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# Green Lands

QUARTERLY

**WINTER 1975** 

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### ABOUT THE COVER

This most impressive aerial photograph shows the controversial-42 acre H. L. Kennedy surface mining operation at Laurel Run near Morgantown. The photo was taken in the fall of 1974, about one year after the final reclamation work had been completed.



On March 29, 1971, an appeal filed by the Committee to Save Laurel before the West Virginia Department of Natural Resources stated flatly, "this surface mining operation will result in landslides, flooding, the destruction of land for forestry purposes and for all future uses by the state of West Virginia, and it will destroy and impair the health and property of others and in general create hazzards dangerous to life and property and will constitute an imminent and inordinate peril to the welfare of the State of West Virginia."

# This is how H. L. Kennedy's "Laurel Run" surface Mining Operation looks today.

# LAUREL RUN REVISITED

Driving through the eastern portion of Preston County, West Virginia, the traveler is almost sure to be struck by the tranquil setting. The land is dotted with small, sleepy towns, well-kept farms, rolling hills and a slow, peaceful way of life.

But in the spring of 1971, this tranquility was shattered by a controversy that reached nearly every corner of West Virginia. The question centered on whether or not a coal operator should be allowed to surface mine 42 acres of coal, just off Route 73, five miles west of Bruceton Mills. Of course, the area and controversy are best remembered simply as "Laurel Run."

The Laurel Run controversy started in November 1970, when H. L. "Mike" Kennedy, a small independent contractor began negotiations to mine the Upper Freeport coal seam on 42 acres near Bruceton Mills. Landowner Ward Thomas, who was concerned that a good job of reclamation be done, checked into Kennedy's background and "could find no one with complaints about Kennedy's operations" at two Harrison County sites mined earlier.

At Thomas' instruction, Kennedy agreed to eliminate the highwall on the 18 acres he would disturb, and the deal was settled.

In December, Kennedy filed an application for a surface mine permit with the West Virginia Department of Natural Resources, which was issued to him on February 11, 1971. The permit was issued with several restrictions, above what the state surface mining act required. They included:

- constant monitoring of water quality

- construction of water treatment impondments and drainage ditches according to SCS standards

- segregation of overburden material, with topsoil being returned on final grading

- total highwall elimination

- progressive and rapid stabilization of the area through

re-establishment of grass.

Upon receiving the permit, Kennedy placed an order for new equipment needed for the operation and it was delivered on February 22. On February 25, the permit was amended, instructing the operator to maintain a 100 foot boundary between the operation and Coopers Rock State Forest, which bordered the permit area. Kennedy agreed to this additional provision and began operation.

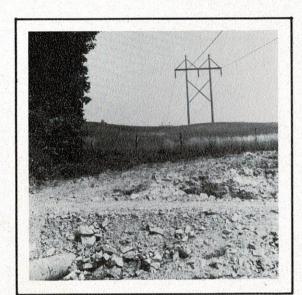
### THE CONTROVERSY BEGINS

The first newspaper reports claiming that "one of the state's most popular recreation spots" would be destroyed by this mining operation, came on March 14. Soon after, a small group of Morgantown residents organized to oppose the mining, because it bordered on the State Forest. They immediately requested assistance from several larger environmental groups and the public controversy was under

The Committee to Save Laurel Run petitioned the



Only about two months after final seeding this is how the Laurel Run operation looked in July, 1973. The group visiting the site above was the 1973 Interagency Evaluation of Surface Mining and Reclamation in West Virginia. The West Virginia University Forest is beyond the treeline at the top of the picture.



Much of the original 42 acres leased by Ward Thomas had already been cleared for pasture land and did not even need to be timbered before mining. Notice the "inherent aesthetic beauty" of the high tension wires that cross the property.

### THE COMMITTEE TO SAVE LAUREL RUN

IZAAK WALTON LEAGUE, Ray Thomas, President, West Virginia Chapter; WEST VIR-GINIA HIGHLANDS CONSERVANCY, Bob Burrell, President; THOMAS KING, Vice-President; NATIONAL AUDUBON SOCIETY, Mountaineer Chapter; DAVID SAMUEL, President; REV. STACY GROSCUP, Ombudsman, West Virginia University; ROBERT LEO SMITH, Professor of Wildlife Biology, West Virginia University; DR. EARL CORE, Professor of Biology, West Virginia University; STANLEY HARRIS, Registrar, West Virginia University; MRS. CAROLE FULLER, JO-ANNE MEADOWS, NORMAN OLSON, DR. LACY SCHWARTX, VIRGIL PETERSON, DEAN JACK TURNER, DR. TOM CAMP-BELL, STOKELEY GRIBBLE.

Department of Natural Resources, asking that the permit be revoked. Department of Natural Resources Director, Ira S. Latimer, Jr., refused. Immediately following this, the Committee filed a formal appeal to the Reclamation Board of Review, to force Latimer to revoke the permit. Counsel for the Committee was John "Si" Boettner, Jr., who was with the Appalachian Research and Defense Fund. The appeal asked that the Board revoke the Kennedy permit and conduct a public hearing on the matter.

### CITIZENS MARCH ON LAUREL RUN

Meanwhile, citizens groups had marched to the surface mine site on two occassions to show their opposition. On March 27, 1971, state police estimated nearly 1,000 protesters in the Laurel Run area, equipped with banners, cameras and box lunches. Protest leaders began organizing petitions and encouraging citizens to apply pressure on local and state agencies and politicians to get the permit revoked.

Finally, with public pressure at a fever pitch, on March 30, Governor Arch A. Moore, Jr. ordered the Department of Natural Resources to halt Mr. Kennedy's surface mine operation, on the grounds that it "may naturally cause the destruction of aesthetic values."

Kennedy remembers that day vividly. "I'd left home and was driving to the job when I heard the news on the radio. They said that Governor Moore had ordered the revocation of my permit," he said. "I felt it was wrong from the beginning because I didn't get involved with such large expenses for equipment and labor until after I had received the permit."

Kennedy immediately went to see Charles V. Wehner, a Kingwood attorney, who later handled the Laurel Run case, and appealed the revocation order.

Following this action, the Committee to Save Laurel Run, through Charleston attorney Si Boettner, requested that the Department of Natural Resources modify the revocation order to include additional grounds beyond "destruction of aesthetic values." These new grounds included:

- The proposed strip mine activities will result in acid water pollution of the native area in such amounts as to destory Laurel Run as a quality stream capable of supporting the thosuands of brown and rainbow trout now living there.
- The acid water pollution, based on the information available from the permit application, cannot be feasibly prevented or controlled.
- 3. The proposed strip mine will destroy the recreational values of the area.
- The proposed strip mine will preclude the full development of and adversely effect the future use of the land.
- The cost to the State of West Virginia in terms of loss or recreational use and future use of this area alone will exceed three million dollars per year.

After a review of this new petition, the Board of Review decided to include these additional grounds and ordered a hearing between H. L. Kennedy and the Department of Natural Resources on June 22.

Following several additional delays, the hearing finally began before the Board of Review on July 20, 1971, at the Preston County Court House in Kingwood. Serving on the Board were Chairman W. H. Dickerson, John W.

Stratton, C. E. Compton, Richard Neal and Paul Nay.

The opening day of the hearing had more of a circus atmosphere about it than a trial. Every group that could possibly be interested in the proceedings was represented. The Izack Walton League, Highlands Conservancy, Committee to Save Laurel Run, environmental editors of both Morgantown and Charleston newspapers and representatives of West Virginia University, acting as individuals, seemed congregated together on one side, while newly formed pro-surface mining groups, ladies auxiliary, coal operators and the West Virginia Surface Mining and Reclamation Association, lined up on the other. Seated squarely in the middle was H. L. "Mike" Kennedy and the West Virginia Reclamation Board of Review. Representing Mr. Kennedy was Charles V. Wehner. Deputy Attorney General Frank Ellison represented the Department of Natural Resources.

Wehner utilized testimony by Kennedy, Floyd Stiles, a Preston County surveyor, and representatives of the Department of Natural Resources, to prove that his client had in fact done everything required by law to protect the area, and even more. He built his case around the fact that there was no legal justification for revocation of the permit.

### PETITIONS QUESTIONED

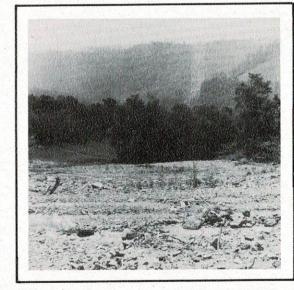
On the other hand, Ellison had to use testimony from "expert witnesses" to try and prove what "might" happen under various circumstances, if the operation continued. He was also handicapped by a significant factor that surfaced during the fourth day of the hearing. Since the Committee to Save Laurel Run had been successful in adding the "additional" reasons for revocation of the permit, those reasons would now have to be substantiated. They would have to be backed up in court. To try to prove their various allegations the Committee had used several expert witnesses from West Virginia University. On the petition asking for "additional grounds", Dr. Arnold Benson, Director of West Virginia University's Water Resources Institute and Dr. Robert Jenkins, Professor of Sanitary Engineering addressed the acid run-off problem. Their signed petition explained that treatment would be inadequate and that acid would "irreparably damage Laurel Run."

Next on the petition, the statement that the mining operation would destroy the recreational value of the area, was answered by Dr. Robert Leo Smith, Professor of Wildlife Biology and Dr. David Samuel, Assistant Professor of Wildlife Biology, both of West Virginia University.

Finally the petition read, "the presence of the proposed strip mine will result in the destruction of the future use of the land," which was undersigned by Dr. David White, Chairman of the Department of Forestry. Behind each name, was a detailed summary of statistics and data listed to back up the original statement. Of course, it had always been presumed that, in fact, these men had written these statements and then affixed their names to them. But during the forth day of testimony, with Mr. Wehner cross examining Dr. White of the Forestry Department, White said that he had put his name on a petition, but that he had never before seen the petition which had his name on it. Then only moments later, David Samuels said of his name and the petition, "yes it appears there, but I didn't



Above is the new bulldozer and front-end loader Kennedy bought for the Laurel Run operation. This equipment sat idle from February 22, 1971, when it was delivered, until the permit was reinstated on August 27th.



One of the great ironies of the Laurel Run controversy is slightly visible in this photo. As you look from the Kennedy permit over Laurel Run and on across the valley, construction of the four-lane, federal Corridor "E" highway is visible in the upper right hand corner. The "experts" said that the 42 acres on one side would cause more destruction to the trout stream than the thousands of disturbed acres on the other side.



When the controversy was finally settled, Kennedy completed the operation in less than eighteen months. Nearly 100,000 tons of steam coal from the Upper Freeport seam was hauled out over this road.

put it there in that position." He also admitted that he was not the author of the statement on the petition.

Finally Dr. Robert Leo Smith, when questioned by Mr. Wehner about his statement on the petition said, "No I did not say that. This was written up without my having a prior chance to read it."

Suddenly it became apparent what had happened. The petition had been prepared and the names of the undersigned affixed without their prior knowledge. The petition had been prepared and signed by John L. "Si" Boettner, counsel for the Committee to Save Laurel Run. The hearing was adjourned the following afternoon, July 24, 1971.

### **BOARD REINSTATES PERMIT**

Following three weeks of deliberation and in view of the discrepancies about the petition which had been brought out at the hearing, the Board of Review ruled that the Department of Natural Resources would have to reinstate the permit. The state immediately began appeal proceedings and filed for an injunction against further mining, but finally on August 27, the Board issued a direct order to Kennedy to resume operation. He began loading coal and continued until October 2, when a temporary restraining order shut him down again. The operation remained idle until November 27, when he started up again and continued mining until the job was completed on April 21, 1973.

During that eighteen month period, Kennedy mined nearly 100,000 tons of coal, utilizing the box-cut and lateral movement methods of mining. Almost all of the coal, which comes from the Upper Freeport seam, was sold to Ohio Edison at Akron, Ohio.

Initial seeding began on about one-third of the property in the fall of 1972 and was completed after mining in the spring and summer of 1973. The area was seeded under the supervision of the Soil Conservation District, with oats, birdsfoot trefoil and timothy. Final release of the property by the state will not be considered until the spring of 1975.

Kennedy, who is a graduate of Johns Hopkins University, a registered professional engineer and a registered professional land surveyor, has mixed emotions about Laurel Run. "The whole affair was very disturbing for me, because I had never been the object of so much adverse publicity," Kennedy said, "It showed us all just what can happen when the public becomes aroused."

"I was extremely puzzled and disappointed with Mr. Boettner, because I called him several times to see if we could sit down and try to solve some of the problems, but he would never talk to me.

"I've often wondered who paid for all those people," he said, "they came in groups of five or six and they dug into every possible record to see what they could find."

After completing the job at Laurel Run, Kennedy did not pull up stakes and go back to Pennsylvania. He applied for, and received another small permit just north of Brandon-ville in Preston County. He did not leave because he likes the area, he likes the people and he knows he can do a good job. Of the new mine Kennedy says, "no protestors, no complaints, no excitement. Just mining coal."

And what about Laurel Run today? Ironically, landowner Ward Thomas recently sold the property to a professor at West Virginia University.

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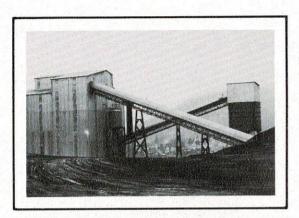
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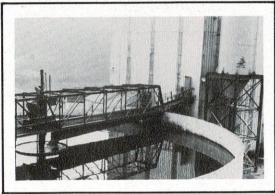


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# New Preparation Plant Opens In Preston County





Top: The Albright Preparation Plant is located just northeast of Kingwood, W. Va., on Route 26 in Preston County. The new facility began operation in August, 1974, after nearly 15 months of construction.

Above: A strengthening coal market and the need for a blending facility to improve coal quality prompted Kingwood Mining Company to invest \$3 million into a new preparation plant.

Right: According to Jim Wilkinson, Vice President of Kingwood Mining, the facility will be able to load a 10,000 ton, 98 car unit train in approximately four hours. Total plant capacity is estimated at 150,000 tons per month. A strengthening coal market and the need for a blending facility to improve coal quality has prompted Kingwood Mining Company to invest \$3 million into a new preparation plant.

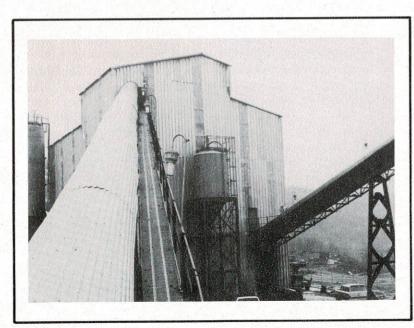
The Albright Preparation Plant, located just northeast of Kingwood, W. Va., on Route 26 in Preston County, began operation in August of last year, after fifteen months of construction.

According to Jim Wilkinson, Vice-President of Kingwood Mining Company, the facility will be able to load a 10,000 ton, 98 car unit train in approximately four hours. Plant capacity is estimated at 150,000 tons per month.

Wilkinson explained that the rising demand for coal during the past two years was the major stimulus for building the new preparation plant.

"Since much of the coal in this region will not meet present environmental standards, we needed a large facility capable of cleaning the low quality mineral and blending it with higher grades of coal", he said. "This process of cleaning and blending creates a better quality coal and a more marketable product."

Wilkinson noted that the plant is receiving coal from both surface mining and underground operations. Presently, approximately 70% of the coal is coming from surface mine operations in the Preston County area.



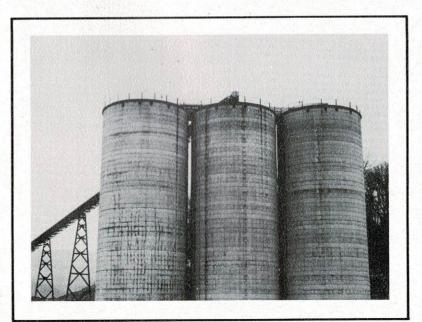
The plant is a closed circuit, utilizing the wet wash principal, which allows no air pollution. The system conveys raw coal into the plant and onto a crusher where it is reduced to a maximum size of one and one-quarter inch. After crushing, the coal moves across a scalping screen, separating the various sizes of raw coal. The underflow from the scalping screen (minus three-eighths inch material) is sent to the 24 deister tables, while the overflow carries the remaining coal, which ranges in size from three-eighths to one and one-quarter inch, on to the heavy media vessels. Drying is accomplished through utilization of two 1100-C Bird centrifuges and two screen bowl dryers.

Wilkinson explained, "We are now able to reduce the existing ash level of 15 to 25 percent down to a marketable level of less than 10 percent, while also reducing the moisture content to seven and one-half percent. This new facility upgrades the quality of our coal so that currently, 60 percent of our processed coal is of metallurgic quality."

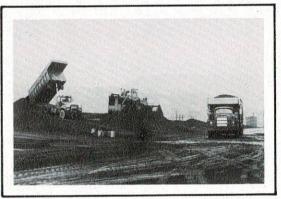
He noted that the plant can also reduce pyritic sulfur in coal from levels of three percent down to one percent.

The processed coal is hauled from the plant by truck, barge and rail. Full production is being hindered by the critical shortage of railroad cars.

The facility was constructed under the supervision of design engineer Jack Barber, as well as Wilkinson, and employs 30 people.







Top: Some of the extensive conveyor system that feeds coal into the plant is visible here. Design engineer on the project was Jack Barber. The Albright Power Station is in the background.

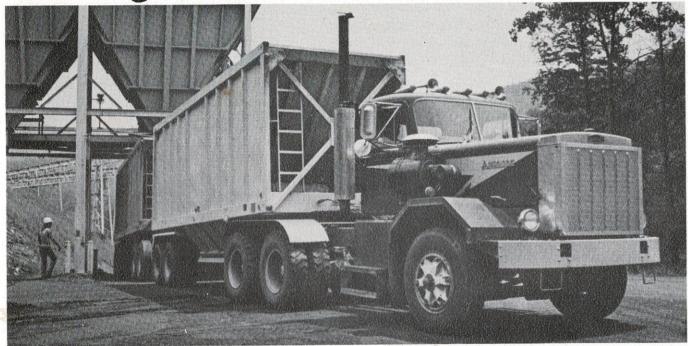
Above: The plant is presently receiving coal from both surface mining and underground operation. Presently, approximately 70% of the coal is coming from surface mining operations in the Preston County area.

Left: Here, one can see the three huge storage silos, located near the preparation plant. The rising demand for coal during the past two years was the major stimulus for building the new facility.





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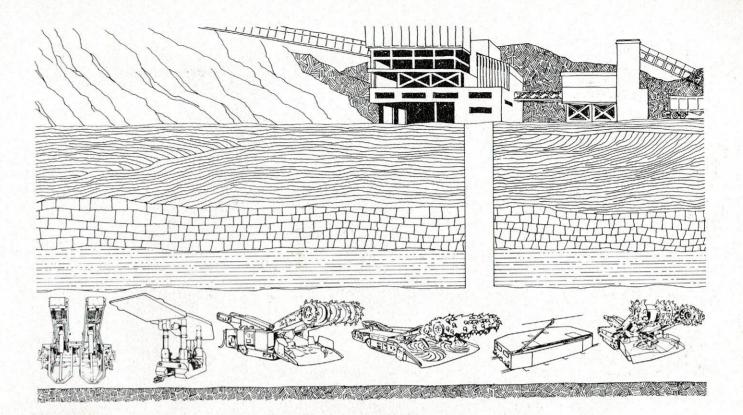
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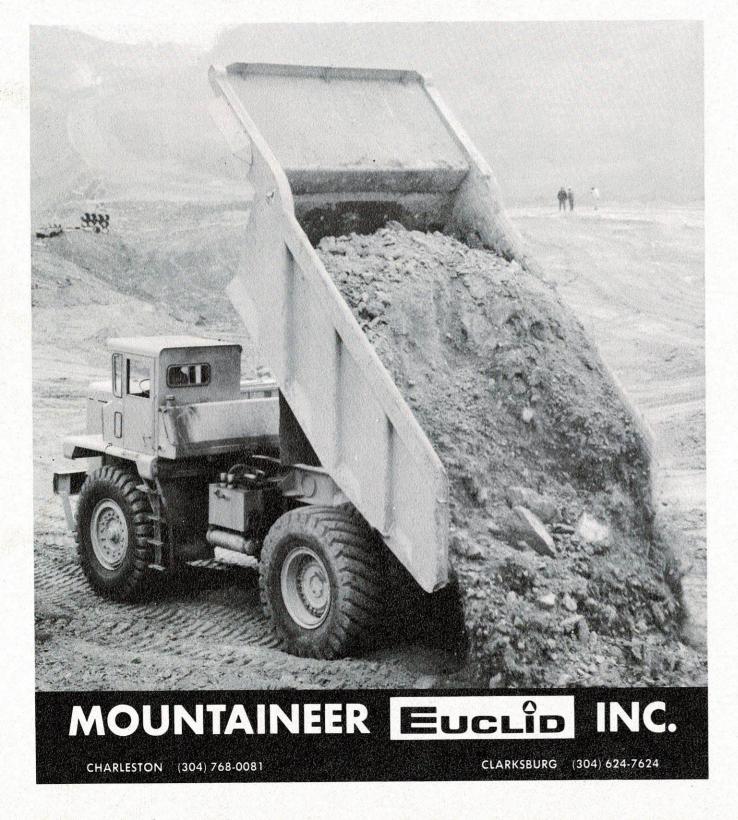
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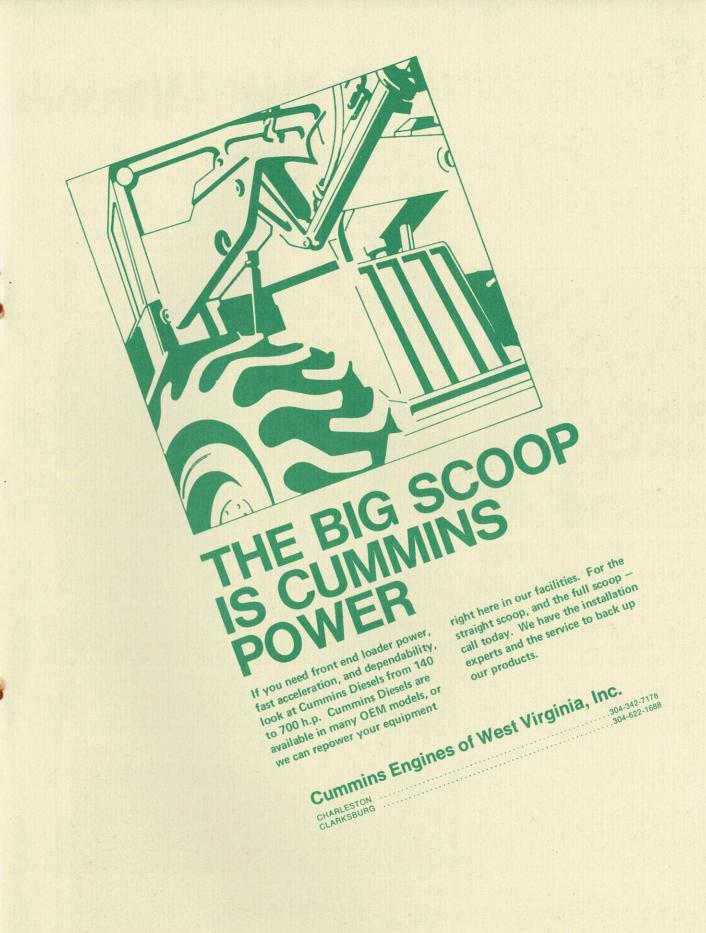
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# If It's a Reclamation Job It's a Hauler Job It's a Euclid Job





# Better Minesoils By Blending?

by Richard Meriwether Smith, Walter E. Grube, Jr., and John R. Freeman

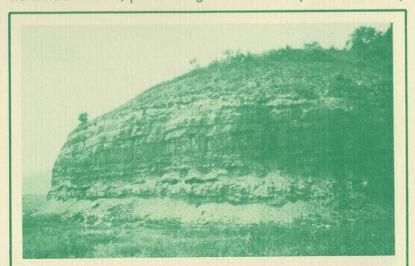
EDITOR'S NOTE: (Published with the approval of the Director of the West Virginia Agricultural Experiment Station as Scientific Paper No. 1359.

This work was partially supported by the Environmental Protection Agency. The deas and conclusions are those of the authors and not necessarily those of EPA.)

Our recent EPA Report, "Mine Spoil Potentials for Soil and Water Quality" (Smith et al, 1974) contains data on a number of coal overburden sections in West Virginia, as well as descriptions of methods and interpretations. This report emphasizes how operators can determine which materials are toxic or potentially toxic, and which are safe to place near the surface of minesoils. In considering how to make this report more useful, and to bring it up to date with our continuing research, we have decided to point out advantages of blending certain overburden materials in order to avoid toxicity and create better minesoils.

One purpose of blending would be to mix enough neutralizing material with all potentially-toxic material so that the resulting composit would be neutral or alkaline. (Green Lands Quarterly, Fall, 1973; p. 7.) Unless you have looked at the data for a number of overburden sections you may not have realized how often this is feasible. The more common reaction has been, whenever potentially toxic material is recognized, to plan to bury it as deeply as possible. In fact, the idea may be, to seal it in a pocket with material that will prevent air and water from entering and reacting with pyritic materials.

In some cases deep burial is considered to be the only solution for disposal of concentrations of pyritic materials. However, when potentially toxic materials are placed on the floor of the pit without admixture or cover with sufficient neutralizers, percolating soil water may move laterally





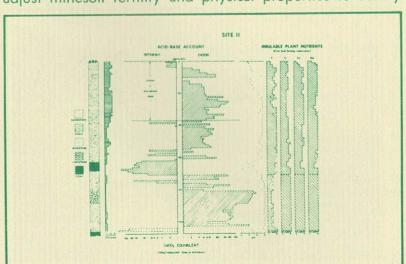
through the acid zone on top of slowly pervious underclays or rocks, resulting in acidic "weeping" from the outslope.

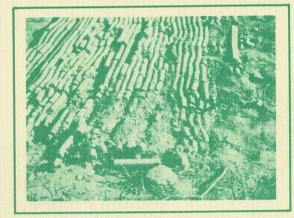
We have observed many cases where neutralizing materials are dominant and we believe it is important to think more about blending to prevent acidity, and less about burial which may favor acid weeping. We have suggested this approach to a number of people, and we can cite cases where proper blending is working.

Now that more overburden analyses are becoming available, there should be many opportunities to prevent toxicities and build better minesoils. Without an Acid-Base Account and other data for the overburden you might not be able to plan to practice blending safely, because the entire minesoil deposit might become extremely acid. There are a few such cases but when you know there is enough neutralizing material present, the best and cheapest approach may be to blend. Of course, detailed information about the composition of different horizons and how to recognize them will be necessary. Then it will be easy to plan desirable placement.

We realize that each surface mining job tends to be different, and that machinery and operators have to be considered in any plan to vary procedures. This is one reason we suggest that operators may want to consider whether blending rather that burial might offer advantages to an operation. If so, overburden analyses should prove whether or not deliberate blending is a feasible alternative to procedures now being used for disposal of potentially toxic wastes and spoil.

There are reasons other than prevention of acid, that cause us to be interested in the possibility of mixing materials in different ways in minesoils. Insofar as some flexibility of placement is practical, we may be able to adjust minesoil fertility and physical properties to satisfy





Above: Northern Preston County test core near Cuzzard, W. Va., which has been exposed to weather, showing differential weathering that occurs in blended minesoils. Core extends upward from Upper Freeport Coal.

Below: Acid-Base Account and associated data for Pittsburg and Redstone, Off I-79, Marion County, showing range of properties for Blending. Note that surface is depleted of plant nutrients; however, lower horizons show very high-levels of required nutrients which indicate a favorable condition for minesoil blending.

Above: Good Grass Birdsfoot Trefoil mix on

diverse, blended fertile over burden of Bakers-

Below: Hi-Wall Section over the Pittsburg

and Redstone Coals, near Harrison and Bar-

bour County line, showing the diverse car-

bonate-rich materials that neutralize and assure

town Coal near Lenox, Preston County.

favorable minesoils.



Above: Restored site on Upper Front operation on Laurel Run, involving blending of selected mudstone to form and superior subsoil.

Below: Outstanding Birdsfoot Trefoil in Randolph County on blended minesoil of variable rock-types over the Sewell Coal.

suitability requirements. As an example, there is evidence that available phosphorus and trace elements may be relatively high in carbon-rich horizons such as roof shales where swamp vegetation accumulated during the coal age. Thus, blends between soft, neutral, medium-textured mudstones and high carbon fissile shales might make our best minesoils for forage production and other crop uses. The weatherable mudstones would provide favorable water relations and each material would contribute specific fertility.

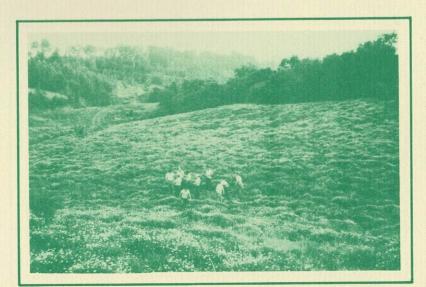
Blending of pyritic overburdens or wastes with neutralizers is inherently logical because sedimentary rocks contain many times more calcium, magnesium and potassium neutralizers than acid-forming sulfides. (Clarke and Washington, 1924). Silicate and carbonate are the most common acid oxides in nature that balance alkaline or neutral elements. The peculiar behavior of silicates and carbonates is the reason that alkaline or neutral reactions predominate. With all forms of silica the chemical activity is so low that toxic acidity cannot develop even when neutralizers are absent. And with carbonates, any acid reactants cause release of carbon dioxide to replenish the supply in the atmosphere, leaving basic neutralizers like calcium and magnesium behind in the soil. These wellknown relationships in nature provide the clue that planning based on knowledge can result in superior minesoils for any intended purpose.

### REFERENCES

Clarke, F. W. and H. S. Washington 1924, Composition of the Earth's Crust. U.S. Geol. Survey Professional Paper 127.

Smith, R. M., W. E. Grube, Jr., T. Arkle, Jr., and A. Sobek 1974, Mine Spoil Potentials for Soil and Water Quality. Environmental Protection Technology Series. EPA-670/2-74-070. U.S. Govt. Printing Office, Washington.

Green Lands Quarterly, Fall, 1973; p. 7.



# PRELIMINARY RECOMMENDATIONS FOR SEEDING PINE ON SURFACE MINE SPOILS

by William T. Plass U.S. Forest Service

These recommendations are based upon experience during the past 3 years, observations of direct seeding attempts by others, and the growth and survival of planted seedlings. The recommendations are preliminary, and a moderate risk of failure must be accepted with their use. Exploratory trials are encouraged so that additional evidence may be accumulated to refine procedures that will permit an increasingly higher percentage of success in establishing pine by direct seeding methods.

### Site Selection:

The southern pine species have been most successful in several direct seeding trials. Geographical limitations need to be recognized to limit seeding trials to areas closest to the source of seed. Since much of the seed comes from northern Georgia, northern Alabama, Tennessee, and Kentucky, the initial direct seeding attempts should be limited to southwestern West Virginia. This would be roughly defined as the area south of I-64 and west of the West Virginia Turnpike.

Topographic limitations should also be considered. Due to seed source, it probably would be advisable to limit seedings to elevations below 2,000 feet. Attempts at higher elevation would probably mean a greater risk. Seedlings at high elevations may germinate and live until severe winter weather kills them. Coarse-textured sandstones and hard shales provide the best seed bed. There is evidence that surface crusting on fine-textured spoils prevents seedling emergence.

The pH of the spoil probably would not be limiting. Pines are tolerant to low pH's, and the probability of finding low pH sites under current mining and regrading systems is low.

### Site Preparation:

Seeding into fresh spoil or scarifying areas before seeding could increase the chances for success. This would depend to some extent on the texture of the spoil. It would be less important on coarse textured spoils.

Phosphate fertilization is recommended for pine seeding. The amounts applied with grass-legume mixtures may be adequate, but more phosphate may increase growth.



William T. Plass

Grass-legume Covers:

The species composition of the grass-legume cover could affect survival and growth. Also, the seeding rate may determine ground cover density and the degree of competition to the young seedlings. Sericea lespedeza is tall and can provide a dense cover. Its use should be discouraged or the rate of application reduced. Birdsfoot trefoil, crown vetch, and the clovers do not grow as tall and may not provide as much competition. Kobe and Korean lespedezas are good companion crops, since they are warm season annuals.

High seeding rates of fescue and orchard grass could provide undesirable competition. Annual and perennial ryegrasses should be avoided since these species compete strongly with young seedling trees. Redtop and weeping lovegrass appear to be acceptable at moderate seeding rates.

### Pine Seeding Techniques:

The southern pines have been more successful than other species in previous direct seeding trials. It is recommended that these be used in exploratory trials. The following mixture and seeding rate per acre is recommended:

> Loblolly pine 1 pound Shortleaf pine ½ pound Virginia pine 1/4 pound

Use seed from a source as close to West Virginia as possible. At these rates, about 55,000 untreated seed are sown per acre. This includes 18,000 loblolly pine, 24,000 shortleaf pine, and 13,000 Virginia pine. If 1 percent of these germinate and survive, there will be 550 pine seedlings per acre. Spring seeding with a hydroseeder or helicopter is recommended. Seed stratified and treated with bird and insect repellent should be used. Treated seed costs no more per pound; but the treatments increase the weight of each seed, so you get less

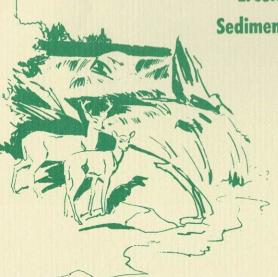
A guick-developing tree or shrub nurse crop should be seeded with the pine. This will provide site protection and protect the pine while it is young and susceptible to injury. Bicolor lespedeza, a shrub and a legume, is recommended. It should be seeded at a rate of 1 to 2 pounds per acre. The higher rate would apply to outslopes or other different sites. This species is accepted as a woody, permanent cover for state regulations relating to surface mine revegetation.

Bicolor lespedeza will grow as rapidly as black locust on good sites with adequate fertilization. It will grow as tall or as dense as locust. The pines are slow starters from seed, and they may require 3 years' growth before they reach a foot in height. Growth should increase once they become established and dominate the grass legume cover.

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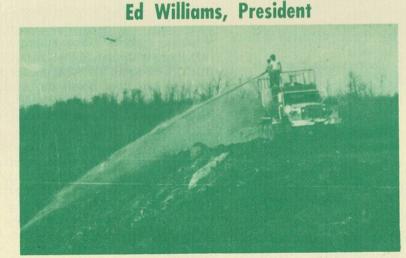
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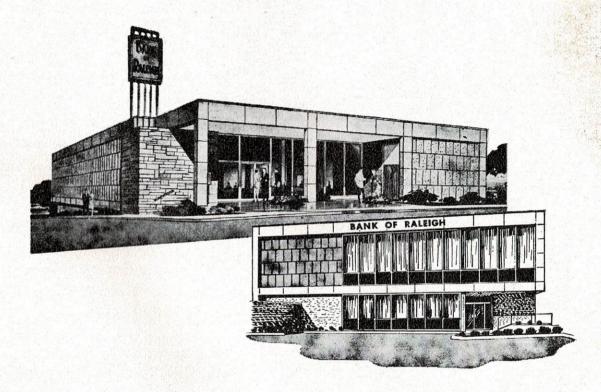
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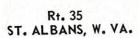
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### OVER 250 ATTEND SYMPOSIUM

# Ten Companies Receive Awards

Over 250 Association members, engineers, surveyors, and government officials turned out for the Second Annual West Virginia Surface Mining Symposium last month in

Sponsored by the West Virginia Surface Mining and Reclamation Association, the theme of this year's conference was "Meeting the Needs of a Changing Industry" and featured in-depth discussions of the Association's newest programs and services. Attendance for the two-day affair was larger than last year. All functions were held at the Daniel Boone Hotel.

The new "Permit Procedure Program" was first on the agenda. This portion of the meeting included a panel discussion with representatives of each of the Divisions of the Department of Natural Resources concerned with review of incoming permits. Each participant discussed the errors most often made in permit applications in his respective division and how they might be corrected. Participating for the Department of Natural Resources were Ben Greene and Pete Pitsenbarger of Reclamation, Pat Park of Planning and Development, and Don Caldwell and Bill Gibson of Water Resources.

Following this, the membership got its first opportunity to meet John Sturm, the new Director of Technical Services. Mr. Sturm made a page-by-page review of his new booklet "Procedure For Obtaining a Surface Mining Permit in West Virginia", which had been distributed to all conference registrants. The book is a step-by-step outline of how to go about applying for a permit in West Virginia, and is accompanied by a copy of the law and rules and regulations.

Before the lunch break, Sturm introduced Mr. Gary Cooper, who has been hired to run the new Environmental Quality Control Lab in Beckley. The lab has been set up to aid the membership in getting water analysis tests taken on their jobs to satisfy state and federal requirements.

In the afternoon session, Rodney Krause of the National Coal Association explained his group's opposition to the proposed federal surface mine legislation, saying it would cut nationwide coal production significantly. He also noted that the new, more liberal Congress coming in this year could bring about an even tougher bill later this

The final portion of the first day's program concerned another "new book review." Pat Park and Pete Pitsenbarger explained the major changes in the new "Drainage Handbook", recently completed by the Department of Natural Resources.



Above: First Vice-Chairman of the Board H. L. "Mike" Kennedy welcomed the Thursday morning crowd on behalf of Chairman Jim Justice. Attendance at the early session was better than 250. Kennedy also made welcoming remarks at the banquet that evening.





Top: Following the introductions, work got underway. Ben Greene, Chief of the Reclamation Division, explained what happens to a permit after it is received by the Department. Mr. Greene is flanked by Mike Kennedy (left) and John Sturm, new Director of Technical Services for the WVSMRA.

Bottom: Some of the large crowd in the Ballroom of the Daniel Boone Hotel listen attentively as Ben Greene follows a permit through its rigorous tests in each division. From the left are: Mike Kennedy, John Sturm, Ben Greene, Don Caldwell and Bill Gibson of the Division of Water Resources.

The symposium was highlighted by the Awards Banquet that evening, as well over 300 members and their guests jammed into the Ballroom for cocktails and dinner. An added surprise was a visit by over 60 members of the West Virginia Legislature, who are always invited to the Association's functions in Charleston.

The awards presentation is an annual affair sponsored by the Association to honor those surface mining companies that have exhibited outstanding achievement in various phases of reclamation. The winners are selected by a panel of representatives of the Department of Natural Resources Reclamation Division. They review the better companies on a state-wide basis, then choose several from both the northern and southern portions of the state.

Ira S. Latimer, Jr., Director of the Department of Natural Resources was on hand to present the awards. They went to:

### NORTH

**C. J. Langenfelder & Sons** — For exhibiting outstanding supervision, cooperation and performance, from initial pre-planning through final reclamation.

**C & W Coal Company** — For displaying excellence of operation in abandoned and poorly reclaimed mining areas, through the use of the haulback and mountain top removal methods of surface mining.

**D & L Coal Company** — For outstanding reclamation and conscience by the operator on several permit areas in Mineral County. Also for following through with pre-plans to achieve an excellent end product.

**H. L. Kennedy** — For outstanding overall performance in a critical environmental watershed. The drainage facilities prevented any sediment or acid water from leaving the site during and after mining.

Masteller Coal Company — For new techniques particularly in the area of controlling acid drainage in critical watersheds during the active mining operation.

### SOUTH

**Burdette's Creek Coal Company** — For operating in an abandoned surface mined area, this company has shown a high degree of professionalism in material handling and placement. Haulroads and drainage are excellent.

Hobet Mining & Construction Company — For elimination of eye sores and reclaiming old mined areas. Drainage, overburden and material placement confined and well

regulated on two sites mined more than fifteen years ago. Hobet Mining & Construction Company — For the first controlled placement method of mining used in extremely steep slopes, producing no outslopes and maintaining all material on the bench. Proper placement of material eliminated siltation and made revegetation easy to accomplish. Princess Susan Coal Company — For excellent development of haulback mining and valley fill construction, utilizing the controlled placement theory of overburden handling.

**Scholl and Wilcher** — For outstanding drainage control and overburden placement through the mountain top removal method of surface mining.

The festivities concluded the next day at noon, following an explanation of the Association's new Health and Safety Committee. The committee was originated by T. C. "Ted" Hillman, of the Princess Susan Coal Company, and is designed to set up a group of safety directors that will have a direct input into both state and federal rule making agencies. Taking part in the presentation were Jack Feltner, Hobert Mining and Construction Company and Mike Frazier, Imperial Smokeless Coal Company, both of whom have helped in the initial organization of the committee.

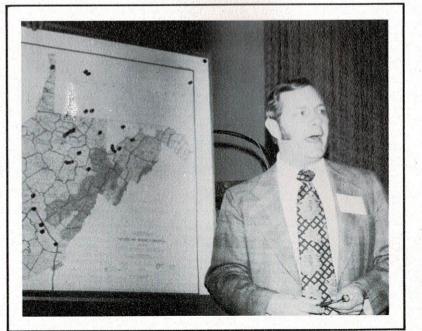
The symposium was termed an outstanding success by Association President Ben Lusk, who said plans are already under way for next year's event. However, the dates have not yet been set.



Top: With over 250 at the technical session, seating space was at a premium.

Bottom: Big crowds are great for conventions but they mean one thing for members of the Association staff; lots of work. It's a big job getting 250 people registered during a hectic, all-day meeting, but its the order of the day for Mary Ann Steele (left) and Patty Bruce, as they get Bob Kosnoski signed up.

Left: Ted Hillman, safety director for Princess Susan Coal Co. outlined his proposed Health and Safety Committee during the Friday morning session. The map in the background depicts the location of general member companies of the WVSMRA.





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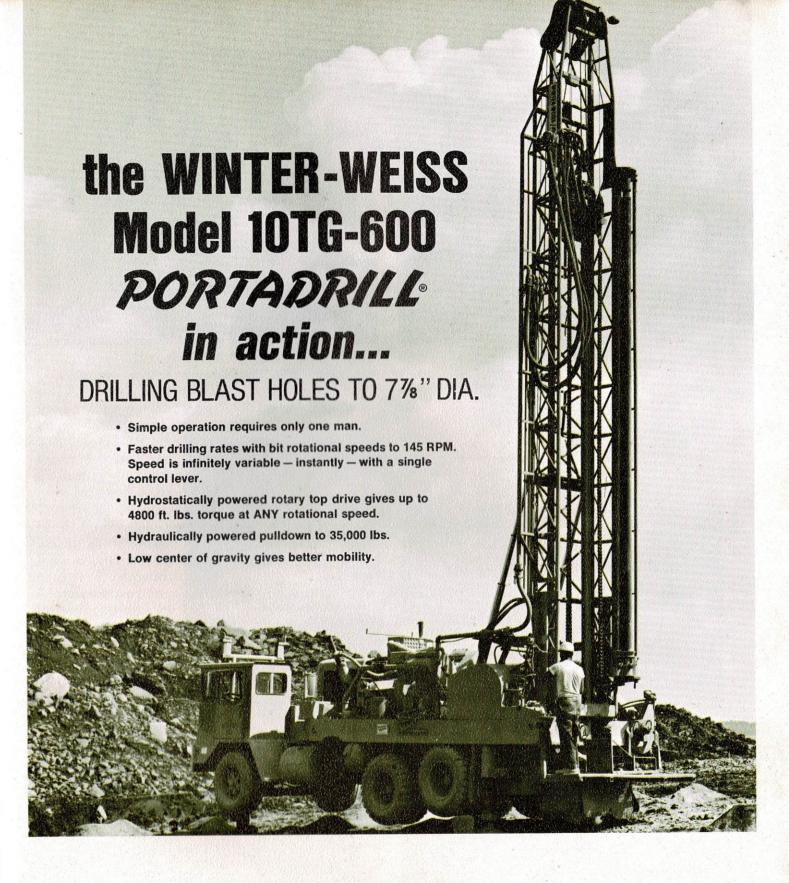
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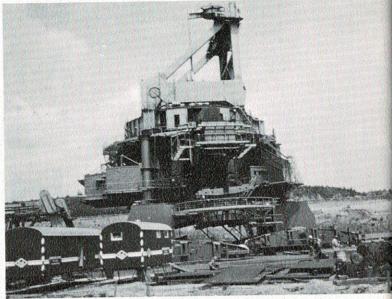


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# INTERNATIONAL MINING AND RECLAMATION CONFERENCE

Last July, Fil Nutter, Gil Frederick, Joe Orlandi and Ben Lusk, of the West Virginia Surface Mining and Reclamation Association, accompanied by Jack Mulhern and Gene Harris of the United States Environmental Protection Agency, visited mining and reclamation areas throughout Germany.

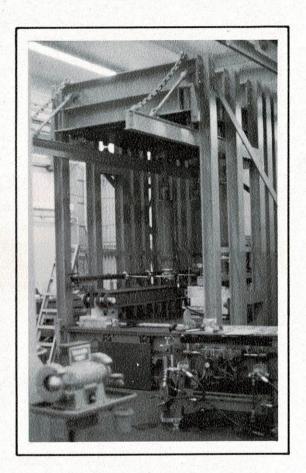
The group visited the famous "Brown Coal" region in Cologne, where over 100 million tons of coal are surface mined annually out of only three pits. They also toured a single-entry long-wall deep mine near Walsum, where 22,000 tons of coal are mined daily at a depth of 4,000 feet. In addition, the study group toured a research lab in Essen, where studies are being conducted on roof control and a plant in Wuppertal which manufactures longwall supports.

These, among other points of interest, were found to be so informative that a return trip has been planned in which all interested parties may participate. The First International Mining and Reclamation Conference will be held in Dusseldorf, West Germany, April 12-19, 1975. Representatives from 37 other countries have also been invited to attend the Conference, giving all an opportunity to exchange views and ideas on mining and reclamation approaches on a world-wide basis.

Lufthansa German Airlines has arranged round trip air transportation from the Philadelphia International Airport. The group will be staying at the Dusseldorf Hilton, one of Europe's finest hotels.

The program will include three field trips, including one day at the Brown Coal Region to view the Rheinshcie Braunkohle operation in Cologne, where giant wheel escavators are working. In addition, underground longwall mines in the Ruhr Valley and plant tours of manufacturing companies such as Krupp, Hemscheidt, Wolff and Humboldt will be visited by the group. Papers will be given on the first and last days with significant speeches from high-ranking German and United States government officials. The Conference promises to be informative and should provide new insights on German technology in the fields of mining and reclamation for all participants.

If you are interested in participating contact: West Virginia Surface Mining and Reclamation Association, 1624 Kanawha Boulevard, East, Charleston, West Virginia 25311 (304) 346-5318.





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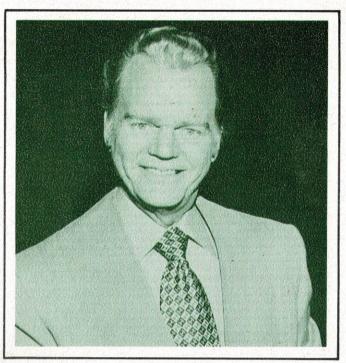
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# PAUL HARVEY TO SPEAK AT DORAL MEETING



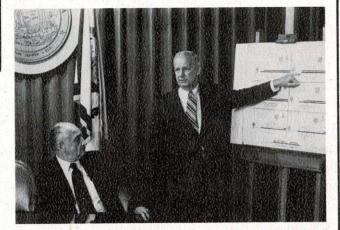
Paul Harvey

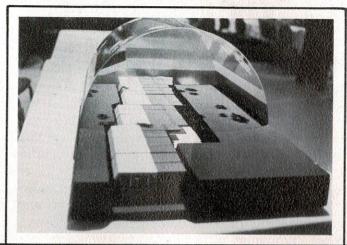
Paul Harvey will be the guest speaker at the Semi-Annual Meeting of the West Virginia Surface Mining and Reclamation Association on March 8, 1975, at the Doral Country Club in Miami. Mr. Harvey has often been referred to as the "burr under the saddle of the American conscience." His broadcasts and newspaper columns have been reprinted in the Congressional Record more than any other commentator. The one word most often used to describe Paul Harvey and his broadcasts is "courageous."



# Governor Moore Announces E. P. A. Project Site

















The Honorable Arch A. Moore, Jr., Governor of West Virginia, publicly announced the Association's \$2 million grant from the federal government to study longwall surface mining. The Governor revealed that the new project would be located on property owned by the American Electric Power Company near Julian, Boone County, West Virginia. Seated from the left: Ben E. Lusk, West Virginia Surface Mining and Reclamation Association President: S. Jackson Hubbard, project manager for Environmental Protection Agency; Governor Moore; and Paul D. Martinka, Senior Vice-President of American Electric Power Com-

With Mr. Martinka looking on. Governor Moore explains the concept of longwall or shortwall surface mining. The drawing follows the operation from beginning, through the surface mining phase, followed by the shortwall system and through the final reclamation. The morning press conference was held in the Governor's conference room.

The formal signing of the agreement between the West Virginia Surface Mining and Reclamation Association and the American Electric Power Company came after the announcement of the site selection. West Virginia Surface Mining and Reclamation Association President Ben E. Lusk, and American Electric Power Senior Vice-President Paul D. Martinka sign the final papers at the luncheon.

Full television, radio and press coverage was on hand at the morning press conference as Governor Moore announced the site selection. The Governor told the audience that this could be a great step for the coal industry in West Virginia.

A scale model of the shortwall equipment and how it will mine the coal was made available by the Lee-Norse Company, who is supplying the machinery for the project. The glass cover represents the mountain above the project. The black area on the right is the coal seam being cut away by the shortwall equipment and roof supports on the right.

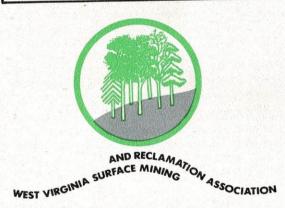
At the luncheon following the press conference, some of the principals discuss the morning's activities. From the left: Eugene Harris, Mine Pollution Control Branch of the Environmental Protection Agency, Governor Moore, Ben Lusk, and Ulrich Lange of the Lee-Norse Com-

You couldn't have found a happier group on this big day than the Association's Executive Committee who posed behind the shortwall model. From the left are: H. L. "Mike" Kennedy, 1st Vice-Chairman of the Board; G. B. Frederick, Treasurer; Ben Lusk; Frank D. Jennings, Secretary; James C. Justice, Chairman of the Board; F. B. Nutter, Sr., 2nd Vice-Chairman of the Board; and L. W. Hamilton. Jr., past Chairman. Not pictured was Bernard J. Folio, Chairman of the Associate Division.

35

# About the Association





### NEW HEADQUARTERS OPENS IN CHARLESTON

The WVSMRA has opened its new headquarters at 1624 Kanawha Boulevard, East, Charleston, West Virginia 25311. The three-story structure was purchased from the West Virginia Labor Federation which occupied the building for many years before buying the Nelson Building in downtown Charleston.

The WVSMRA is utilizing the basement and main floor for its business offices. The upper two floors and the garage apartment in the rear will be rented as office space to member companies on a first-come-first serve basis.

The Association now has four locations. The main office in Charleston; the northern office at 338½ Washington Avenue, Clarksburg, West Virginia 26301; the Environmental Quality Control Lab at 1149 Valley Drive, Beckley, West Virginia 25801; and the shortwall field office at Julian in Boone County.

### WVSMRA 1975 CALENDAR

January 9 & 10, 1975

Second Annual West Virginia Surface Mining Symposium, Daniel Boone Hotel, Charleston, West Virginia

March 6-9, 1975

Semi-Annual Meeting, Doral Country Club, Miami, Florida

April 12-19, 1975

International Mining and Reclamation Conference, Dusseldorf, West Germany

June 5-8, 1975

Annual Meeting, The Greenbrier Hotel, White Sulphur Springs, West Virginia

October 17 & 18, 1975

Fall Board of Directors' Meeting, Lakeview Country Club, Morgantown, West Virginia

