hathaway's credit, he did recommend a three per cent excise tax on coal, oil, natural gas, and oil shale. And he evidently pushed enough on the weak sisters in the legislature to get it through. Politician that he is, he sensed that it was one of those gut issues which the electorate will no longer allow to go unnoticed.

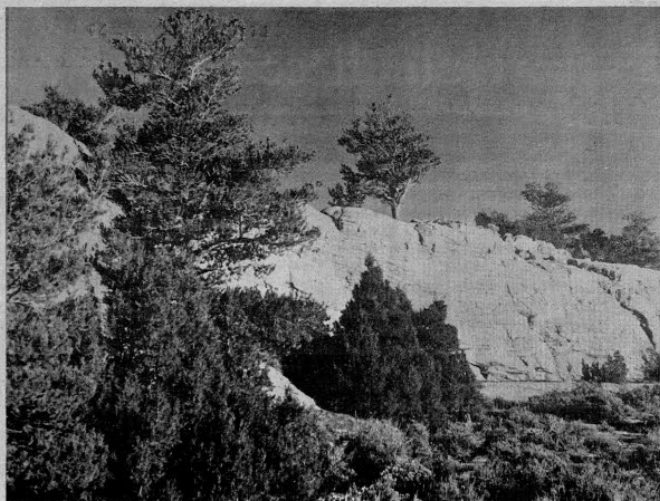
It was an issue which he had ignored for seven years. His opponent in the race for governor in 1966 likes to point out that had he recommended a three per cent severance tax on extractable minerals in his first address to the legislature, the state would be about \$70 million richer. As recently as September, 1973, he told a news conference new taxes were not needed.

But the leadership of both the executive and legislative branches is most sorely needed in another area. Here again, the Governor talks a good line but evades the action. He told the Wyoming Farm Bureau convention in November, "It is the people impact about which we must be concerned. There must be planning for water, sewer, education, recreation and other facilities." He did not express a similar concern to the legislature. And for the most part, the legislature was as unconcerned as he was.

It took dedication and courage on the part of a few House members to push an industrial siting act through that body. The Senate leadership let the legislation die by calling the session to a halt after 18 days of work in a 20-day session. There was no leadership from the Governor or any concerted leadership in the State Senate to see the siting act put on the books.

Wyoming may live to regret that inaction. State Sen. Malcolm Wallop of Sheridan County pointed out during the session that population projections for just his county were staggering. A reliable study shows growth from 20,592 in 1974 to 90,736 in 1995. Just one firm with two coal mines is going to literally explode the population of Campbell County next door.

There is no way Wyoming can realistically avoid becoming an energy producer for the nation. But our people, our land and our valued resources of air and water do not have to be prostituted in order to fulfill a responsibility. Left to the politicians, it is not even so honorable as prostitution. It is a case of rape, committed while the leadership of the state looked the other way.



Letters

Hey Tom Bell!

I've belatedly read your Dec. 21 issue with its lead article by Carlos Stern, the professor of agricultural economics at the University of Connecticut, regarding the energy situation.

The professor had me right in harness, plowing a straight furrow, until he ran that article right up between a rock and a hard place. The professor may know his beans about agricultural economics, but his attitude on curtailing recreation won't hold any more water than a tin dipper that's been left in the spring branch too long.

First off, the learned gentleman has overlooked the important point that recreation is an industry. The plants that manufacture motor boats, skis, bicycles and golf balls all employ people. If there is to be any curtailment, the recreation industry should be given at least equal treatment in energy allocations. It takes people working in factories to turn out recreation equipment as well as farm tractors with air-conditioning and stereo tape-decks. Or have you seen the newest tractors?

Second, the professor of agriculture overlooked the cogent point that many states, from Sunny Florida to Majestic Montana depend, to a large degree, on vacation travel and recreation for the livelihood of much of the state's populace.

Third, the article singled out snowmobiles, motorboats, campers, vacation homes, auto racing, etcetera. Anyone familiar with recreation knows that the majority of motorboats are small boats pushed by small motors. A gallon or two of gas per day is all that is required by most fishermen, who account for the greatest majority of motor boat users. If the professor meant high-powered motor boats being used to roar around in circles, he has a point; but to lump all motorboats into a category that he suggests should possibly not be "permitted" is a bit irrational. As to auto racing, the amount of fuel used by the automobile racers is minuscule when compared with the amount used by spectators to come to the race track. If the professor is suggesting a ban on all spectator sports, including baseball games and drive-in theatres, where the energy use is made by the spectators,

that is one thing. The amount of fuel used by all of the competing automobiles on the nation's racing circuits is a drop in the bung hole of an empty barrel compared to the amount used to take kids to Little League baseball games.

As to campers. Yes, some large motor homes require a lot of fuel, six to eight miles per gallon is not uncommon. This is comparable to some large luxury cars and is, admittedly high, but why hit campers and recreation. High fuel using motor vehicles? Maybe so. The family traveling in the largest motor homes on the road are actually using less total energy than a similar sized family staying at home. It simply takes less energy to heat, cool and power a 25-x 8-foot motor home than an average sized house. But, some campers use less gas than middle sized automobiles and the average recreational vehicle owner drives far fewer miles than the family car.

Vacation homes are places of habitation. What difference does it make if the family is using energy in the city or in the mountains? Generally, vacation homes are smaller. And if the vacation home is ruled out, it still takes energy to power the hotel or lodge or motel room.

That's the economic side of recreation. It provides jobs just as does every industry. A waitress in a Connecticut tourist area restaurant can be just as job hungry as a steel worker in Pittsburgh, Pa. And if the steel is not needed in recreational equipment, the steelworker may well join the waitress in the bread line. Granted that we are a consumptive nation, economically speaking, about 16% of our gross national product is involved with providing for our leisure pursuits. Does the professor want to abolish even five percent of the GNP?

One would wish that the author of the article also had considered the social aspects of his proposal. It may well be what some consider "luxury consumption," but so are thousands of other items on sale. Recreation, whether it be mechanized or unmechanized is not a luxury. Few social scientists would disagree with the thesis that recreation is a necessity for all people and is particularly necessary for 85% of the nation's population who are restricted to life in



Editorials

Public Interest as an Afterthought



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While Congress was deciding whether to give the go-ahead to the trans-Alaska pipeline, they were constantly reminded that millions of dollars had already been invested in the controversial route. Purchased pipe was waiting and warping in Valdez. Some observers feel this massive investment prevented proper consideration of a less destructive alternative—an all land route through Canada.

In this year's Wyoming legislature, the solons debated whether to allow coal to be slurried from Wyoming to Arkansas using Wyoming's precious ground water resource as a transport medium. The industry involved, Energy Transportation Systems Inc., made it widely known at the legislature that considerable sums had already been invested in the project. Subsequently, ETSI was named as the firm that could tap Powder River Basin ground water for a

slurry line.

The same kind of special pleading is being used in the Montana coal fields. The draft environmental impact statement on the Crowded land (Sarpy Basin) spells out the large investment already made in the area by Westmoreland Resources and the Burlington Northern Railroad. The impact statement says that shifting coal mining to another area would cause undue cost and impact because mine service facilities and a railroad spur have already been constructed. Here, if the impact statement had been prepared back in 1970 when the initial actions were contemplated, the decision makers wouldn't have foreclosed so many options.

In all these cases, we have seen decision makers faced with the energy companies' tales of impending economic hardship if a decision is not made in their favor. The companies seem to

go where they damn well please, do what they want to do, and only ask for procedural approval as an afterthought when they are committed to a course of action. This is known in the vernacular as "government energy policy planning."

It's time that the decision makers stood up to the energy cartel and represented the public interest. Energy companies should not be given carte blanche in the name of the energy crisis. In order to accomplish this end we need strong laws such as Montana's new Utility Siting Act which requires adequate notification of an intent to develop before substantial investment is made. The Wyoming Senate just killed such a measure by adjourning without consideration.

Energy has become a national preoccupation. Now, more than ever before, when we are faced with an onslaught of new energy-related development proposals, it is time to serve notice that any commitment of resources to a project is a gamble. It is not a "foot in the door" insuring later approval.

—B.H.



urban areas. When the Kerner Commission report was issued some 10 years ago, it pointed out that there was, and is, a near crisis in recreation and that if it is not provided as a safety valve, the urban areas could erupt in disastrous anti-social conflict.

I'm sure that the professor is familiar with the economics of agriculture, but these are not the economics of recreation, nor are they the social aspects of recreation. I think that we should be reminded again that deprivation of reasonable recreation outlets will create a nationwide trauma of incredible proportions. Recreation should be placed in its proper priority in energy allocations. It is not at the bottom of the silo where the professor placed it.

As an alternative, I might suggest that the nation's energy situation could be alleviated and the job-slack taken up if all farmers were forced to go back to oxen and mules which would save diesel fuel, provide organic fertilizer to replace the petro-chemical based fertilizers and keep everybody too tired to want to go to the auto races. But I don't know anything about agricultural economics. I do know something about recreation.

Al Foster
Outdoor Writer
St. Louis, Missouri



Editors,
Congratulations for your inspired message on "Nuclear Energy!"

Half-learned are ever prevalent in this great country and now why don't you write an article on the dangers the Pilgrims chose when crossing the ocean.

Stop ignoring progress — and tell the Sierra Club to move into caves!

Glenn Stanwick
New Berlin, Wisc.
Fremont County Wyo. taxpayer

Dear Friends,

It was heartening to read in the Rapid City Journal about the discussions held during the Farmers Union Strip Mining Conference held here a week ago. Thank you folks for being here, and adding your knowledge and comments to the conference.

At the same time I get the frustrating feeling that too many people still have the attitude — "to hell with the environment, I want my job and all the comforts." Still, consumption HAS been cut. I hope that shows that most citizens are thinking ahead and are not accepting the "facts" put forth by the oil companies, explaining the energy crisis.

Stay in there fighting.

Sincerely,
Elizabeth Belton
Rapid City, S.C.

HIGH COUNTRY NEWS

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Editor Thomas A. Bell
Associate Editor Joan Nice
Field Editor Bruce Hamilton
Office Manager Mary Margaret Davis
Circulation Manager Marjorie Higley

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Legislators Are Not Responsive

The workings of state legislatures in some western states are a riddle to many observers and probably most constituents. In at least three western states — Utah, Idaho and Wyoming — it would sometimes be difficult to discern the difference between a sitting legislature of 1894 and 1974. And in Wyoming at least the debates on mineral severance taxes could have been lifted from the legislative journals of 1890.

It is no wonder that representative, democratic government is viewed with such jaundiced eyes by many of the younger generations, and at least a good part of all others.

Frankly, the legislators are not responsive to the times. And in this respect, they are not occupying positions of leadership but trail far behind a solid body of the electorate. They seem to fall into categories: they are there out of sincere desire to serve the public interest; they are there for the excitement, prestige, and Hell-raising; they are there to serve a selfish or vested interest; they are there because they have been there for the last 10, 20, or 30 years and the electorate doesn't forget the name on the ballot.

There is no other way to make a fair assessment. And when you add up the last three categories, more often than not you have a majority.

How else do you explain creaky, old codgers who complain about any kind of off-year session (to which they have become accustomed in the last ten biennial sessions)? How else the legislator who sits there looking and acting bored (and sleepy) — and frankly says so on occasion? How else explain the ones who are seen sometimes openly and sometimes covertly with the paid emissaries of big industry or big business?

It seems to be a miracle that any good legislation ever gets passed. That only seems to be because there is evidently just enough honest, conscientious legislators to make it work within tolerable limits. Otherwise the electorate would throw all the rascals out, and the good ones, too.

But operating just within tolerable limits isn't good enough for the times in which we now find ourselves. Horse and buggy legislators must someday give way to the 20th Century.

—T.B.

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Hidden Costs . . .

(Continued from page 1)

per cent of last year's total between them. In the east, the other principal coal-producing states are Pennsylvania, Ohio, Illinois, Indiana, Maryland, Virginia, Tennessee, and Alabama. Moving westward, there is production in Oklahoma, Arkansas, Iowa, Kansas and Missouri. The big reserves are in the Rocky Mountains and the Northern Plains.

All this coal is being mined by an estimated 150,000 men, which makes coal one of the most productive industries in the country. About 125,000 of those men belong to the United Mine Workers (our total membership, including retired miners, is about two hundred thousand). You can get some sense of how the coal industry has changed through mechanization by realizing that thirty years ago we were producing roughly the same amount of coal every year, but then it required a work force of about six hundred thousand to do it. Today the coal industry is about ninety-eight per cent mechanized.

More than half of the coal we produce goes to electric utilities. We deliver about ninety million tons to the steel industry. We export about fifty-seven million tons. We deliver the rest to a wide variety of other industries, particularly those producing chemicals, which rely heavily on coal and coal by-products.

Mainly because of mechanization and the high productivity that results from it, the price of coal traditionally has stayed low. That is the price to the consumer. The hidden cost of coal is the one we pay — the people who mine it. It is a high price. We get killed. Since the Bureau of Mines started keeping records of such things back in 1910, about eighty thousand of us have been killed. No other industry comes close to that. And we get black lung, from exposure to fine coal dust in the mine air. That problem has been with us through the history of the industry, but the companies and the company doctors have denied it even existed. They were still denying it in 1969 when the Public Health Service finally go around to releasing a study it had been sitting on for sixteen years that showed that one hundred thousand or more miners and retired miners were afflicted. And "afflicted" isn't a strong enough word. Dying of cancer is no worse. This old disease has become worse with mechanization because the high-speed mining machines stir the coal dust up much more intensely than in the old pick-and-shovel days. We have had our technological progress in coal, just as in other industries, but we are still being smothered to death.

There are other hidden costs in coal. Underground mining produces acid wastes and gob piles. Strip mining destroys mountains and poisons watersheds. It also poisons people's lives. There is probably nothing worse than knowing those big shovels are coming to take your land and the house you grew up in. If you are poor, you don't have too many ways to fight back, and it is tempting to take whatever they offer you. That brings me back to John Muir's idea about everything's being hitched together to everything else. You are poor in the first place because of the coal industry — if you live in an Appalachian coal camp. They make you poor and then they come and take advantage of it. That is a hidden cost. Anybody who has had to fight the coal industry knows what it is like to pay it.

"It also poison's people's lives. There is probably nothing worse than knowing those big shovels are coming to take your land and the house you grew up in."



Thick, flat beds of low-sulfur coal, lying close to the surface, have drawn attention to Wyoming's Powder River Basin. Here, the Belle Ayr Mine of AMAX, located about 20 miles south of Gillette, is a forerunner of many more huge operations. The coal is now being hauled by unit train to Colorado Public Service Co. at Pueblo. But by 1980, the company may be producing 30 million tons a year, bound for such destinations as Topeka, Kansas; Carson, Texas, and Siloam Springs, Arkansas.

We have learned from bitter experience that when you fight the coal industry, there are terrible odds against you. The concentration in the industry is extreme. Of course, the industry says this is ridiculous. The industry spokesmen are always pointing out that there are five thousand mines and 1,200 mining companies. And then they ask how any industry with that many companies in it could possibly be concentrated. They get away with this question because so few people know anything about the industry. But the simple fact is that fifteen companies produced 301,208,359 tons last year, which was fifty-one per cent of the total. The top fifty companies combined produced 400,000,000 tons — two-thirds of the total. I am not an economist, but you don't have to be to know that any industry which has half of its production controlled by fifteen companies is concentrated. It is more concentrated, in fact, than those figures indicate. And what is really important is to understand where the concentration goes — where the puppet strings lead to, to put it another way.

First, let me list the top fifteen companies by their coal industry names, and you can see how many you recognize. Peabody, Consolidation, Island Creek, Clinchfield, Ayrshire, U.S. Steel, Bethlehem, Eastern Associated, North American, Old Ben, Freeman & United Electric, Westmoreland, Pittsburg & Midway, Utah International; and, in fifteenth place, a group: Central Ohio Coal, Central Appalachian Coal, Windsor Power House Coal, Central Coal, and Southern Ohio Coal.

If you have ever heard more than five of those names, you must have grown up in Appalachia, or you have been studying the industry. But the next question is harder. Who owns those fifteen companies? How many of them speak for themselves?

Peabody Coal is a wholly-owned subsidiary of Kennecott Copper. Consolidation Coal is a wholly-owned subsidiary of Continental Oil. Island Creek is a wholly-owned subsidiary of Occidental Oil. Clinchfield is a wholly-owned subsidiary of the Pittston Company, which operates oil refineries and owns the Brink's armored car company so that it won't have to pay someone to carry its cash around. Ayrshire Coal is a wholly-owned subsidiary of American Metal Climax (Amox). U.S. Steel and Bethlehem own their own coal-mining operations. Eastern Associated is a division of Eastern Gas & Fuel. North American Coal is independent. (You have to get down to number nine on the list to find an independent coal company.) Old Ben is a wholly-owned subsidiary of Standard Oil of Ohio. Freeman Coal and United Electric are wholly-owned subsidiaries of General Dynamics. Westmoreland Coal is independent. Pittsburg & Midway is a wholly-owned subsidiary of Gulf Oil. Utah International is independent, but not strictly a coal company. It has worldwide operations in copper, iron ore, and other minerals. And that last group — Central Ohio Coal, Central Appalachian Coal, Windsor Power House, Central Coal, and Southern Ohio Coal — is a division of American Electric Power, the biggest private utility company in the world.

You realize very quickly that the coal industry is not what it seems to be at first glance. You have oil companies controlling two of the top three. Kennecott Copper controls the biggest of them all — a company which produced nearly seventy-two million tons last year and plans to double that by 1980. This one company, which gets about eighty per cent of its coal from strip mining, produces about twelve per cent of the industry total. In fact, Peabody alone out-produces the combined effort of the seven companies at the bottom of the top-fifteen list.

In the coal industry a very small number of very large companies not only sets the pace for the rest but also has the power to swamp them financially. What other industry has this same pattern? Everybody knows: oil. But not every-

"... a nation that runs on energy can't afford to fall into the hands of a cartel."

body knows that the oil industry effectively controls the coal industry. It shares that control to some degree with other industries — with Kennecott, with the steel people, and with utilities. I don't deny that they have their differences of opinion from time to time, and maybe even a little competition. But not very much competition, and less of it every day.

We are all slowly learning that the oil industry is more than that now. It has wide-ranging interests: coal, natural gas, uranium. It is an energy industry, though that is too polite a name. The Federal Trade Commission recently observed that "the industry operates much like a cartel" and filed suit to try to break it up. Exxon, Texaco, Gulf, Shell, Standard Oil of California, Atlantic-Richfield, Standard Oil of Indiana, and Mobil between them control fifty-one per cent of crude oil production, sixty-four per cent of crude oil reserves, fifty-eight per cent of all refining, fifty-nine per cent of refined gasoline, and fifty-five per cent of gasoline marketing. "A nation that runs on oil can't afford to run short," they say in their advertising. In the long run, it may be much more true that a nation that runs on energy can't afford to fall into the hands of a cartel. We already have some firsthand experience with shortages. But today's are nothing compared to tomorrow's. I think shortages are directly connected with concentration. The experience of the coal industry here is likely to be educational.

It should be admitted right off that concentration in the coal industry has had some notable advantages, even though we have not all been allowed to benefit from them. In the earlier part of this century the coal industry was about as mixed up as a pig's breakfast. Many thousands of companies competed with each other. You could get into the business without much money. If you could get a railroad to put some tracks near your mine and send you a few empty cars every now and then, you could fill them up and send them away and make a profit. The lower you kept the wages of your miners, the

more money you made. But there was chronic overproduction, and after 1920, when oil and natural gas began creeping into coal's heating markets, the overproduction got worse with every year. It was a logical thing for the bigger producers to work at getting still bigger and combining their assets through mergers so that they could carve out a secure place for themselves. They did that. They did it with increasing speed after World War II, when John L. Lewis forced mechanization into the mines by driving wages up to the point where it was cheaper to put machinery into the mines than it was to pay pick-and-shovel men.

Full-scale mechanization was something only big companies could afford. They paid for it out of working capital or with long-term loans at relatively favorable interest rates. The smaller companies couldn't keep up, even if they were relatively well managed. The record of the industry was too unstable to attract capital to small operations. An investor or a bank with a choice between a company with thirty-five mines and long-term contracts for its coal or a company with one or two mines that could be bankrupted by a strike at either of them — and that had only spot contracts — which do you think it would choose? But the trouble with this trend was that there was no stopping it. And now we have an industry in which the smaller independent operators have no leverage at all. But the irony is that the smaller companies are answerable to somebody. They are local, or nearly local. You can get at them. What is true of all the giants is that ordinary citizens can't get at them. They are not accountable to us.

They should be, because there are some important questions they should be forced to answer — and not just with the usual symphony of public relations they pump out whenever they are being criticized. First of all, they should be forced to explain how they are going to deal with the future energy needs of this country. Lately we have had truckloads of studies indicating one thing: by 1985, the United States will be running out of domestic oil and domestic gas,

and relying even more heavily than we already are on supplies imported from the Middle East. Most of the studies also give some passing mention to coal. Some of them point out that we will need to produce about 1.5 billion tons of it a year in order to keep our lights burning. That is more than double the six hundred million tons per year we produce now. In effect, it means building a whole new industry on top of the one we already have.

That might be possible if the coal industry were expanding production steadily, about ten per cent each year. But total production last year was less than in 1947. The National Coal Association forecast for 1973 shows little or no increase over 1972. At this point even that forecast seems to be off the mark; production is now running five to ten per cent behind last year, and it is likely to stay that way for some time. At this rate, there is no way that the coal industry will be producing 1.5 billion tons a year by 1985 — or for that matter, at any time after that.

Part of the reason is concentration. It is just not possible for independent coal companies to expand in competition with the giants. And some of the legislation that has been passed in recent years has not made it any easier for them. The 1969 Coal Mine Health and Safety Act has probably brought about the closing of numerous smaller mines which simply couldn't afford the investment in new equipment required by the very strict standards of the act. I don't think the act should have been less strict — if anything it could have been even tougher — but I wonder whether provisions should not have been made to provide some sort of relief to the smaller companies. I do not mean tax relief, which is equivalent to an outright subsidy; I can't see any value in rewarding a company for having had a consistent record of failing to provide a safe work place, as too many smaller companies did. But I think it might have been a good idea to establish something like a Small Mines Safety Bank that could have provided low-interest loans to be used for safety equipment and training. It may not be too late to do that, and it might have the effect of subsidizing competition.

The bigger companies, with effective control of their market, have no incentive to expand except when they are absolutely certain in advance of selling every ton of coal at acceptable prices. Their goal is to remove every last bit of risk from the business (except in the area of safety, where they are still willing to take all kinds of risks).

This was true even before they started being devoured by the oil industry; it is twice as true now. The oil industry knows that you don't refine more gasoline than you think the country will need, because if you do, the price will go down. In the days of competition you had less chance of manipulating the total production. These days, when competition in the oil industry is a joke, you can manipulate whatever you feel like manipulating, starting with the White House and the Interior Department and going on from there. The biggest oil-coal combines are sitting on vast reserves of readily recoverable coal. But that coal will come out of the ground only when the men who own it can be sure of the price they will get for it.

That is a simple objective, but it immediately becomes complicated. Coal, oil, and gas are largely interchangeable as far as electric utilities are concerned. They all produce Btu's. Many generating plants have been designed to take any or all three. If coal were still one hundred per cent competitive, there would be an incentive to mine more of it, sell it to the utilities at the lowest possible prices, and undercut oil and gas, which are increasingly difficult to find and bring to market, especially if

(Continued on page 6)



Feelings run high in the ranch country of southeastern Montana. In the meantime, the people of West Virginia are not happy with the turn of events either. Recently, a West Virginia legislative study criticized state government for not doing more to protect and promote that state's coal industry. And a bill recently introduced into the Legislature would not allow automatic utility rate increases due to the cost of hauling coal into West Virginia.
Photo by Terry Moore

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Friday, Feb. 15, 1974

Hidden Costs . . .

(Continued from page 5)

you have to go overseas to do it. But coal is not one hundred per cent competitive. It has problems of environmental damage and it is hard to transport efficiently. More importantly, however, it is being kept in the back room by the oil industry. When the other commodities are gone from the shelves, the industry will bring out coal. And it will sell for what the industry wants it to sell for.

Not long ago I was reading the testimony of John O'Leary, the director of licensing with the Atomic Energy Commission, before the Senate Interior Committee during its June hearings on energy problems. Mr. O'Leary is an economist by training. He was also director of the Bureau of Mines until someone in the White House decided that he was doing too good a job and got rid of him. He knows a great deal about oil companies and their interests in coal and other fuel sources. I was impressed by the clarity of something he said:

"Oil companies today have two overwhelming interests. The first is to increase the value of their domestic reserves, thereby enhancing their book value. The second is to liquidate as rapidly as possible their foreign holdings, thus maximizing current income from these holdings should these holdings for one reason or another be denied in the future.

"These strong and practical motivating forces run absolutely counter to the current public interest in energy research and development, which calls for rapid development of alternatives to conventional fuels. For the oil industry as a whole . . . a world without alternatives to conventional oil and gas is a better world than one which had available the sorts of alternatives that can be developed through research and development."

Not only is this a valuable summary of a

dangerous situation, but it happens that the very day after Mr. O'Leary made these remarks, the A.E.C. put out a huffy statement to the effect that these were O'Leary's personal views and had nothing to do with those of the A.E.C. The oil people must have been on the phone to all the right places the moment he finished testifying. They rarely have to listen to that kind of truth from anyone within the government these days.

I like Mr. O'Leary's language because he steers clear of any talk of conspiracy. Words like that still tend to put people off. Instead, he describes in matter-of-fact language a situation in which the oil industry is on a collision course with the rest of us, and he uses the word "practical" to describe the industry's motivation. I think he is right. What is practical for eight or ten companies may be disastrous for two hundred million people. In that situation, the industry obviously must yield. But when was the last time we saw the oil industry yielding?

For coal miners, this isn't just a little spare-time exercise in industry-baiting. The idea of an

reasons for being the way it is. If we have any warning to pass on to the rest of the country, it is to watch out for large industries with practical motivations. Mr. O'Leary could not have put it better.

Going back to what he was talking about, let us look at a few aspects of the current energy situation. We are already using twenty-four trillion cubic feet of natural gas per year, and finding less than half that much in our reserves. Demand has increased about seven per cent per year since World War II. There is no leveling off in sight. The Federal Power Commission says we have a sixty-five-year supply of natural gas, but that figure is based on a demand increase of 1.4 per cent a year, which is ridiculously out of date. Mr. O'Leary sees us running out of domestic gas reserves by 1986. With luck, assuming there are more undiscovered reserves than we think, we might make it to 1995.

We are not quite as badly off in oil reserves, but the forecast is no more encouraging. We were using 14.7 million barrels a day in 1970. We were producing 11.6 million barrels a day

"Unfortunately, common sense has almost nothing to do with the way we consume energy in America."

unrestrained oil-coal-gas-uranium cartel is terrifying to us. We already know what it is to work for people who think of themselves as above the law. The coal industry has always been that way. If you don't believe it, look at what is left of the company towns they built — and then sold to us when they no longer needed them. Look at the schools in eastern Kentucky. Look at the roads all over Appalachia. Look at the men who were battered and broken in the mines, and then forgotten. Look at the stripped hills and the rivers running red with acid. Look at all that, and look at the coal companies' tax returns, and then tell me the coal industry isn't above the law.

The coal industry has its own "practical"

from domestic wells. That gave us a deficit of 3.1 million barrels a day. We made it up with imports. Looking ahead, even the most conservative estimates for 1985 show domestic demand running at 30.2 million barrels a day, more than twice the consumption of 1970. With luck, domestic wells will be producing fifteen million barrels.

That is a deficit of 15.2 million barrels a day to be accounted for. It has to come from the Middle East, for the most part. In the back of my mind right now is the question: What are we going to be doing with all those B-52 bombers now that they are not bombing Cambodia any more? I don't think it is wrong to start worrying about what the Pentagon is up to — or will be up to. When we have too much dependence on foreign supply, as we now do, the temptation to go in there on some flimsy pretense and clean out all those sheiks will be strong. If the B-52's are too clumsy, we will do it with subversion and the C.I.A.

We don't have to do that, of course. We could be pouring money into research that would speed the day when we can convert coal to pipeline gas and synthetic gasoline. Very few people have come to grips with one vitally important fact. That fact is that we could run this country on coal, if we wanted to. Not tomorrow, no. But, with a sufficient commitment, we could be doing it before 1985.

Some time in the future, we will be running this country with fast-breeder nuclear reactors, though I won't live to see it. When my children are my age the first of these reactors will be making an impact. Beyond that, we will get the sun's energy harnessed. My children won't live to see that — at least not on a nationwide commercial scale. Meanwhile, we ought to be concentrating on figuring out how to use our conventional fuels. We have just about run out of gas. We are low on oil. What about coal?

We sit squarely on top of the largest readily available supply of coal on earth — about 1.3 trillion tons in all, with about 390 billion tons considered to be readily recoverable. That is a six-hundred year supply, at current consumption levels. Even when you double or triple our consumption, the supply will outlast any conceivable period of demand.

Coal overpowers gas and oil in terms of available reserves. The U.S. Geological Survey figures that coal accounts for 87.1 per cent of everything we have left. Oil is 3.5 per cent. Gas is 4.6 per cent. Sheer common sense should tell us



Decker Coal Co. is a joint venture between the large construction firm of Peter Kiewit & Sons and Pacific Power & Light Co. The mine, shown here in the initial stages, is located along the Tongue River just north of the Montana-Wyoming state line. The coal seam is 52 feet thick, just beneath the surface. Unit trains will haul some four million tons from here to Havanna, Ill., where it will be loaded on barges for shipment to Commonwealth Edison in Chicago. The mine is equipped to handle a much larger tonnage.

Photo by Terry Moore

to put all our efforts into developing coal.

Unfortunately, common sense has almost nothing to do with the way we consume energy in America. Not only do we consume more of it than we should — it is a widely quoted statistic that we add up to six per cent of the world's people and burn up about forty per cent of the world's energy — but we consume more of it all the time. Population increased fourteen per cent from 1961 to 1973; per-capita consumption of energy went up forty per cent. And while we are busily consuming more every day, we are burning up the wrong things. Oil and natural gas account for 77.9 per cent of our current total energy consumption — almost a direct inversion of the figure for available reserves. Coal accounts for 17.5 per cent. Hydroelectric and nuclear sources provide the remaining 4.6 per cent. It is not just because I am a coal miner that I consider this a ridiculous situation. It is also because I am a citizen. My interests as a citizen are not being served by this kind of arrangement.

There are various reasons why coal is low on the list of fuels currently supplying our energy requirements. The biggest reason has to do with simple expedience. Aside from the fact that coal is difficult to transport and requires large storage facilities, it also comes out of the ground mixed with various impurities. The most serious is sulphur. The burning of coal produces other impurities — fly ash, particulates — but electrostatic precipitators and redesigned boilers have largely brought those under control. But sulphur is not under control, and that is a very serious problem, since a high percentage of the coal we mine in the East is high-sulphur.

A few months ago I was in a meeting with some coal barons who were wringing their hands about the sulphur problem and how it was affecting their sales. I couldn't argue that it was having that effect, but I could still ask them a question: "Gentlemen, when did you first discover there was sulphur in coal?" I knew the answer as well as they did. The discovery goes back hundreds of years. The next question was: "Gentlemen, how much money has each of your companies spent researching ways to handle the sulphur problem?" They changed the subject.

I can understand that they would, because research is not something the coal industry has been comfortable with. Some coal companies will tell you that they have a research department, and in the annual report you will find a picture of a man in a white coat squinting at a piece of coal; but when you go to their headquarters and ask to see the research department, either they have nothing at all or their "research" consists of a technician working out of a converted broom closet fixed up with a Bunsen burner and two or three beakers. All he does by way of research is to analyze random samples coming out of the company's mines.

Having said that, in fairness I should point out that the coal industry's trade association has a research wing, Bituminous Coal Research, Inc., which carries out research for the entire industry. But B.C.R. did not get serious about sulphur problems until the mid-nineteen-sixties. Even then, its involvement was slight.

Further, the industry does not pay its own way in research. It siphons money, through contracts, from the federal Office of Coal Research, which is part of the Department of the Interior. Electric utilities have been criticized because they spend less than a fourth of one per cent of revenues on research. That puts them one-fourth of one per cent ahead of the typical coal company. The coal industry waits for Department of Interior to do it.

Unfortunately, Interior does not do it. The Office of Coal Research, which was lobbied into

Photo by Terry Moore



A quiet and relatively simple pastoral society is about to be swallowed in the rush to provide coal for energy. The Bill McKinny Family of Birney, Montana, is only one of many families whose lives and livelihoods will be disrupted as industrialization comes to the Northern Great Plains of Montana, Wyoming, and the Dakotas.

existence in 1960, is a storefront operation which hands out contracts but does little or no basic research itself. Compare it with the Atomic Energy Commission, which is pushing coal's principal competition after gas and oil reserves run out, and you can see the absurdity of our situation. During the current fiscal year, A.E.C. is operating on a budget of \$2.2 billion dollars. O.C.R. has a budget of fifty-eight million dollars. A.E.C. employs 5,800 people; O.C.R. thirty-seven.

About fifteen years ago, the utilities companies on the East Coast began moving away from coal. Gas was the ideal fuel — clean and cheap, and nobody said anything about running out of it. Oil was almost as good, especially since removing sulphur from oil is easier than removing it from coal — if you use low-sulphur residual fuel oil, you do not have to deal with the sulphur problem at all. The coal industry responded to the threat like the two men sitting at the table with their feet up telling each other, "Next week we've got to get organized."

The industry wanted the government to do more research but it would rather disappear than let the government exercise any control over the results. For the past fifteen years various people have been proposing a national fuels policy to replace the mess we have now. The coal industry said that would be fine, as long as the people administering such a policy had no actual influence. The coal industry's thinking on free enterprise is stubborn and basic — and, as far as I am concerned, about as enlightened as the robber barons who got the whole thing started a hundred years ago.

While the industry was fending off socialism (or what it thought would become socialism, given half a chance), it was losing its market. One by one the East Coast utilities switched — particularly to gas and residual fuel oil. The trend moved inland as well. Coal had sixty-

seven per cent of the utilities as recently as 1965. By 1972, that figure had dropped to fifty-four per cent.

It is still dropping, despite the coming shortages of other fuels. Meanwhile, residual fuel imports during the first three months of this year amounted to 192 million barrels, representing an 11.4 per cent increase over the same period in 1972. That increase alone, translated into terms of coal, would come to 4.7 million tons. That is more than eight hundred mining jobs.

Now the utilities are beginning to hesitate. It may be that fewer of them will convert — not because they don't want to, but because they can't be sure of future supplies of oil and gas. In at least one state — New York — the Public Service Commission has ordered utilities not to convert unless they retain the capability of switching back to coal. Naturally the coal industry is pleased with this development, though it did nothing to bring it about.

But this development needs to be looked at in context. And the context is that the key coal reserves being held for future use belong either to the oil industry or to corporations based in the western part of the United States. Western coal is generally of lower heat value than Eastern coal and it is still more remote from its markets, even though the country's growth continues moving westward. But Western coal is generally low-sulphur. And it sits there in gigantic quantities.

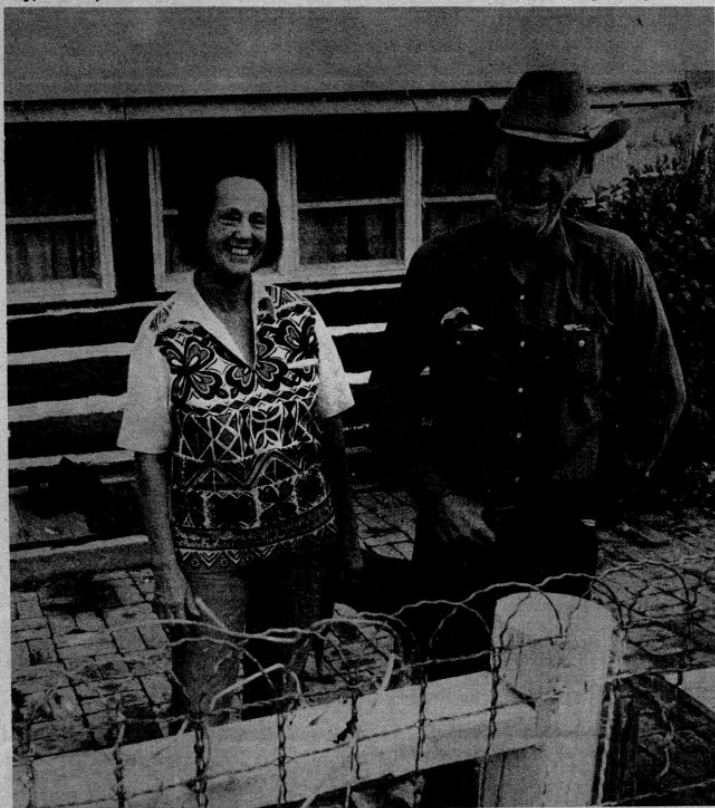
The Fort Union coal formation, which underlies eastern Montana and part of North Dakota, is the largest single block of coal in the world. Other coal formations underlying Wyoming, Colorado, New Mexico, and Arizona are enormous. Getting at them is easy, because they lie under less than three hundred feet of "overburden," as the strip-mining industry calls it. You

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"... their 'research' consists of a technician working out of a converted broom closet..."

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Photo by Terry Moore



"Some people can't understand that money is not everything. I told that man (from Consolidation Coal) that I knew he represented one of the biggest coal companies and that he was backed by one of the richest industries in the world, but no matter how much money they came up with, they would always be \$4.60 short of the price of my ranch."

Boyd and Anne Charter at their ranch home in the Bull Mountains of Montana.

Hidden Costs . . .

(Continued from page 7)

have none of the engineering requirements of a major underground mine, and you need a fraction of the lead time to get started. Your biggest problem is waiting for delivery of a dragline, which will cost you around twenty million dollars to buy. It's worth it. One man operates it, and the bucket picks up anywhere from fifteen to two hundred tons at a swoop (depending on the size of the machine). Even with a small dragline you can load two thousand tons an hour. That is more than a medium-sized Appalachian underground mine can load in a whole shift.

Obviously, Western mining has another attraction. Almost no workers. In the East, the general rule of thumb is that you need about two hundred men to get out a million tons a year. In fact that is the minimum work force needed. In the West, you can clear the same tonnage with ten men. If I were a coal baron, I'd be heading west. And they are. They are gloating about it, too. Ed Phelps, president of Peabody Coal, told his colleagues about it at the National Coal Association convention a few weeks ago: "Talking about Western coal reminds me of that old fisherman's prayer which you sometimes see printed on wooden plaques for sale in sporting goods stores. It goes, 'O Lord,

let me catch a fish so big that when I tell about it later, I won't even have to lie.' Western coal reserves are like that fish." That is true, and Ed Phelps's company has already leased as estimated 8.7 billion tons of Western coal. That would last 125 years if he shifted all his equipment west and maintained his current level of production. But his company is looking for more. Meanwhile, he is getting a good start by digging up the Navajo reservation at Black Mesa.

Ed Phelps's prize black fish isn't the biggest catch in the West. Burlington Northern has more than eleven billion tons, and Union Pacific has ten billion. Continental Oil has 8.1 billion. Amax has four billion; Westmoreland Coal, 1.2 billion; Northern American Coal, 2.6 billion; Montana Power, a billion. And there are numerous others we haven't begun to identify, because they buy up coal under assumed names and we do not have the manpower to track through all the records.

So the West sits there, waiting to be developed. There are huge mines in operation there now, of course. But they do not represent a fraction of what is coming if the energy cartel is allowed to pursue its own timetable. The ranchers and environmentalists who are fighting against strip mining in the Northern Plains haven't seen anything yet. Look at the tonnages I've just mentioned, and compare them against

"The ranchers and environmentalists: strip mining in the Northern Plains have

Montana's total production last year, which was about eight million tons. There are more than thirty billion tons of coal under Montana, and eight million tons is only two-tenths of one per cent of that. We have a long way to go, and if there is any ranchland left in Montana when Ed Phelps is finished, I will be very surprised.

I know all about what they promise: reclamation. "Land as good as it ever was." I know about the "reclamation" in Appalachia because I have to live with it. The reclamation in Appalachia — to borrow a phrase from a former officer of our union — is the small end of nothing, shaved down to a point.

This kind of talk usually gets me into trouble. Several thousand members of our union are stripmine employees and they don't like to hear their president talking like an environmentalist. What is more, the U.M.W.A. has launched an organizing drive in the West, on the theory that wherever there are men digging coal they should be members of the United Mine Workers. Whenever I say anything critical of the industry I find that it is reproduced and distributed with blinding speed among the men we are trying to organize. Strategically it would be much better to stay silent. But there is a tradition of speaking out in my union, and the westward trend of coal mining creates an issue we have to confront. In West Virginia and Kentucky, all over Appalachia, we found out, as our fathers found out before us, that when the companies no longer need you or want you, all you have left are your scars and the dust in your lungs. And in our hills, what we have left are the scars and the mud slides and the streams choked up with silt where we used to fish.

Sometimes it is much worse than that. Sometimes gas explodes underground and we lose as many as seventy-eight men at a time, as we did in West Virginia in 1968 at one of Consolidation Coal's mines. Or a dam made out of coal wastes lets go in the early morning, and 125 people are carried away and drowned or suffocated under millions of tons of mud. That was Buffalo Creek in February, 1972 — the Pittston Company's operation.

The moral is simple: beware of industrialists bearing gifts. Fifty years ago they promised to develop Appalachia, and they left it in wreckage. Now they promise to develop the Northern Plains. They will leave it in ruins. A dragline operator working seven days a week can make more than twenty-five thousand dollars a year. I can understand his enthusiasm for the industry he serves, but somewhere we have to find the common ground between miners and "eagle freaks."

"Eagle freaks" are what coal men call the ranchers who liked Montana and Wyoming the way they were before the draglines moved in. Recently I read a magazine report about the Northern Plains problem, and about a rancher named Boyd Charter, who decided he did not want to sell to Consolidation Coal. "Some people can't understand that money is not everything," Mr. Charter said. "I told that man that I knew he represented one of the biggest coal companies and that he was backed by one of the richest industries in the world, but no matter how much money they came up with, they would always be \$4.60 short of the price of my ranch." It doesn't matter that he is a rancher and I am a miner. I know what he means. If I owned my hills of West Virginia I would have kept the price \$4.60 higher than the industry could pay to strip them. But they had the price, and now we have the mud.

Environmentalists who are fighting against strip mining haven't seen anything yet."

The man from Consolidation Coal did not think much of Mr. Charter. "You can be as hard-boiled about this as you want. But we'll get you in the end." That's how he put it. I know that kind of language. I've heard it all my life.

Government, of course, ought to be protecting Mr. Charter's ranch just as it ought to be protecting my fishing, just as it ought to be protecting my safety. But that is not the kind of government we have in Washington. What we have in Washington now is a very well-oiled job-shuttle system. You start out in industry and shuttle over to government for a while and shuttle back into industry again. Let me just briefly cite some examples that come to mind:

— Carl Bagge starts out as a lawyer for the Sante Fe Railroad, then is appointed to the Federal Power Commission. He leaves the F.P.C. to become the president of the National Coal Association.

— Lawrence O'Connor starts out as director of the Independent Petroleum Association,

leaves to join the Federal Power Commission, then leaves the F.P.C. to become vice-president and chief Washington lobbyist for Standard Oil of Ohio (SOHIO).

— Albert Gore is defeated for reelection as a populist senator from Tennessee, leaves a lifetime of good works and becomes chairman of Island Creek Coal, Occidental Petroleum's wholly-owned subsidiary.

— Hollis Dole, Assistant Secretary of Interior for Mineral Resources, leaves government to become head of Colony Development Operation, an oil shale development consortium in which the principal company is Atlantic-Richfield, run by Robert O. Anderson, a major Republican fund-raiser and G.O.P. national committeeman from New Mexico. Dole is then appointed vice-president of the National Petroleum Council, the half-government, half-industry group that "advises" Interior on energy policy. In his new capacity he returns to Washington to speak for industry. All within a matter of weeks.

— Edward G. Failor, a lobbyist and Republican campaign strategist, is put in charge of safety enforcement at the Bureau of Mines. He leaves in June, 1972, to go to work for Charles

Colson of the White House, "monitoring" Democrats in Miami Beach.

— John B. Rigg leaves the Colorado Mining Association to become Interior Deputy Assistant Secretary for Mineral Programs.

— Harry Moffett serves the American Mining Congress as its chief Washington lobbyist for thirty-one years. Then he joins Interior as Deputy Assistant Secretary for Minerals and Energy Policy.

— Stephen Wakefield becomes Assistant Secretary of Interior after serving the oil industry as an attorney at Baker & Botts, the Houston law firm, where he represented Pennzoil, the firm which had a hand in "laundering" the Watergate money. At Interior, Mr. Wakefield dismisses any talk of antitrust action against the oil cartel. "A large number of people grasp at the most simplistic solutions," he says. "They must find a culprit. Industry, especially the largest companies, are obvious candidates."

You bet they are.

I would not claim that industry and government are one and the same, because my experience with the federal bureaucracy is that it is a world all to itself. But I do believe that industry and government are much closer together and much less distinguishable than they have a right to be. And I believe that when we talk about developing an intelligent energy policy in this country — a policy designed to serve us all, not just a corporate few — we'd better know that the odds are bad, and the size of the job is almost overwhelming.

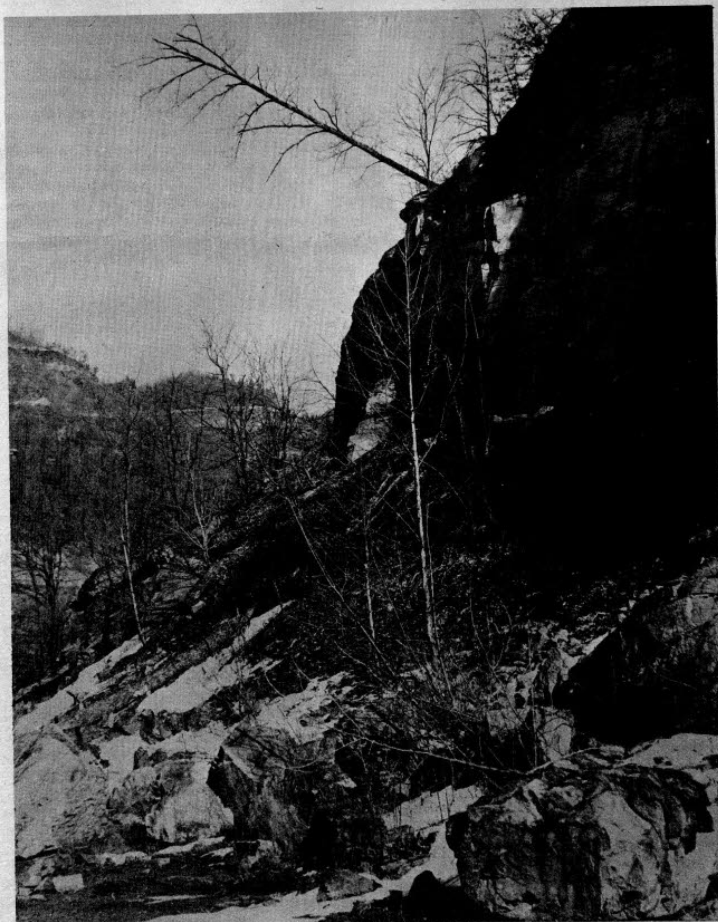
As far as coal is concerned, I define the job this way: we must greatly expand total production, on a crash basis, and aim at a goal of domestic energy self-sufficiency as quickly as possible.

We must not rush into development of the West at the expense of the East. A headlong commitment to super-scale Western mining means that over the next five years between twenty-five thousand and forty thousand mining jobs will be lost in the East. Of course, that concerns us as a union of miners. It concerns us also because we have lived through an unending depression in Appalachia, and we simply cannot sit silently and watch another one come rolling in on us. Finally it concerns us because you cannot turn underground coal production on and off like a light switch. If we arrive at a rational fuels policy five or six or seven years from now, and decide to strengthen our emphasis on Eastern mining, the mines will not be there, and neither will the miners.

We must not rush into development of the West at the expense of the West. Our western members need jobs, and we believe they should have them. But that does not mean that we want to see eastern Montana wiped out.

We owe it to ourselves and our children to develop a National Energy Policy that means something more than giveaway. To do that, we will have to make some very tough decisions that nobody is going to be entirely happy about. What I mean by that is that there must be some form of authority empowered to say no to the most powerful corporations in the United States. At the moment there is no such authority anywhere, and there will be none during this Administration.

I know that sounds pessimistic. I am not a pessimist but I would prefer to try to be realistic now than to be taken by surprise later.



West Virginia has already been hit by the destructive forces of strip mining. Here a highwall and the area just under it have begun to recover after ten years. But the highwall keeps breaking off since it was shattered years ago by blasting which preceded the bulldozer.



High Country News-9
Friday, Feb. 15, 1974

10-High Country News

Reckoning from Washington

by Lee Catterall

A Christmas, a month late, was swept aside before the gift-getters even had a chance to unknot the bows.

Standing empty-handed at the end with combat veterans and ex-POWs were trona companies, dam bust victims, winemakers and a few others, including a group of anonymous Chicagoans. Then, just before the final axe, every taxpayer in the country joined the disappointed list.

The Christmas tree, as opponents called the bill, simply became tophheavy and went the way of more ordinary Christmas trees at season's end.

The extravaganza began simply enough, as a House-passed bill to give tax breaks to POWs and other veterans. It headed toward the Senate floor in December and, as it became loaded down with a dozen unrelated amendments, it started drawing attention. A Christmas tree bill, Sen. William Proxmire (D-Wis.) said, is "one of the institutionalized kinds of bills in the House and Senate which is trotted out about once a year and to which is attached almost every kind of tax amendment — good and bad, big dollar amounts and small dollar amounts — that men can think up."

Proxmire called the POW tax bill a "model Christmas tree bill" even though it didn't reach the Senate floor until mid-January. (Some of that may be because a couple of Senate scrooges wrote letters in December to the Senate leadership in objection.) When it finally did reach the floor, those scrooges had their guns aimed at the amendments.

One of those — sponsored by the entire Wyoming delegation — would have increased the depletion allowance — reduced the taxes — for companies that mine trona, the mineral ore of soda ash and other things. Half the nation's trona comes from Wyoming, near Rock Springs.

Sen. Clifford Hansen took the floor to say the tax favor was one that had existed for years, through 1971, until a Treasury Department rule change.

Proxmire and Sen. William Hathaway (D-Me.) argued that allowing such treatment for trona could lead to allowing it for other minerals, and the \$2 million tax loss could turn into millions more. While Hansen pleaded for the "12,000 jobs at stake," Proxmire and Hathaway viewed the proposal as big daddyism toward an industry they regard as flourishing.

Hansen won that squabble, by a vote of 50 to 38, a signal to Proxmire et al that Christmas, late as it was, would not be spoiled.

Proxmire then challenged Hansen about his other amendment, an obscure change in the tax code relating to situations where a stockholder sells his shares back to the company but is paid in other kinds of securities rather than in cash. A group of Chicago lawyers asked Hansen to sponsor the amendment, but Hansen's office told this column in December he didn't know whom they represented. That question arose again.

"The critical question is who is this for," Proxmire said. "Why are we doing it?"

"I cannot give specific names," Hansen said. "I would be happy to get such information as I can." He added that wasn't as important as "the principle of taxation." Hathaway succeeded in amending the proposal more to his liking, and it subsequently passed unanimously.

Still, Sen. Edward Kennedy (D-Mass.) wanted the whole bill sent back from whence it came. When he realized he didn't have the votes, he got the Senate to approve a massive, \$4 billion amendment of his own, increasing personal income tax exemptions from \$750 to \$850 a year, and another to increase corporate taxes.

The weight of the Kennedy amendments finally toppled the bill, and the Senate voted 48 to 27 to send it back to the Finance Committee, of which Hansen is a member.

Editor's note: There has never been any question of trona companies falling upon hard times in the mining area of southwestern Wyoming. The tax play by Sen. Hansen (and endorsed by both Sen. Gale McGee and Rep. Teno Roncalio) can only be viewed as a raid on the treasury by

Are the Grizzlies Endangered?

Is the grizzly bear an endangered species in the lower 48 states? The answer depends on who you talk to. Grizzlies in and around Yellowstone National Park are estimated to number anywhere from 150 to 300 animals. Hunting pressure outside the park and a controversial grizzly management program within the park are pointed to as reasons for the decline of the grizzly in the area.

Dr. Frank Craighead, a wildlife biologist who has studied grizzly behavior for 10 years at Yellowstone, claims only about 100 grizzlies are left in the park. He maintains that the park's bear management program has cut the grizzly population in half. "If the present management program continues," Craighead says, "it will wipe the grizzlies out by about 1990." Craighead says, "Injuries (to park tourists) increased over 40% during the 1968-1972 period of revised management and there was one death in the summer of 1972."

The controversial park management program involves closing garbage dumps where the grizzlies once fed to force the bears to return to their natural habitat in remote areas of Yellowstone. In some cases, park rangers trapped and drugged bears to accomplish their ends. Yellowstone's research biologist, Glen F. Cole, says, "The data gathered so far show that the program has accomplished its goals of returning the grizzlies to natural conditions and reducing injuries to human beings."

Craighead disagrees. He says the dumps were closed too rapidly causing the bears to become an accented threat to humans. Craighead favored the "phase out" of dump feeding by providing supplemental rations such as elk carcasses during the transition period.

Added to this park dispute, is a plea to end grizzly hunting in the National Forests of the three states which surround Yellowstone Park. The Fund for the Animals, a national conservation group, has petitioned the Forest Service to ban hunting of grizzlies in the forests surrounding Yellowstone.

Game and fish departments in Montana and Wyoming feel "there is no biologically sound reason to ban hunting or, for that matter, to shorten the season." Hunters reported taking 15 grizzlies in Montana and three grizzlies in Wyoming during 1973.

Forest Service Chief John R. Maguire said he does not believe any action would be needed until after the National Academy of Science

completes its study of the grizzly in April. Bear hunting seasons do not open until the following fall. Maguire also said the Interior Department is considering putting the grizzly on its list of endangered species. This would ban hunting.

In the meantime the Fund for the Animals has taken their case to court. On Dec. 18, a lawsuit was filed in U.S. District Court in Washington demanding an environmental impact statement on the government's grizzly management program. The petition asks for a ban on hunting the bears in the Shoshone, Gallatin, Targhee and Teton national forests in Wyoming, Idaho and Montana.

Letters Needed

In recent press briefings, the Environmental Protection Agency has stated that it is receiving pressure from local chambers of commerce and other pro-development groups to repeal the non-deterioration decision by amending the Clean Air Act. This pressure has so far been aimed at senators in the clean air states.

Letters to your U.S. Senators are urgently needed saying we want to maintain our air quality in the states where it remains clean, and work toward cleaner air in those areas where it is dirtied. Stress these points: generation of cheap, coal-fired power in clean air states to supply the large dirty areas removes the incentive to develop clean energy sources. In addition, large population centers themselves should pay the costs of continued growth (pollution) and suffer the impacts of supplying power. It is those large centers that can do the most to reduce consumption and force alternative power sources in order to reduce pollution.

Two economic areas of the clean air regions will suffer if large power plants are allowed to proliferate in the regions — agriculture and tourism. Sulfur dioxide and trace elements emitted from coal-burning power plants have been shown to seriously damage agricultural crops. Falls of dirty smoke are not a drawing card for vacationers.

Alcohol Is Fuel

One of the possible long-range answers to the automobile gasoline shortage may be coal, or wood — or even garbage. Any of those products can be converted into alcohol products, such as methanol, which burns effectively in today's automobiles without mechanical alternations.

Doctors T.B. Reed and R.M. Lerner of MIT's Lincoln Laboratory report that methanol, for example, when added to gasoline, produces a clean burning, low polluting motor fuel. Also in its favor, alcohol products made from coal are comparatively inexpensive.

The Detroit auto makers say they've been aware of this all along, but they argue that methanol has only about half the energy value of gasoline. In other words, a car which runs for 200 miles on a tank of gasoline will only run about 100 miles on a tank of methanol.

But Doctors Reed and Lerner point out in an article in *Science* magazine that the idea isn't to replace gasoline with alcohol, but merely to stretch it out. About a 10% solution of methanol added to gasoline, they say, will not only improve the overall costs, but will also make the gasoline burn cleaner.

The irony of the situation is that gasoline can also be produced from coal, and the decision on which route to take will ultimately be an economic one, not an environmental one, say the scientists. :: EARTH NEWS

The Program Management Team of the Northern Great Plains Resources Program will hold a meeting in Buffalo, Wyoming, on Feb. 21 and 22. Thursday meeting will be held at the American Legion Hall beginning at 8:30 AM. A number of issues will be discussed, including the future of NGPRP, legal constraints on coal development, and lawsuits concerning development.

Reckoning

big companies looking for an unexpected "Christmas gift." Texasgulf is now constructing a new \$75 million trona mine and processing plant in the area. It joins FMC Corporation, Stauffer Chemical Co. and Allied Chemical Corporation, the nation's largest producer of soda ash. The huge deposits of naturally occurring trona in Wyoming now supply more than half of the total production of soda ash in the country. It is used in making glass, detergents, and paper pulp.



A siting act to control large energy and industrial installations in Wyoming was lost when the State Senate refused to take action on a House passed bill. Proposals and discussions on five large powerplants and four gasification plants for Wyoming have already taken place, but the need could not be demonstrated to the Wyoming Senate leadership. At the present time, the Public Service Commission has some control over power plant sites but no control over gasification plants or other large industrial installations. Montana has a realistically tough energy installation siting act and is now in the process of amending that act to include other installations.



Emphasis ENERGY



in the Northern Rockies and Great Plains

Considerable interest is being shown in geothermal leasing in the Northwest. Feb. 1 lease openings by the Bureau of Land Management drew 607 applications for leases on public lands in Oregon. Most of them were on the Willamette National Forest and the Deschutes National Forest. The State of Washington had 151 applications, mostly on the Gifford Pinchot National Forest. Most of Idaho's 265 applications were in the eastern part of the state. Sixty were in the Raft River Area and 116 were in the Island Park area adjacent to Yellowstone National Park.

The head of the geohydrology section of Washington State University's engineering college, Dr. James W. Crosby, says there are indications that geothermal sources "once developed, could exceed the electrical power output of all Pacific Northwest hydroelectric dams." He says that use of geothermal energy could double the Northwest's energy supplies in 10 to 20 years.

The Atomic Energy Commission has admitted a "potential environmental problem" at its Rocky Flats nuclear weapons plant 16 miles northwest of Denver. The danger there is plutonium, carried by the wind from a leaky adjacent storage facility several years ago. While previous reports had described the problem as "extremely minute quantities" of the radioactive element, AEC officials revealed at a meeting with state officials in early February that about 16 grams of plutonium within the plant's fences is held in the ground only by vegetative cover. Plutonium can cause cancer in man when inhaled, even in minute amounts.

William Colston, manager of the AEC area office at Rocky Flats says he knows "we have a potential environmental problem from air movement of affected soil." But he says the plutonium has been stable for some time, due primarily to good ground cover in that area.

Dames & Moore, an engineering consultant firm from Seattle, has identified 20 Pacific Northwest sites suitable for 1,100-megawatt nuclear generating plants. Two of the sites are in Montana, with others in Idaho, Washington and Oregon. Sites were surveyed for water availability, geology, transportation, proximity to existing transmission lines, weather, and ecology. The report said each site was evaluated for the "maximum number of 1,100-megawatt light water reactor units it could economically and technically accommodate."

Standard Oil of Indiana and Gulf Oil Corp., the winners of bidding for the first of six federal oil shale lease tracts, have released a tentative mining plan. The plan says up to 4,000 construction workers will be needed to get a 50,000 barrel a day operation in western Colorado underway by 1981. Long range plans call for the production of 300,000 barrels a day, requiring 1,400 miners and 400 shale-processing workers after construction is completed.

The companies plan an open pit mine 1,000 feet deep and nearly a mile long. They also forecast a room and pillar underground mine on the same 5,089 acre tract. Government observers feel the development may require a \$300 million investment.

The Atomic Energy Commission, the Bureau of Mines and the Department of Interior are working together to conduct a massive hydraulic fracturing experiment in the same tight gas formations in which the Rio Blanco, Colo., nuclear experiment was performed. The object is to make a comparison between nuclear and non-nuclear technology. Government scientists aided by private industry will compare the cost of gas at the well head, the rate of recovery, and the amount of gas which can be recovered by each method.

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The Hot Line

across the country

An Ohio electric utility, exercising its right of eminent domain, has been stopped from crossing a proposed 23,000-acre federal-state park. The utility wanted to run a 345,000-volt transmission line across the proposed Cuyahoga Valley Park and Preserve. Probate Judge Ralph Locher, a former Cleveland mayor, said the line would violate the natural area needed by "... the soul of man which has very significant, almost insatiable, psychological needs which only nature can satisfy. The city dweller longs for solitude and beauty..." The judge noted that safe, feasible alternative routes existed. His ruling is believed to be a first in the U.S. setting the interests of the public in park land over a proprietary interest of a utility.

Bechtel Company has taken a contract with the National Science Foundation to do a study defining energy self-sufficiency, determining if the U.S. can become self-sufficient, and identifying possible bottlenecks.

A bill by Alaska Sen. Mike Gravel (S 2806) would place a Btu tax on fossil fuels and electricity. Receipts from the tax would be used for energy research and development. Federal Energy Administrator William Simon spoke out against the bill saying such a tax would discourage the use of coal, and the beneficiaries of the R & D would be future generations and not present users!

A pilot plant for controlling sulfur dioxide emissions has been finished at Bunker Hill Company's lead smelter at Kellogg, Idaho. The plant is part of the research effort of the U.S. Bureau of Mines to reduce sulfur emissions. The process, known as the citrate system, was developed by the Bureau of Mines in work done at the Salt Lake Metallurgy Research Center.

Washington County, Mich., is considering a county-wide garbage-to-energy conversion system. The existing collection system would be used, but instead of dumping the garbage in a land fill, the waste would be burned in boilers to generate electricity. The University of Michigan at Ann Arbor is interested in contracting for the energy produced.

Ann Arbor's landfill has a life expectancy of only 10 more years at current dumping rates. The ash residue from the new system would also be dumped in the landfill, but it constitutes only five per cent of the original waste volume.

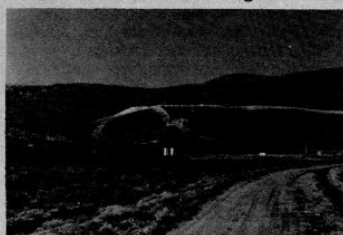
The Atomic Energy Commission has released a report critical of nuclear power plant safety. The report says that in a 17-month period beginning Jan. 1, 1972, there were 800 "safety related abnormal occurrences." Of these, the report said, "Many of the incidents had broad generic applicability and potentially significant consequences." About one-fourth of the problems were from design or manufacturing errors. The rest were caused by operator errors, improper maintenance, incorrect construction, or a combination. (Ed. note: There are only 36 nuclear powerplants now operating. As of Jan. 31, 1971, there were 21. So the "abnormal occurrences" with "potentially significant consequences" would have occurred in a relatively small number of nuclear plants. There are now approximately 150 nuclear plants under construction or on order. The AEC estimates that by the year 2000 there will be 1,000 plants operating. It is interesting to speculate when an abnormal occurrence will turn into a full-blown catastrophe.)



12-High Country News
Friday, Feb. 15, 1974

BLM Tightens Controls

The Bureau of Land Management, administrator of 23 million acres of public lands in Utah, is initiating a program designed to put an end to serious environmental degradation by oil and gas lessees. Utah's oil and gas interests



have accused the BLM of making leasing requirements more stringent, a charge the BLM counters by pointing out that oil and gas leasing will not be more limited, but only restricted in certain areas. Leasing policies have not been modified, but only clarified, which should expedite oil and gas leasing.

In order to prevent leasing which might irreversibly preclude future use by other activities, BLM lands have been placed into four categories: 1) open category, 2) open subject to special stipulations, 3) open areas with no surface occupancy stipulation, and 4) suspended or no lease category. Restrictions are designed to more readily protect conflicting valuable resources such as forests, livestock range, roadless areas, recreational opportunities, wild and scenic rivers, archeological sites, and wildlife habitats such as nesting areas, deer winter range, bighorn sheep, wild horse and burro ranges, and areas where the rare bristlecone pine grows.

Utah Geological and Mineral Survey, State Oil and Gas Division of the Department of Natural Resources, and the State Land Board have accused the federal agency of "locking up" 55% of BLM lands, which, when added to previous withdrawals for national parks, monuments, fish and wildlife areas, national forests, military installations, and reclamation projects, results in two-thirds of the State no longer open to oil and gas leasing.

The BLM refutes that argument by pointing out that 78%, or 18.3 million acres, of BLM land in Utah is open to oil and gas leasing, providing that environmental stipulations are agreed upon. At the present time, the federal agency has issued over 14,600 leases on almost 13 million acres found in all four land categories, with fewer than 100 wells having been drilled in 1973.

The BLM hopes that with the formalization of land categories, some of the massive environmental impacts which sometimes accompany oil and gas development will be prevented in the future. With careful planning, oil and gas production could be made compatible with other equally important resources found on BLM lands. Terry McGowan, BLM Chief of the Division of Resources for Utah, advocates the de-



velopment of oil and gas resources on national resource lands. Oil and gas reserves only occur in certain areas, therefore, development is limited to those areas. However, the situation is the same for other unique values. Potential primitive areas, archeological sites, wild rivers, etc., are valuable to man because of the natural ecological associations of plants, animals, and land and water which made these areas unique. They must be protected wherever they occur. BLM's responsibility is for assuring rational development of Utah's oil and gas resources on public lands in balance with other resources.

During the oil and gas exploration phase, the land is often severely impacted by a honeycomb of trails cut into the terrain by trucking in exceedingly heavy drilling equipment, thereby causing significant erosion to take place. Land is also eroded when the tops of rolling hills are bulldozed in order to prepare drilling pads and



when pipelines are improperly sited. Erosion can be avoided by limiting access trails, by monitoring drill pads, and by carefully siting pipelines. Other BLM goals are to work with other agencies to prevent unnecessary air pollution from the flaring of gas and the burning of solidified hydrocarbons. They also want to prevent noxious wastes from being flushed into living streams, thereby killing fish, riparian vegetation, and wildlife habitat for a number of miles downstream. Strict stipulations for leases can help protect other values from the impacts of drill pads, sump ponds, and "mud pits," where oil rig crews dump toxic material and litter, and where thousands of birds and waterfowl become mired every year.

Only 12%, or 2.7 million acres in Utah, are presently suspended from further oil and gas



leasing pending further planning or special studies. Included in that category are potential and existing wild and scenic river corridors, primitive areas, natural areas, and the 1.1 million acres Glen Canyon National Recreation Area, which comprises 40% of the land in that category.

Another BLM classification which includes 2.3 million acres, or 10% of BLM administered lands in Utah requires exploratory oil and gas drilling by whipstock (slant) methods in order to preserve special values such as camping and picnic areas, research areas, scenic areas, recreation and public purposes (R & PP) patents and leases, critical wildlife habitat, significant

Production of oil and gas on National Resource Lands administered by the Bureau of Land Management has not been without significant environmental impact. These photos taken in Sublette County, Wyoming, show the duplication of rights-of-way for seismographing, access roads and pipelines; scarring of the land at drilling sites; oil spills, and debris and garbage around drilling sites.

Photos by John Fandek

historical, archeological, and paleontological areas.

The BLM welcomes the help of environmentalists in identifying areas which need protection. The BLM admits that they may not be aware of all significant values found on lands administered by them, but the agency is attempting to set up a system which can deal with those significant values once they are identified. Some of the areas slated for protection and study by the BLM are the Colorado, Green, Dolores, Muddy, and Dirty Devil rivers, the Bonneville Salt Flats, the San Rafael Swell, the Deep Creek and Wahwah mountains, the House Range, Canaan Mountain, Grand Gulch, the Escalante and the Paria Primitive Area.



Ask Wilderness Review

Fifteen national conservation organizations have backed amendments to the BLM Organic Act (S 424 and S 1041) which would provide for a wilderness area review of National Resource Lands. Sen. Lee Metcalf of Montana intends to propose two short amendments which would accomplish the review.

Your help is needed! Write, telephone or visit the senators listed below in support of the amendments:

Following are members of the Senate Committee on Interior and Insular Affairs, soon to mark-up a final version of the BLM Organic Act:

Henry M. Jackson-Wash.
Alan Bible-Nev.
Frank Church-Idaho
Lee Metcalf-Mont.
J. Bennett Johnston, Jr.-La.
James Abourezk-S. Dak.
Floyd K. Haskell-Colo.

Dewey F. Bartlett-Okla.
Gaylord Nelson-Wisc.
Paul J. Fannin-Ariz.
Clifford P. Hansen-Wyo.
Mark O. Hatfield-Oreg.
James L. Buckley-N.Y.
James A. McClure-Idaho



Western Roundup

Pressure Mounts to Bring Back Poisons

Predator poisons may be making a comeback. The Environmental Protection Agency (EPA) has approved an "experimental use" program for M-44s (spring-loaded cyanide "coyote getters") for the state of Texas. The National Audubon Society has reviewed the Texas program and concludes, "The plans which they have drawn up for Texas are totally inadequate and amount to general use of the M-44 in much of the state. The worst thing is that the other western states will also be applying to participate in the program, so the Texas program will set a very bad precedent."

California, South Dakota and Wyoming have already applied to EPA for permission to use cyanide against coyotes. The Wyoming Attorney General's Office has threatened to take EPA to court over the predator control issue. A spokesman for the office said as many as 20 states interested in the issue could file "friend of the court briefs" and thus become involved in the action.

In early 1972 predator poisons were banned from inter-state sale and use on public lands by a Presidential Executive Order. The EPA program would allow Texas to use one poison, cyanide, on private lands. The program would be administered by the Texas Agriculture Department. Audubon staff members see the Texas program as a "foot in the door" that may lead to the rescinding of the executive ban.

"The main point to stress, however, is that the public simply will not tolerate the use of poisons to kill predators. We need to let EPA know that the public stands firmly behind the poison ban," said Cynthia Wilson, Audubon Washington Representative.

On the Congressional front, national legislation on predator control is under consideration. Twenty-one western Senators have sent a letter to Sec. of Interior Rogers C.B. Morton highly critical of Interior's predator control program which uses no poisons. The letter read in part, "Through the dissemination of misleading information and distorted analyses, our efforts to obtain cooperative assistance from the Department of the Interior have been stymied."

Morton and the Senators are scheduled to meet Feb. 21 to discuss Interior's program. Conservationists and wool growers alike are busy sending in letters to try and influence the outcome of this meeting.

Wyo. Lawmakers Act on Key Bills

A subdivision bill, passed by the Wyoming House, was killed by Senate vote before the Legislature adjourned early this week. The bill would have covered subdivisions of 10 acres or less. One senator said the realtors had originally favored the bill but later opposed it.

Gaining acceptance by the Wyoming Legislature was a slurry pipeline bill. The measure gained significance early in the session when it was learned that Energy Transportation Systems, Inc., a New Jersey corporation and part of a consortium with Peabody Coal, wanted to build a 1,000-mile pipeline to Arkansas. The slurry line would use 15,000 acre feet of water a year to carry 25 million tons of Wyoming coal. The water would come from underground reservoirs in eastern Wyoming.

The bill, as passed, would allow the slurry line to Arkansas but would prohibit other underground water withdrawals until April 1, 1975. The Arkansas slurry line is proposed for completion in 1977. It is to feed four 750-megawatt units of a new Arkansas Power & Light plant.

Utah Land Use Bill Called "Mush"

The Utah Legislature passed a weak and watered-down land use planning bill before adjourning. One legislator described it as "a bowl of mush." The bill will create a nine-member planning commission appointed by the governor. The Commission is responsible for drafting a state land use plan and with helping local communities plan with funds and expertise.

Deleted were provisions requiring counties to adopt land use plans and allowing state officials to withhold funds from counties allowing abusive land practices.

Also passed by the Utah Legislature was a bill which would allow compensation to dependants as a result of environmental lawsuits.

Environmentalist Denied Position

A man who served two terms as the president of the Idaho Wildlife Federation was accused of being an "extreme environmentalist" and rejected as an Idaho Fish and Game Commissioner. Robert G. Thomas was appointed by Gov. Cecil D. Andrus nine months ago. His appointment had to be confirmed by the Idaho Senate. Opponents voted him down while praising him as a man of integrity. Two senators said they opposed him because he was more concerned for environmental considerations than for economic considerations.

Thomas said that as a Fish and Game Commissioner he stood behind all license buyers whether they wore "logging boots, tennis shoes or cowboy boots."

Photo by Verne Huser

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Entering Pistol Creek Rapids on the fabled Middle Fork of the Salmon River in the Idaho Primitive Area. This wild river and the Main Salmon River into which it runs are so popular for floating that the U.S. Forest Service has announced a reservation system for both. This will be the fourth year for reservations on the Middle Fork but the first for the Main Salmon. Because congestion is worst on weekends and holidays, the reservation system for float boating is intended to relieve congestion and provide everyone an opportunity to enjoy the river experience without crowding. Reservations can be made by contacting the North Fork Ranger District, Salmon National Forest, North Fork, Idaho 83466.

Briefly noted . . .

Rep. Wayne Owens, a Democrat who walked across much of Utah to a seat in the U.S. House, has taken a strong lead in the race for the Senate seat being vacated by retiring Sen. Wallace Bennett. A poll conducted by the *Deseret News* gave Owens about one-third of the polling choice. There are eight announced candidates. Owens has been a strong supporter of various environmental issues.

The Blackfoot Indian Tribe have proposed trading 140,000 acres of Lewis & Clark National Forest in Montana for their irrigation impoundment rights in Glacier National Park. The Indians claim special rights in the park which have been upheld in court.

Grand Teton National Park marked up over three million visitors in 1973, as it had for the three years previously. However, last year's visitation fell short of the record 3,352,464 visits in 1970. California visitors led the list over all other states, including Wyoming. Backcountry use increased 6.5% over 1972.

An 88-pound grey wolf was killed by a ranch hand near Huntington, Oregon, on Jan. 30. Huntington is on the Oregon side of the Snake River, along U.S. Highway 30 between Boise, Idaho, and Baker, Oregon. The wolf measured 5 feet 9 inches long.

Montana's Governor Thomas Judge has asked the Legislature for authority to suspend all pending Yellowstone Basin water use permits. Already recognized as one of the critical pieces of environmental legislation, the bill may shape Montana's future for decades to come. The bill excludes Montana Power Co. facilities at Colstrip and most agricultural users from the moratorium. It also encourages reservations by state departments to guarantee water for wildlife, agriculture and municipalities.

Utah Gov. Calvin Rampton has asked federal officials to make "no hard and fast decisions" regarding public lands in Utah until the state completes its land use plan. In a letter to the officials, Rampton asked for no more permanent classifications such as wilderness areas or national parks until "we see whether or not such recommendations can be made part of a single Utah Land Use Plan."

14-High Country News
Friday, Feb. 15, 1974

Thoughts from the Distaff Corner

by Marge Higley

Oil and the Arab countries have been much in the news lately, so maybe that's why I got to thinking about Ali Baba, of Arabian Nights fame.

Ali Baba, as you may remember, was the poor fellow who hid behind a rock as forty thieves brought their treasure-laden camel caravan to a halt at a nearby grove of trees. From his hiding place, Ali watched as the chieftan of the thieves shouted "Open, Sesame," and a cave opened up in the side of the mountain. The treasure was unloaded into the cave, and as soon as the men and animals departed, Ali Baba approached the mountain and shouted "Open, Sesame!"

Now, today, it would take more than a couple of magic words to open up such a treasure trove, but for Ali it worked just fine. The cave opened at his command and he beheld more riches than he had ever dreamed of. He knew that the thieves must have been many years accumulating it. Because there was so much, he reasoned that they would never miss it, so he took home all that he could carry.

His wife was very pleased at this sudden good fortune. Now at last she was able to have some of the nicer things in life. When their supply dwindled, Ali would make another trip to the cave to replenish it. They soon grew so accustomed to the luxuries of life that the trips to the cave had to be made quite often.

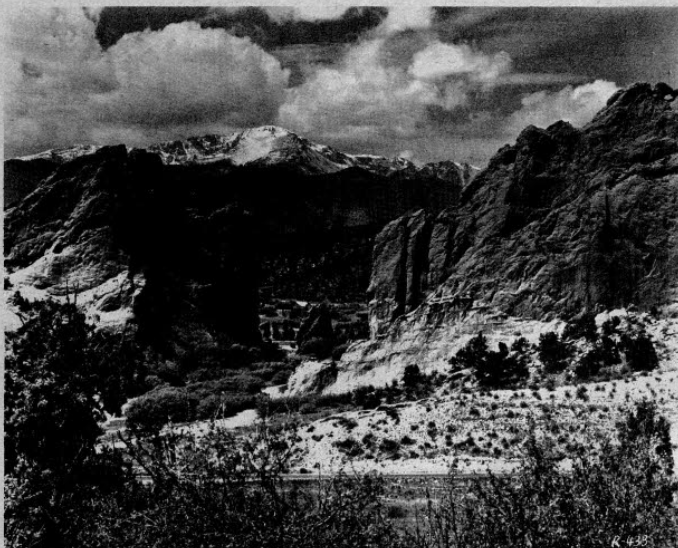
Even so, catastrophe might have been averted had it not been for Ali's greedy brother, Cassim. Cassim's wife was jealous of all the fine things that Ali's wife now possessed, so Cassim threatened to go to the authorities if Ali didn't tell his secret. Not wishing to share with the authorities, Ali gave in. The next day Cassim led a string of camels into the cave and loaded them high with treasure.

Unfortunately, Cassim was not only greedy, he was also stupid. There he was, in the cave, with a fortune literally in his grasp — but he forgot the magic words, so he couldn't get out of the cave! When the thieves found him there he tried to throw the blame on his brother, but the wily thieves first did away with Cassim, and then went in search of Ali.

They devised a rather complex scheme. Pretending to be an oil merchant, the chieftan loaded forty oil jars (in those days it was sold by the jar, not by the barrel) onto twenty camels, and headed for Ali's house. Only one jar, however, really contained oil. Each of the other thirty-nine jars held one of the thieves. The chieftan feigned weariness, and asked Ali if he and his camels could take shelter there for the night. Ali, impressed by the man's apparent wealth and prosperity, hastened to agree, little dreaming that he was sheltering the thieves whose riches he had been spending so freely.

Now Ali had a faithful servant, Morgiana, who just happened to run out of oil for the lamps, so she decided to borrow a few drops from the oil merchant's caravan. As she drew near, she overheard the thieves plotting to emerge from the jars to kill Ali and all his household. Quickly, she heated up the one jar which really contained oil, and proceeded to pour boiling oil from it into each of the other thirty-nine jars, effectively foiling the plot. Then she told Ali, who did away with the chieftan, and rewarded Morgiana by taking her into the family as a favored daughter-in-law.

Ali and Mrs. Baba and all their sons and daughters and grandchildren lived in great luxury for many years, from the loot in the cave. But, sad to say, they didn't "live happily ever after," because Ali was perhaps even more stupid than his brother Cassim. It never occurred to him that, with so many people thoughtlessly squandering it, even so vast an underground treasure couldn't last forever!



The words of "America, The Beautiful" were written in the summer of 1893 by Katherine Lee Bates upon her return from her first trip to the summit of Pike's Peak in Colorado, where the opening lines had been inspired by the beautiful view of "spacious skies" and "purple mountain majesties."

New Bottle Needs Less Energy

Monsanto Commercial Products Co. claims that it can make a beverage container which demands less of the earth's resources than steel, glass or aluminum competitors. In addition, Monsanto's "Lopac" containers are light, durable, and don't absorb tastes, the company says.

The bottles are made from previously unutilized and discarded by-products of fossil fuel — ethylene and propylene. They weigh about as much as aluminum. They are one-eighth the weight of glass containers and one-half the weight of steel containers of the same size. Their lightness is expected to reduce shipping and recycling costs.

Lopac requires less water and less energy in manufacturing than the other three materials.

In processing, air emissions of carbon monoxide, hydrocarbons, nitrogen dioxide, sulfur dioxide and particulate matter are about the same for Lopac as the amounts produced by steel, glass and aluminum manufacture.

Monsanto hasn't determined whether Lopac containers could be returned, washed and refilled. They do know that the material can be reprocessed — ground, melted and used to make new bottles — at an energy cost lower than the cost of reprocessing containers now on supermarket shelves.

Two bottling companies have approved the containers. Monsanto plans to market them later this year.

Bulletin Board

The Wilderness Idea is an excellent educational presentation on the critical wilderness issues facing the country. It will be presented by NBC and educational TV stations as a series of 20 panel discussions. If this timely series is not being aired in your area, ask your local NBC or educational stations to write and request the series from WRC-TV, 4001 Nebraska Ave., Washington, D.C. 20016. Request your local station to schedule the programs at a convenient hour.

The conservation movement needs the support of philatelists as well as philanthropists. If you are not saving commemorative stamps for your own collection, save them to help protect Florida's bald eagles. The Florida Audubon Society is collecting stamps for resale to dealers. The proceeds will be used to fund a bald eagle protection project.

Clip off cancelled stamps with a half inch margin all around them. In the Northern Rockies mail these stamps to Murie Audubon, Box 2112, Casper, WY 82601. When a large number have been collected, they will be sent to the Florida Society.

The Environmental Protection Agency has published a directory about itself. The agency says the pamphlet will "help people outside EPA find the insiders who can answer their questions." Write for "Finding Your Way Through EPA," U.S. Government Printing Office, Washington, D.C. 20402. It's free.

New Mexico Citizens for Clean Air and Water is selling a book of Bill Mauldin's best environmental cartoons. Mauldin has donated all proceeds from the book to the organization's Legal-Technical Fund. Send \$2.25 (includes postage) to Clean Air and Water, 400 Canyon Road, Santa Fe, NM 87501.

The National Education Association, along with numerous national conservation groups, is sponsoring a campaign to save whales. Classroom sets of 25 kits and one poster can be obtained from Project Jonah, Box 476, Bolinas, CA 94924, for \$3. The campaign is a worldwide effort to enlist the aid of children in writing letters to Japan and Russia, protesting the killing of whales.

Using the West

Tri-State Fossil Fuels

Speakers at the Tri-State Fossil Fuels Conference in Denver last month agreed that the energy crisis is real.

They moved quickly from that assumption to an analysis of new and buried technologies for extracting the coal, shale oil and natural gas from Colorado, Wyoming and Utah. About 600 people attended the conference organized by the Edward Teller Center for Science, Technology and Political Thought.

The development schemes floated amid two recurrent themes. First, the idea expressed by Dr. Petr Beckmann that Americans "do not want or need to change their lifestyle." Beckmann, a professor of engineering at the University of Colorado, spoke on "Demand Reduction and Conservation Issues of Energy Usage."

"I speak for those environmentalists who want clean air and water, not those afflicted with technomania," Beckmann said.

A second idea expressed by several speakers was that, this time, energy development is going to be done right. Dr. Betty Willard, a

member of the President's Council on Environmental Quality, spoke of development decisions based upon a tripod — with ecology, economy and technology providing equal influence.

Dr. Edward Teller was confident that after research in many directions "in the end we will find the safest and cleanest methods."

Stanley Hathaway, Governor of Wyoming, assured the audience that strip mined land "can be more than just adequately reclaimed, but in many cases made more productive than it is today. An example of that is the height of the grass along the Interstate as compared to the height of the grass along the other side of the fence."

Timed by Teller, engineers and scientists took twenty minute shifts at the rostrum for an entire afternoon, explaining various nuclear and non-nuclear methods for extracting fuel.

IN SITU COAL GASIFICATION

Although they have made no field experiments yet, Atomic Energy Commission (AEC) scientists believe that they have found a good way to release a burnable gas from coal — without bringing the coal out of the ground. Dr. Douglas R. Stephens presented the plan to the conference audience.

The Russians pioneered in situ (in place) coal gasification in the 1930s. They fractured a coal bed between two bore holes, started a fire and kept it going by pumping air into the cracks. At first, they obtained a gas with one-tenth the heating value of natural gas. With time, the heating value decreased. And the fire tended to rise to the top of the coal bed, leaving much of the coal unburned.

The Russians produced electricity with the gas, but they couldn't compete with other available methods of power generation. They gave up their in situ coal gasification experiments in 1965, Stephens said.

The U.S. Bureau of Mines is currently producing gas from an in situ coal experiment in a 30-foot coal seam buried 400 feet below the ground near Hanna, Wyo. Their experiment is modeled after Russian work.

The AEC hopes to improve on the Russian model by using high explosive fracturing of the coal to produce a massive rubble bed. Theoretically, this would allow the fire to move more easily through the entire bed.

"There is no need for nuclear explosives," Stephens said, because chemical explosives will probably produce the desired fracturing.

Stephens said that the technique might bring gas from coal that is too deep to even be counted as part of our reserves now.

UNLOCKING GAS

Wyoming, Utah and Colorado contain 300 trillion cubic feet of natural gas held in tight, deep sand formations. Conference speakers talked of two ways to bring this gas to the surface. One involves nuclear explosives, the other massive hydraulic fracturing.

"Both methods will do the job of getting your gas out of the rock," said Dr. Lloyd Elkins of the AMOCO Production Company. Elkins said that hydraulic methods produce long, horizontal fractures, while nuclear explosives produce fractured circles around a chimney.

Up until last month, the AEC advocated only the nuclear method for stimulating natural gas. The agency has made three experimental wells with atomic explosions — Gasbuggy in New

(Continued on page 16)

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Eavesdropper

LOONEY LIMERICKS

by Zane E. Cology

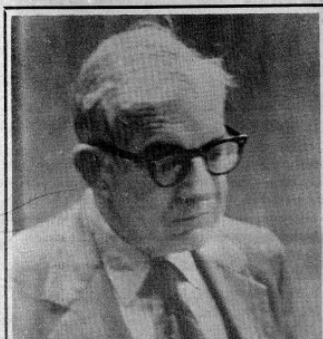
The cowboy is filled with remorse,
For it's time to retire his horse.
Now that power's the goal
It's not cattle, but coal
Which is "herded" by shovel, of course!

Pennsylvania will not use DDT on gypsy moths, even if Congress makes it legal to do so. The state Department of Environmental Resources (DER) says that too much of the state would have to be sprayed with the deadly chemical. DER also feels the moth would just reinfest the state from surrounding states making the DDT program ineffective. DER is seeking a long lasting solution instead. DER says that if they wait it out, normally severe infestations in an area collapse after two years as a result of overpopulation, starvation and virus infections. This collapse occurs before excessive forest damage has taken place, DER maintains. As a backup measure, the Department is working on increasing the gypsy moths' natural enemies. These predators and parasites would have no chance of succeeding if DDT were applied since they would be exterminated along with the moths.

A federal district court has ruled against Petaluma, California's attempt to control growth. After a referendum in the city favoring control, the city tried to limit annexation to 500 housing units yearly. Developers contended this action would severely curtail new housing in the area. The court ruled that the annexation limit was unconstitutional. When a city regulates its growth through a numerical formula, thus precluding people from moving there, it violates people's constitutional rights to live wherever they wish, according to the court.

Lichen Technology Inc. (P.O. Box 369, Corvallis, Ore. 97330) is studying how lichen can tell man about the surrounding air quality. Like the canaries that coal miners once used in the mines, a simple examination of lichen can tell you a great deal about air pollution in a neighborhood.

Two improvements in vehicle performance that seldom accompany one another — increased fuel mileage and quicker acceleration — may be provided by a new traction-drive system. The system, developed by Tracor Inc. of Austin, Tex., would replace conventional automotive transmissions. Tracor believes their traction-drive system will permit a big reduction in engine size with no compromise in vehicle performance. The end result: good mileage and reduced emissions.



Brig. Gen. George A. Lincoln, the former director of the U.S. Office of Emergency Preparedness (OEP), now a part-time professor of economics and international studies at Denver University.

At the Tri-State Fossil Fuels Conference, Lincoln spoke of solving our "national security energy crisis" with western resources and with the tools he devised at the OEP, conservation measures. Energy security is vital to national security, Lincoln said.

"Noting Governor Love's presence, I have recalled some others newly residing here in Colorado, like myself, who are 'energy refugees' from Washington granted sanctuary in the Rocky Mountains. We bring our experience and our scars — in my case four years of Washington scar tissue which is sort of a record in the energy business," Lincoln said.

"I recall that statistics on federal taxes paid and federal funds returned to states generally show that our western states always come out ahead. The opportunity, in fact a critical need, is now here for the western resource states to make a critical contribution to solving our national security energy crisis. . . . We, levered by the Arab embargo, are moving to modify our American thesis of pressing exponential consumption expansion. We need to do this drastically and in a hurry with anti-waste programs penetrating all facets of the American scene. . . ." he said.

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Dr. Peter Metzger, science editor of the Rocky Mountain News and author of *The Atomic Establishment*, a critique of the Atomic Energy Commission.

Toward the end of a program dominated by technical and political speeches, Metzger talked about the environmental aspects of resource development.

Intensive resource development in the West, of the kind described by other speakers at the conference, "even with the best of plans and intentions" would be "a disaster," Metzger said. "That's why with the most honest intent, the concept of a 'National Sacrifice Area' is widely discussed. Because there is just no way to have your cake and eat it, too. Profound environmental degradation is a necessary consequence of massive fossil fuel development anywhere, especially in the semi-arid areas of Colorado, Wyoming and Utah," Metzger said.

"I'll confine my remarks to where I think they're most needed," he said. "I'm talking about the 'people problem' — the phenomenon sociologists call 'urbanization' — or in other words — what happens when thousands of people move into an area where hundreds now live — with little or no advance provision made for housing, water supply, sewage, schools and services. And if you think that boom towns out in the boondocks don't have serious environmental impact, you're mistaken."

Metzger said that he didn't expect that any action would be taken by legislators on the people problem "until long after it's too late."

"The creative energy to solve the dilemma will come from the business community," he said. "The businessman knows, or he ought to know, or he can easily be convinced that if his workers are well situated, his corporation will benefit tremendously."

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Mexico and Rulison and Rio Blanco in Colorado.

John Toman of Lawrence Livermore Laboratory outlined possible development plans for the Rocky Mountain region, provided nuclear stimulation for gas proves workable. Full field development would take place in the Piceance Basin in Colorado, the Uinta Basin in Utah and the Green River Basin in Wyoming. At its peak, full development would mean blasting out 240 wells a year, Toman said. Four to six nuclear devices would be exploded to make each well.

A more modest program, capable of supplying the natural gas needs of Colorado, Toman said, would require 20 wells for the first three years and 11 wells per year after that.

Full scale use of the technique hinges upon technological questions. "As it stands now we still have a long way to go," Toman said. The sequential nuclear explosives to be used in the wells have not been developed and the reservoir characteristics expected in the Rocky Mountain region have not been confirmed, Toman said.

Meanwhile, the AEC has announced that it will take a parallel step toward the locked up gas. This January the agency announced plans to try to stimulate natural gas by massive hydraulic fracturing in the Piceance Basin near the Rio Blanco nuclear blast.

AN OIL SHALE PUZZLE

Richard Ridley of Occidental Petroleum told the audience that in an experiment near Grand Valley, Colo., his company has achieved "a dramatic success in a modified in situ process" for extracting oil from shale. "We do not believe there are any insurmountable problems between us and commercialization," Ridley said.

The Occidental process is a combination of conventional underground mining and in situ techniques. First, a series of "rooms" are mined out of the shale formation. Next, holes drilled up from the ceiling of the room are filled with explosives and detonated. The fractured rock expands by 15% to fill the mined out space.

This makes the shale permeable, but leaves it "locked in there almost like a three-dimensional jigsaw puzzle, providing support to the walls and ceiling," Ridley said.

Then an underground fire brings the shale oil out of the rock.

"Water is our prime concern at this time," Ridley said. In the Piceance Basin large water zones lie both within the oil shale and above it. Ridley says Occidental sees "a couple of ways of handling these potentials for underground water. We believe that certain zones are amenable to sealing off. We believe that other zones may require the pumping of the water to the surface, moving it in pipelines five or ten miles away, and then re-injecting it back into the same aquifer that it came out of."

NUCLEAR SHALE OIL

AEC scientist Dr. Arthur Lewis presented a plan to produce oil from shale by fracturing the beds with nuclear explosives and retrieving the oil by in situ methods. The agency's plans are still untested, but offer "the lowest cost and the minimum environmental impact," according to Lewis.

The technique could provide up to 200 billion barrels of shale oil at \$3.50 a barrel Lewis said. At this level of production, 50,000 nuclear-blasted chambers in western Colorado would be required. Ground water in the area could be pumped to the Pacific Ocean or Great Salt Lake to clear the way for retorting underground, Lewis said.

Although that level of production is possible,

Lewis said that the AEC is considering a less intensive application of the technology.

"It looks to us as if this is most applicable to a very small part of the Piceance Basin in Colorado," he said. There, the AEC estimates an operation could produce about 250,000 barrels of oil a day by blasting 32 retorts a year with nuclear explosives.

—J.N.



Dr. Edward Teller, the father of the hydrogen bomb and founder of the Edward Teller Center for Science, Technology and Political Thought at Boulder, Colo.

At the close of the Tri-State Fossil Fuels Conference, Teller listed "the points on which we shall agree if we sleep on them seven times."

"We ought to get going — and this is what I think we really have agreed upon," Teller said. He called the direction we should be going a "detail" and advocated parallel experimentation in many directions.

Teller said that he favored in situ methods. "What is impressive to me," he said, "is that when you do the work underground with no people going underground, you may do it even more quickly, because you don't need all this massive steel equipment that will not be delivered until three years after you have made up your mind what it should be. It (in situ) uses less water or sometimes none. It can use saline water. And of all the pollutions, it avoids one that is the worst — pollution by excess population."

What kind of in situ process? Teller said all were in research stages — those using conventional explosives, hydrofracturing, and nuclear explosives. He suggested that we try them all. "The research will cost millions of dollars," he said. "But the result of the research will amount to billions of dollars."

Teller has a lifetime of experience with nuclear explosives. When asked about the role of nuclear methods in developing the resources of the Rocky Mountain region he said, "Nuclear methods are one of several. ... I believe that nuclear explosives, if they are used, will turn out to be practical for the release of gas, for the production of oil out of oil shale, and will be from the point of view of the environmentalist, the best. Yet there is a lot of opposition. My hunch is that that opposition is purely emotional. And emotions are important things and last long. Nuclear explosives have been used to kill people. ... What we should say is let's make the swords into plowshares. And experience says it can be done."