Pennsylvania Coal

in Perspective

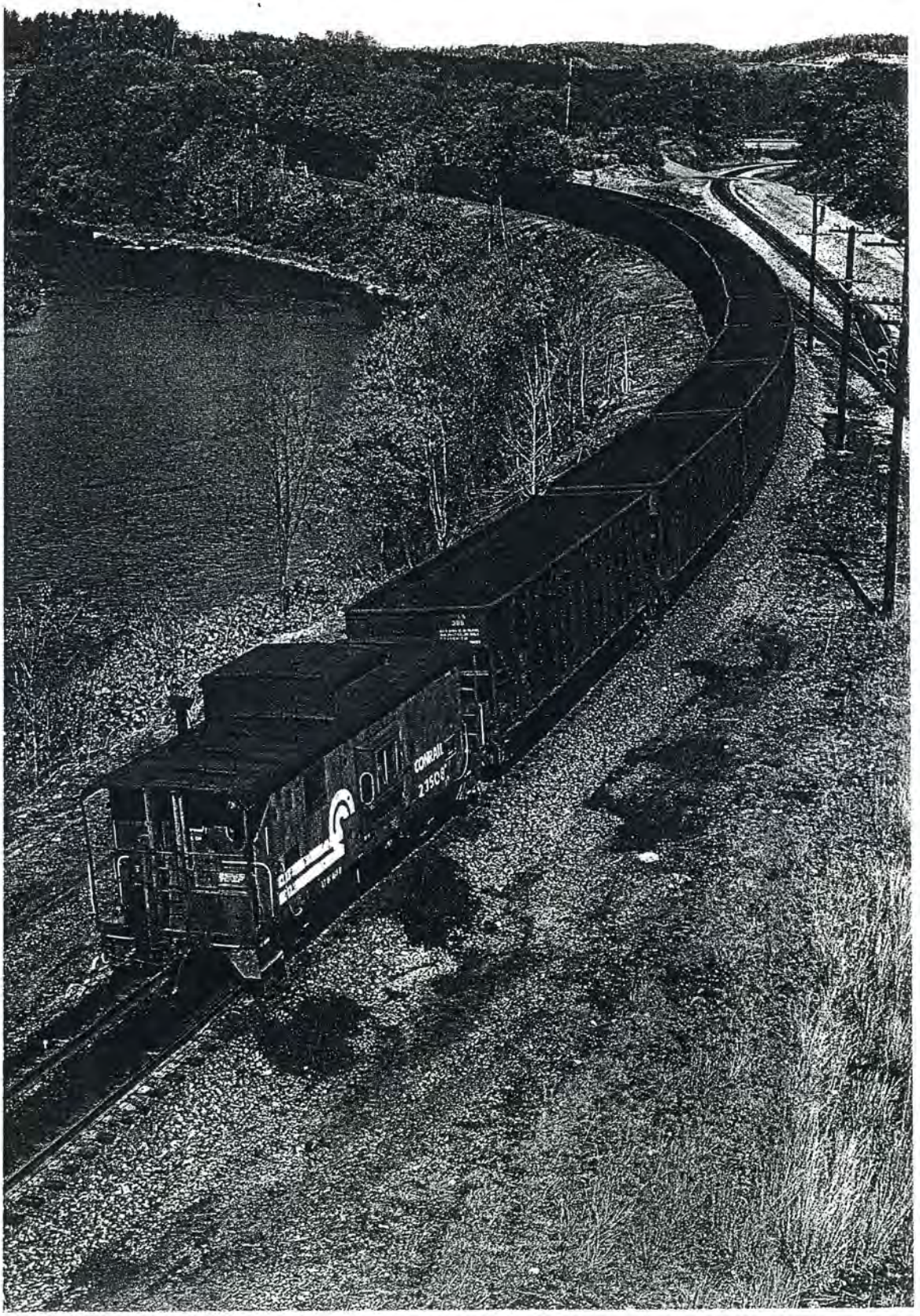
This golf course was built on a former strip mine.

Golfers Tee Off At Former Strip Mining Site

The Grandview Golf Course near Curwensville, Clearfield County, is a prime example of strip mining reclamation at its best.

Blending into the rolling Pennsylvania hillsides, the site once contained draglines and bulldozers when it was an active strip mine during the 1970s.

It is a tribute to modern reclamation methods that the course stands as a shining example of coal mining at its best.



A Conrail train moves Pennsylvania coal to market.

Preface

To stay in business in the 1980s, today's coal operator must be an environmentalist and a shrewd businessman. State and federal regulatory constraints and huge sums of capital needed for daily operating expenses put the coal company on a tightrope, balancing environmental and economic concerns.

However, if you mention coal mining to most people, they immediately think of abandoned highwalls, deadly ponds, sink holes and other scars left by decades of unregulated mining activity. What many do not realize is that coal companies now must comply with strict state and federal laws, which require posting bonds prior to mining to ensure that the site will be reclaimed and doing extensive reclamation work that continues years after mining is completed.

These regulations also add production taxes, consultant costs and permit-preparation fees to already high operating expenses, which include equipment that carries price tags with seven figures, payrolls and associated benefits, diesel fuel and other maintenance costs to keep the machinery running.

Recognizing that an information void may exist, the Pennsylvania Coal Mining Association, which represents approximately 100 surface-mining producers in Central and Western Pennsylvania and 110 associate members in the service and supply industries, has prepared this booklet to highlight some facts that may go unnoticed by the average person.

For example, not many Pennsylvanians realize that when they turn on their lights, there is a 75 percent chance that a coal-fired power plant provides the electricity. Or that every dollar earned mining coal generates $3 in the state's economy through goods and services purchased by the coal company or its employees.

PCMA hopes this booklet will shed some light on these facts and make people realize that in Pennsylvania, you've got a friend in coal.

Acknowledgements

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C. Alan Walker of Bradford Coal Co., Bigler; Edward Morgan of Thomas Coal Co., Grampian; Robert Spencer of Hepburnia Coal Co., Grampian; Tony Ercole and Jim Scahill, PCMA executive vice presidents; Terry Rightnour of Energy Environmental Services, Woodland; Wilson Fisher of Hess and Fisher Engineers, Clearfield; Marlin Sherbine of PBS Coals Inc., Friedens; and Gary Byron, state Department of Environmental Resources Hawk Run District mining manager.

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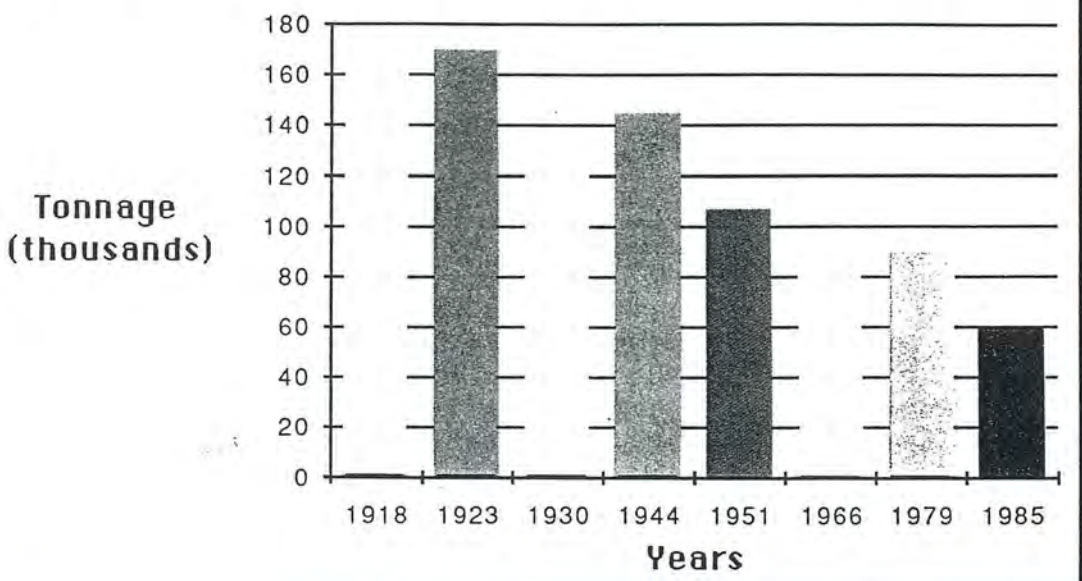
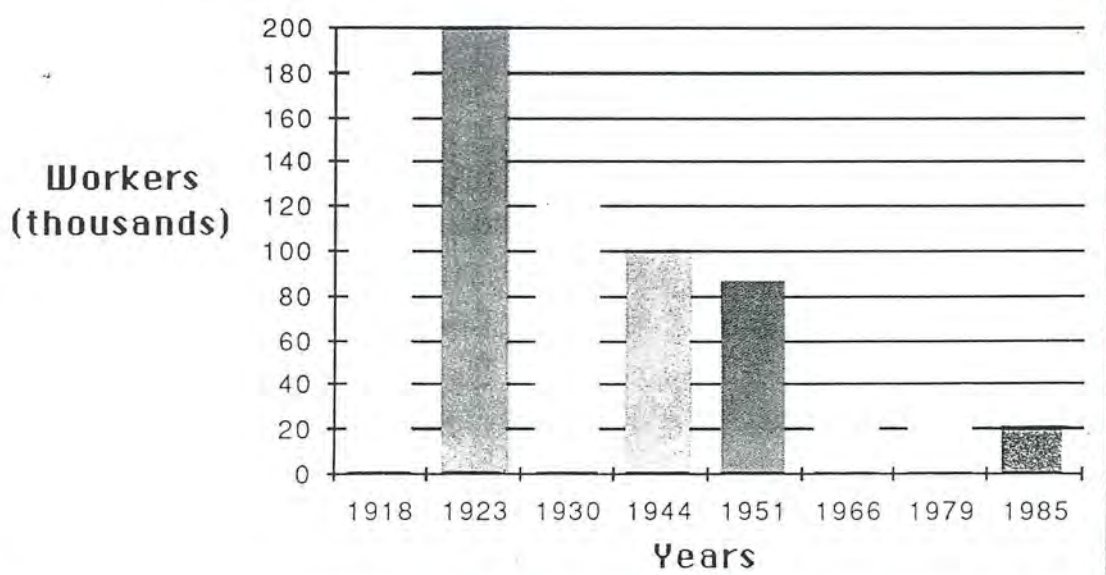
Bituminous Coal Production

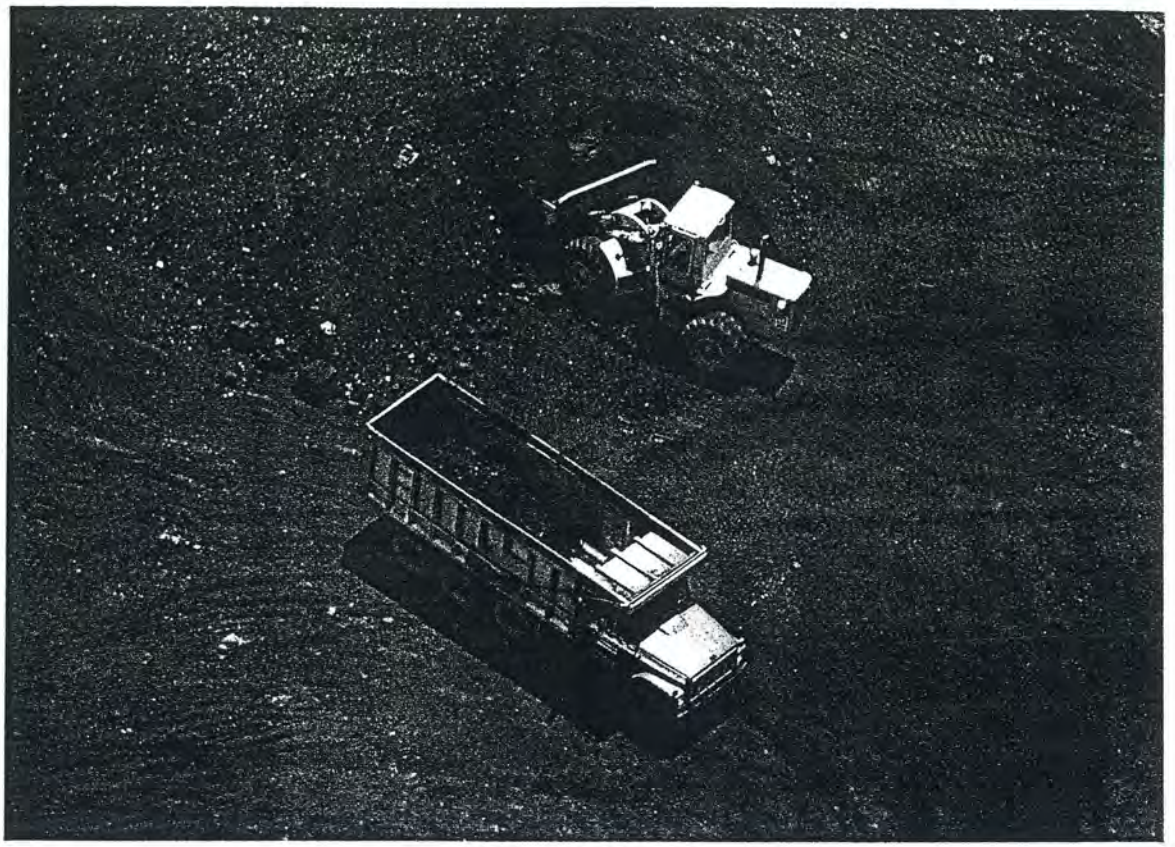
(Source: state Department of Environmental Resources)



Bituminous Coal Employment

(Source: state Department of Environmental Resources)





A front-end loader fills a coal truck in a strip-mining pit.

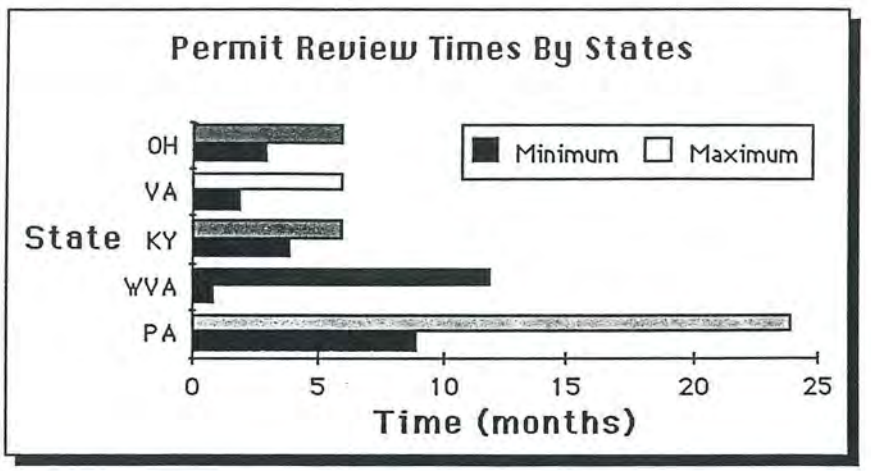
Pennsylvania Coal: An Industry In Crisis

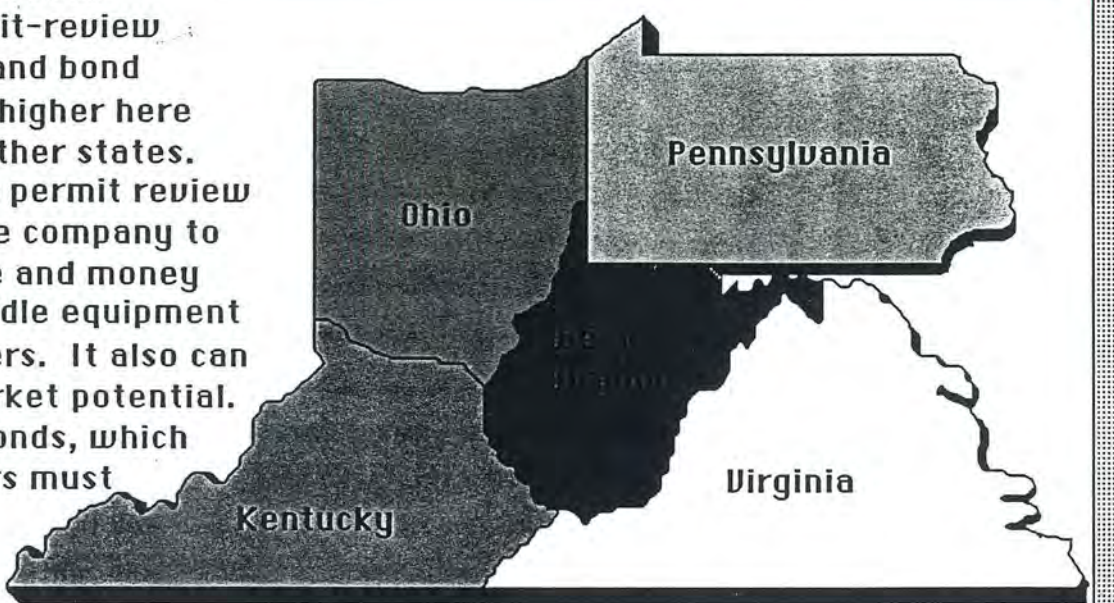
Pennsylvania's bituminous coal industry recorded its worst production year ever in 1985 and faces a crisis that could be devastating if current trends continue. Pummeled by changing markets, rising production costs and increasing regulations, the industry is losing business to competitors in neighboring states and foreign countries. For years the nation's number one coal producer, Pennsylvania slipped to fourth place behind Kentucky, West Virginia and Wyoming, producing only 59 million tons. This is the worst total on record this century and industry employment registered a new low of under 20,000 workers.

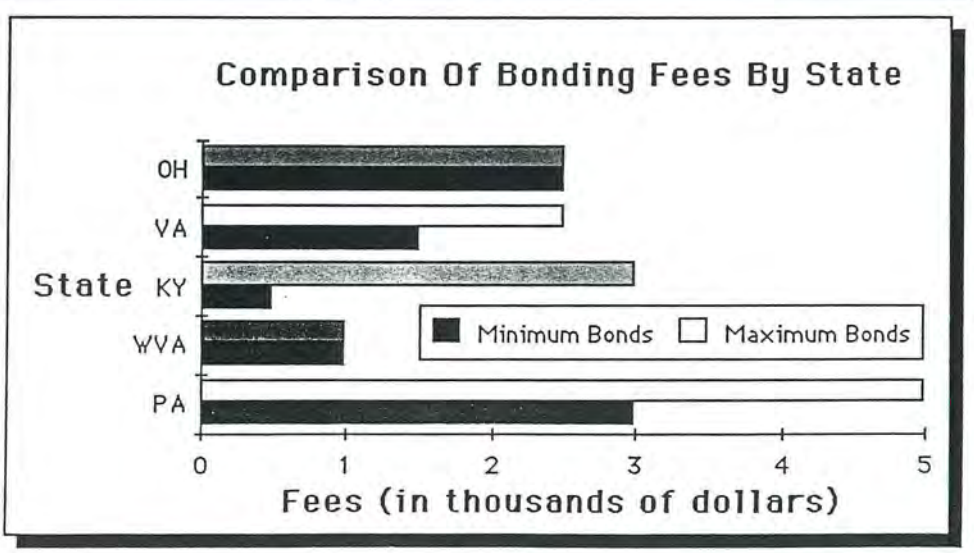
These statistics pale compared to the peak bituminous production year of 1918, when 181,678 miners produced 177 million tons and Pennsylvania led the nation. Coal literally was king at the turn of the century, with the state's high-quality bituminous product finding ample customers in a country that fired locomotives, ocean-going vessels, homes and industries with the mineral. To keep these customers supplied, several hundred thousand immigrant miners from European countries joined local laborers working 12-hour days in tunnels that were sometimes three feet high. The market stayed lucrative until the mid-1900s, when industries, homes and

Pennsylvania's Competitive Disadvantage

Coal companies in Pennsylvania are at a competitive disadvantage with those in nearby states because the permit-review process and bond fees are higher here than in other states. Delays in permit review cause the company to lose time and money through idle equipment and miners. It also can limit market potential. Higher bonds, which operators must post to ensure that reclamation is done, require companies to utilize more capital for bonds, which could be used for other purposes. (Data from state coal associations.)







other consumers began converting to oil, which was selling for less than 20 cents per gallon at a time when coal was around $4 per ton. It stayed in that range from the 1940s through the early 1960s, as the surface-mining industry began competing with the already-established deep mines.

Oil actually sparked an upturn in the coal industry during the 1970s, when the Arab oil embargo drove the price of heating oil and gasoline over $1 per gallon. This made coal more attractive and the price soared from $20 per ton to $60 at one point. Bituminous production hit a post-World War II peak of 89 million tons in 1979 and the industry employed 39,000 workers.

However, tumbling oil prices in the 1980s, coupled with numerous other economic and regulatory factors, brought recession to the state's coal industry. While nationwide production rose 33 percent during the last 10 years, Pennsylvania's tonnage fell 31 percent. Prices also dropped, currently ranging from $25 to $30 per ton for coal that must compete against states where the business climate is more favorable.

The top three coal-producing states have a competitive advantage over Pennsylvania because bonding rates are drastically lower, mining permits are approved faster and the coal is easier to mine. Producers in foreign countries — such as Poland, South Africa and Australia — have advantages in the foreign markets because the mining cost is driven down through government subsidies and minimal regulations. These factors make Pennsylvania coal more expensive to mine and more costly to sell.

For example, competing states have lower bond rates than Pennsylvania, where surface mining companies must post a minimum of $3,000 to $5,000 per acre to ensure that land is properly reclaimed. Kentucky's minimum bond ranges from $500 to $3,000 per acre and in West Virginia the minimum is $1,000 per acre. Thus, bonding a 100-acre site could cost $500,000 in Pennsylvania, $50,000 in Kentucky and $100,000 in West Virginia. Lower rates let companies in these states tie up less capital in bonds, making more money available for production.

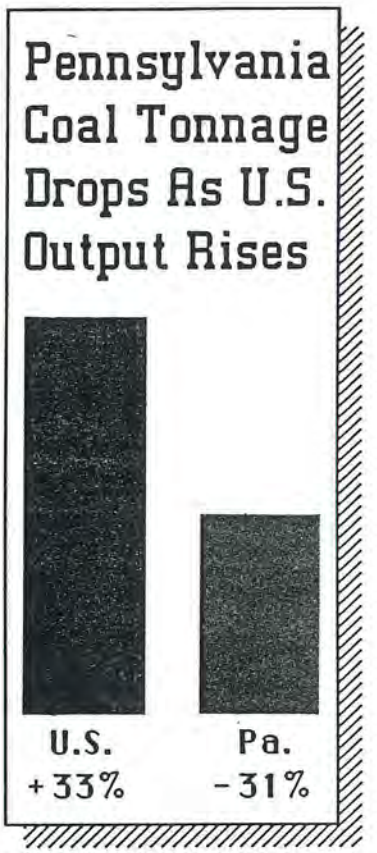
Another important factor is that coal operators in the Keystone state wait from nine months to two years for the state Department of Environmental Resources (DER) to approve a mining permit. In contrast, companies in Kentucky, Virginia, West Virginia and Ohio have a mining permit an average of six months after the application is filed, according to coal associations in these states. This gives the coal companies more flexibility in meeting market demands and puts Pennsylvania producers at a competitive disadvantage.

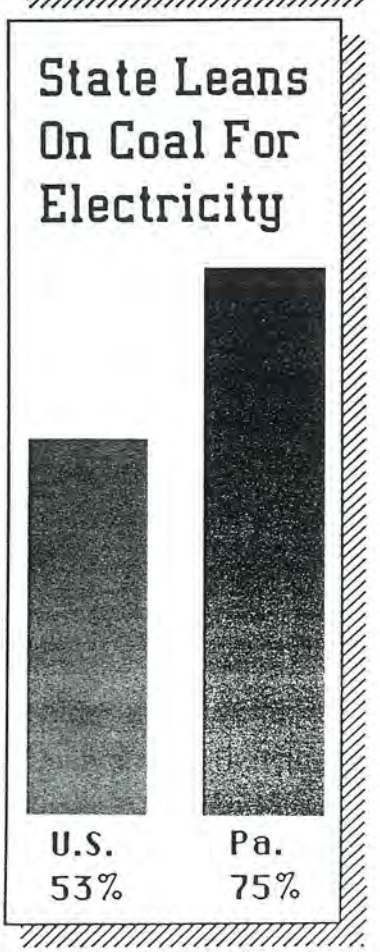
Western states are a threat because coal is less costly to mine since it is closer to the surface and the veins are much thicker than those in Pennsylvania. Regulations permit using larger draglines and having more pit area open than in the Keystone state, where the maximum highwall and pit area is limited to 1,500 feet and a width of 300 feet,

including the spoil area. This prohibits using the more economical larger equipment and multiple-seam mining method.

These factors increase production costs and make it difficult for the state's coal industry to compete for customers in the utility, industrial and metallurgical markets. Some 75 percent of Pennsylvania's electricity is produced by coal-fired plants and nationwide that total is 53 percent. Foreign and domestic steel producers are an important part of the state's customer base, as are industrial users like cement and paper mills. Coal byproducts also produce such common items as alcohol, fertilizer, antifreeze, cleaning materials and pharmaceutics.

Keeping these customers and opening new markets are keys to survival in the 1980s. To weather the current crisis, the industry must have the help of regulators, legislators and others across the state. One million tons of coal alone generates $33 million in the state's economy, creating 307 direct mining jobs with a payroll of $9.4 million and 246 support industry jobs with a payroll exceeding $6 million. One can multiply these figures by the 59 million tons produced in Pennsylvania during 1985 and demonstrate that coal is a vital part of the state's economy. With an estimated 22 billion tons of recoverable reserves left in this state, which is more than has been mined in the last century, the coal industry can continue contributing to the state's economic vitality.





State Mining Regulations Toughest In Nation

Pennsylvania coal companies operate in the strictest regulatory climate in the nation. The state's surface-mining laws are so comprehensive that the federal government used them as a basis for its legislation setting nationwide standards in the 1970s. In some instances, the federal law's requirements were even less restrictive than those on the Keystone state's books.

The state took an early lead in regulating the surface-mining industry in 1945 by passing the Bituminous Coal Open Pit Mining Conservation Act, which required the strip miner to cover the coal seams and plant trees after mining. Although highwalls could remain in place at the site, the law created the concept of bonding, in which the coal company posts money or buys an insurance policy sufficient to reclaim the site. The bonding rate started out at $200 per acre under the original law and rose to $300 later in the 1940s. The law gave the state Department of Mines power to enforce standards, review mining permit applications and monitor operations. The legislature later renamed it the Department of Mines and Mineral Industries in 1956.

On July 16, 1963, the General Assembly strengthened the original mining law by passing Act 133, which took effect Jan. 1, 1964. It became the bench mark used by other states in writing mining laws because reclamation was the act's cornerstone. The new law required planting more vegetation after mining concluded and mandated detailed plans for returning the site to productive use. The measure increased the Department of Mines and Mineral Industries' enforcement powers and authorized the department's secretary to set bonding rates between $500 to $1,000 per acre. With the increased authority, the department developed the concept of "approximate original contour," which required even more extensive reclamation work by filling in highwalls and returning the landscape to the contour that existed prior to mining.

The 1970s brought more sweeping regulatory changes at the state and federal levels. Starting with Act 275 on Dec. 3, 1970, the General Assembly created the state Department of Environmental Resources (DER) to regulate coal mining and other environmental concerns. The Department of Mines and Mineral Industries was incorporated into DER as the Bureau of Mining and Reclamation.

The state gave DER increased regulatory authority under the Surface Mining Conservation and Reclamation Act, passed Nov. 30, 1971. This was the nation's toughest mining law, mandating more frequent inspections at active sites and establishing strict reclamation standards. For example, the law implemented a "five-year clock" in which the operator is responsible for a site five years after it is replanted. A portion of the original bond posted prior to mining is held during that time to ensure that the reclamation complies with existing standards. These minimum per-acre bonds

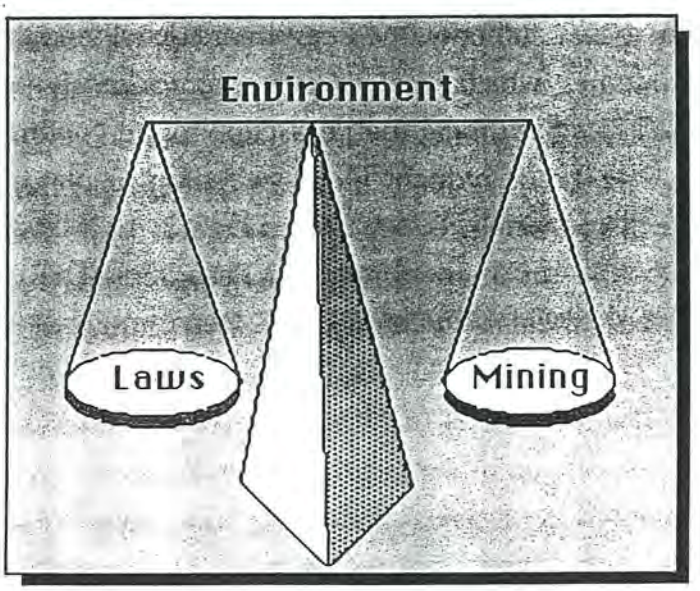
were increased to $1,000 in 1977, $2,000 in 1979, $4,000 on Jan. 5, 1981 and then reverted to $3,000 on Aug. 1, 1981, when the industry agreed to pay a $50-per-acre reclamation fee when filing for permits.

So tough were the standards in the 1971 state law that the federal government used it as a basis for the Surface Mining Control and Reclamation Act of 1977. Despite the similarities, the state had to promulgate new regulations patterned after the federal law to obtain primacy, which is prime regulatory power over the coal industry. DER achieved this status in 1982 after the federal government approved these regulatory changes.

The federal law increased the requirements to monthly inspections at active sites and brought about more paper work for the coal industry and DER, since existing mining permits had to be refiled on federal forms during the early 1980s. DER had to increase its staff for monthly inspections at all active sites and meet other regulatory requirements.

Because of these changes, a coal company's mining permit application now is reviewed by several state and federal agencies for possible environmental impact. The process starts with DER and includes: the Pennsylvania Fish Commission and the Pennsylvania Game Commission, concerned with fisheries and wildlife respectively; the Pennsylvania Historical and Museum Commission, which safeguards historic landmarks; the Pennsylvania Department of Transportation, primarily concerned with roads; the Soil Conservation District and Soil Conservation Service, which deal with erosion on farmlands; and the U.S. Army Corps of Engineers, to study corps sites.

With all of these checks and balances, the mining laws ensure that the environment is protected and that any potential detrimental impact of coal mining is minimized. Although the regulations increase operating costs for Pennsylvania coal companies, today's industry takes seriously its responsibility to abide by the laws and safeguard the environment.



The Coal Business: A Capital-Intensive Industry

Balancing a personal checkbook is like child's play compared to managing a coal company's assets and liabilities. From equipment carrying price tags into the millions of dollars to payrolls in the same neighborhood, the coal operator must be an astute businessman to survive in the ever-changing market. Dwindling profit ratios and soaring production costs make coal companies walk a financial tightrope.

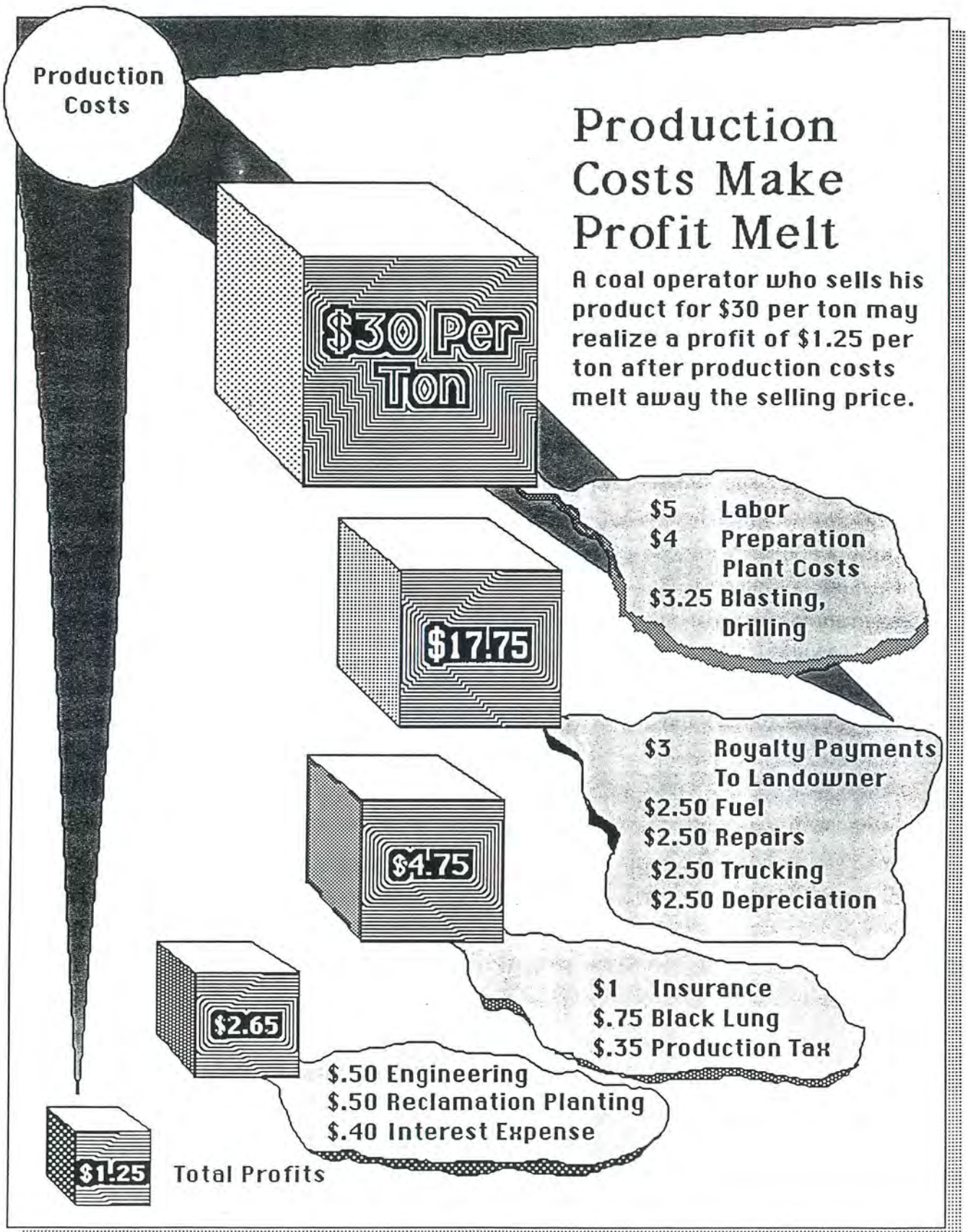
To start a small company that would be capable of mining 60,000 tons of coal a year, the total equipment investment would be $2.10 million. A seven-cubic-yard dragline alone costs $1.2 million to purchase, plus $140,000 to set up. Bulldozers to scrape away the soil and later regrade the site carry a price tag of about $480,000 each. Front-end loaders to load the coal onto trucks in the pit and at the tipple check in at $280,000 apiece.

The sample company has spent $2.10 million, and the coal is still in the ground.

This rather substantial investment is still only about half of what must be spent before mining can begin. Another $100,000 would be needed for contracts with a drilling company to determine if any coal is at a proposed mining site and with a trucking company to haul the coal. About $25,000 is the average cost of preparing environmental-impact studies and preliminary work for the mining permit application, although these costs can range from $12,000 to over $100,000.

When filing the mining permit with the state Department of Environmental Resources (DER), the company may have to put up as much as $500,000 in bonds if the site contains 100 minable acres that would necessitate highwalls in excess of 85 feet. Established operators can purchase these bonds from a surety company at a cost of about $50 for every $1,000 of bonding needed. However, a new company will have to establish a reclamation track record first, much like a consumer must obtain a credit history before borrowing money. Thus, the sample company must post a cash bond or put up collateral in the specified amount. Of the total bond, 60 percent, or $300,000, will be returned after the site has been backfilled, 25 percent, or $125,000, will be released following the first growing season if a 70 percent cover is maintained and the final 15 percent, or $75,000, will be held for five years after the first planting to ensure that the site does not develop any adverse environmental problems.

In addition to the performance bond, the coal company faces bonds of $1,000 per acre for support areas, which are areas that will not be mined but must be used as haul roads, places for the operation office trailer and equipment. The last permitting charge is a non-reimbursable reclamation fee of $50 per acre, which the state uses to supplement forfeited bonds at abandoned-mine sites. The sample company needs 20 support acres and must pay the reclamation fee on the 100 mining acres.


Production Costs
Production Costs Make Profit Melt
A coal operator who sells his product for $30 per ton may realize a profit of $1.25 per ton after production costs melt away the selling price.
$30 Per Ton
$17.75
$5 Labor
$4 Preparation Plant Costs
$3.25 Blasting, Drilling
$4.75
$3 Royalty Payments To Landowner
$2.50 Fuel
$2.50 Repairs
$2.50 Trucking
$2.50 Depreciation
$2.65
$1 Insurance
$.75 Black Lung
$.35 Production Tax
$.50 Engineering
$.50 Reclamation Planting
$.40 Interest Expense
$1.25
Total Profits

This brings the cash outlay to $2.75 million, and no coal has been mined.

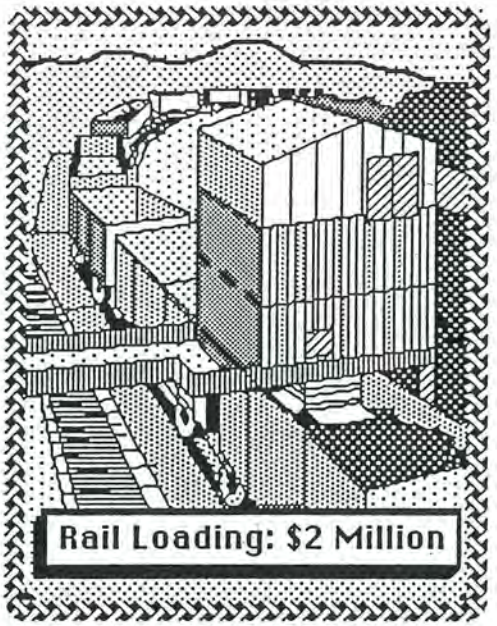
Provided that the public files no objections to the mining permit after the company advertises it in the newspaper and DER approves the application, the company then can begin the final purchases to prepare for mining. Fuel alone for the first year will run about $200,000 for the dragline, bulldozer, front-end loader and trucks, which will require another $50,000 for maintenance. Ten employees working two shifts at about $9 to $12 per hour will cost around $900,000 in wages and benefits. Insurance will add another $200,000.

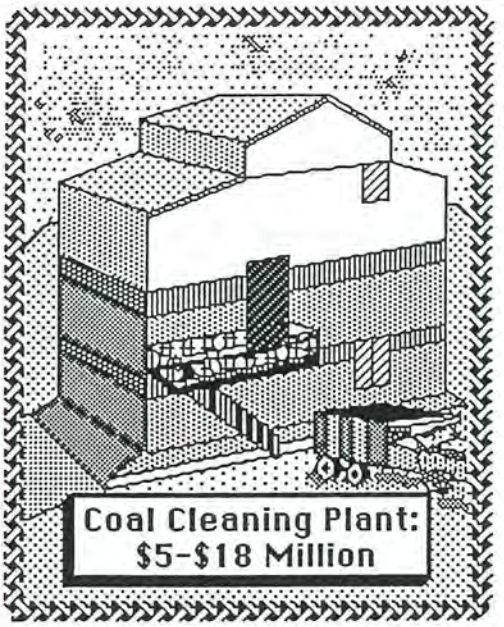
That rounds out the expenditures to start this sample company, which has accumulated a total bill of $4.1 million before any coal is ever mined. Additional money can be spent on coal-cleaning plants, which range in price between $5 and $18 million, or for a sophisticated rail-loading facility costing $2 million. However, with the substantial investment already made, the new company would be prudent to sell the product to an organization with these already in place.

In today's market, start-up costs are not soon recovered, since profit margins on coal selling at $25 to $30 per ton can range from $1 to $2 per ton. Labor, equipment costs, royalties to landowners and numerous other expenses melt the selling price rather quickly.

Profit margins vary with the price of coal and production costs. In the 1940s and 1950s bituminous coal ranged from $3.50 to $4.25 per ton because labor and production costs were lower in an era when gasoline was under 20 cents per gallon and $1 per hour was considered a good wage. As regulations increased in the 1960s, the price of coal more than doubled from around $5 per ton at the beginning of the decade to $12 per ton by the end. While the price approached $20 per ton in the early 1970s, the Arab oil embargo sent it skyrocketing to around $60 per ton during the middle portion of the decade, as gasoline and home-heating oil climbed over $1 per gallon and made coal more attractive. The industry's recession of the 1980s and falling oil prices have plunged the price down to between $25 and $30 per ton.

Whatever price the market is demanding, a coal industry that is selling its product means a lot to the Pennsylvania economy. Each coal-mining job generates about 2.3 to 3 jobs in the community through related service industries, according to a Pennsylvania State University study. This brings increased tax revenues to school districts and municipalities at the local level, along with adding to state and federal taxes. In addition, miners buy goods and services and help keep the business community healthy.

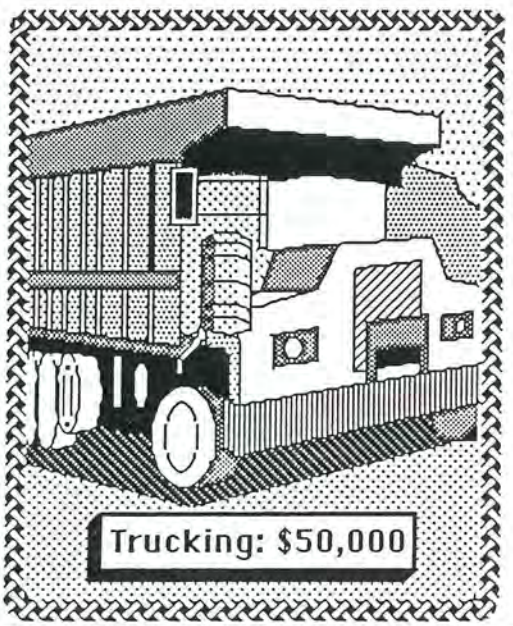


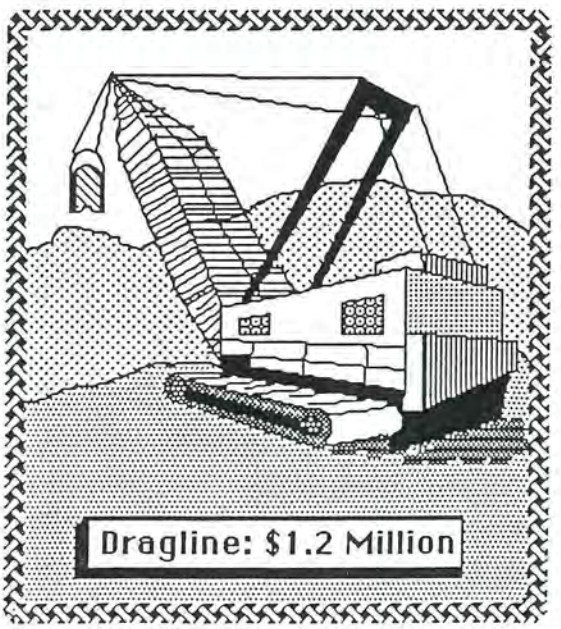


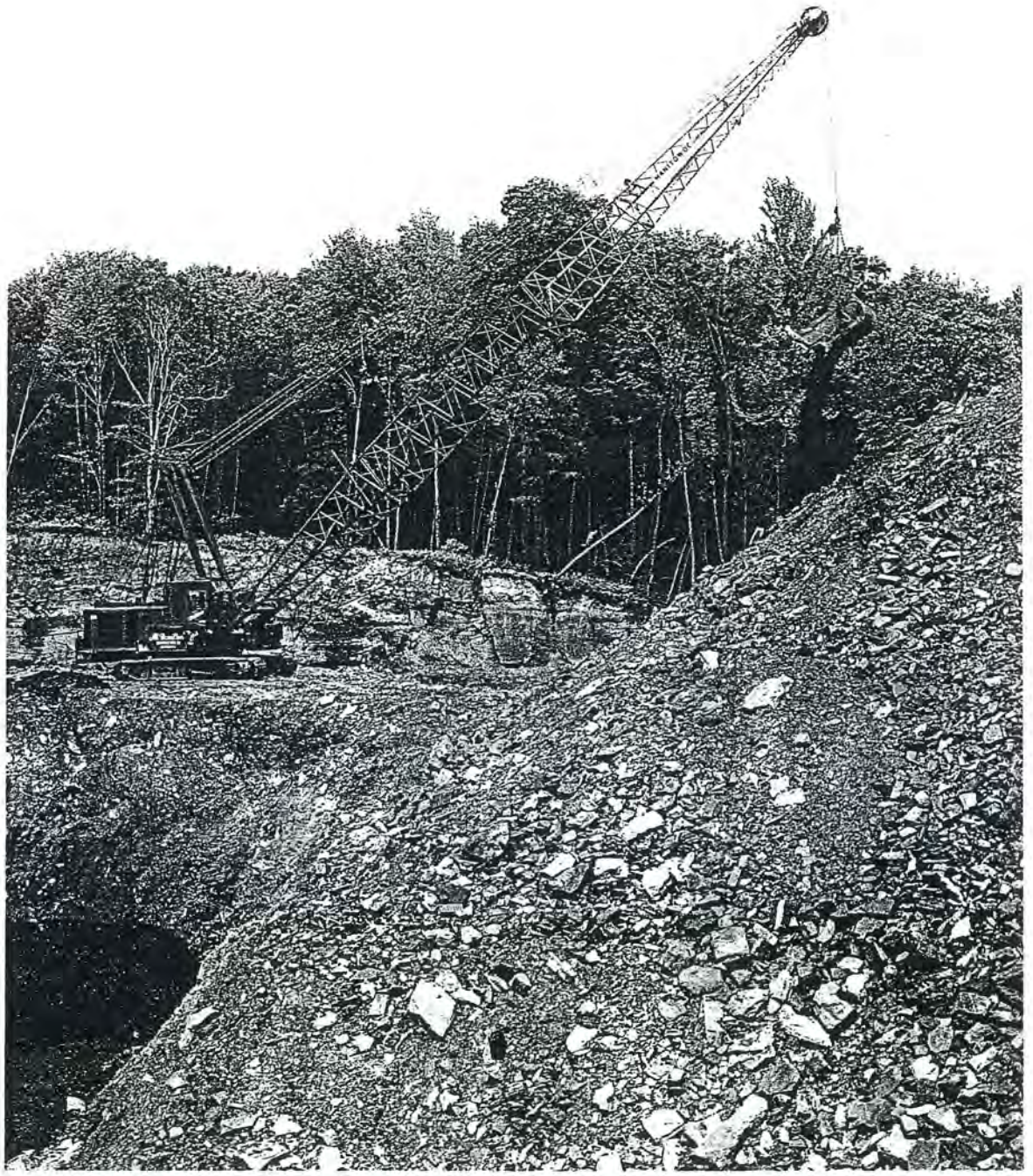
PCMA

Equipment Carries Hefty Price Tags

Today's coal company uses a lot of money to stay in business, maintaining equipment and other facilities that cost millions of dollars.







A dragline costs $1.2 million.

All of this only takes place if the coal company makes the substantial investment to begin operations. Paying for the equipment with million-dollar price tags, and keeping that equipment running, is a tough job that keeps any coal operator busy. In the present economic climate, companies are finding it more difficult to stay on the tightrope and many are falling off into a bucket of red ink.

Before Mining Begins, Coal Companies Study Sites, Prepare Plans

A coal operator drives by a farm and decides to mine it. From two to five years may pass before any earth is disturbed at that site, as the company must obtain permits, prepare detailed mining plans and fulfill other requirements.

Months 1-6

Obtain drilling permit to study coal; do overburden analysis; obtain water samples; get landowner agreement.

Months 7-12

Engineers study site to obtain data for 25-part mining permit application; plans made to mine and reclaim site.

Month 13

Apply for a mining permit from the state Department of Environmental Resources; advertise the application for four consecutive weeks in an area newspaper; place a copy on display at the county Conservation District.

Month 14

Public may comment up to 30 days following last day advertisement runs; state and federal agencies scan application and respond; DER officials review data.

Public Objections Filed

Months 15-16

DER contacts independent hearing examiner who schedules a public hearing within two months after the objection is filed; both sides get opportunity to testify.

Months 17-60

DER receives hearing examiner's report and acts on permit; decision may be appealed to Environmental Hearing Board or to the court.

No Objections Made

Months 15-24

Company posts bonds for mining; blasting plan is prepared, advertised for two weeks; DER issues correction letters; homes within one-half mile of site get pre-blast survey for which company pays.

Permit Is Issued, Mining May Begin

The Mining Process: A Complex Undertaking

In the early days of strip mining, a coal operator could buy or lease a property and start mining as soon as the heavy equipment rolled into place. The situation has changed in the post-World War II era, since regulatory constraints and the modern business climate prohibit any hasty moves on an unstudied property. Today's coal operator may find a prospective mining site this month and it could take a minimum of two years or as many as five years before any coal is uncovered. The mining process is that complicated.

Preliminary studies can take from one to six months, starting with exploratory drilling, which will determine the coal's quantity and quality. The amount of overburden is a prime economic consideration, since present market conditions prohibit mining where the ratio is greater than 30 feet of cover for every one foot of coal. A smaller ratio, such as 10:1 or 15:1, is preferred, since this will help cut production costs and increase profits. An overburden analysis will reveal the soil's chemical characteristics and potential for acid discharges. Water conditions must be documented to determine if mining has any impact later.

If the studies indicate that sufficient coal exists and the site can be mined without an adverse environmental impact, the company makes an agreement with the landowner to either purchase the area or lease it and pay royalties for each ton. Once this is done, work begins on the mining-permit application, which is a 25-part document requiring detailed mining and reclamation plans. This can take another six to nine months.

Delivering the foot-thick application forms to the state Department of Environmental Resources (DER) starts the first phase of the permit-review process. During the first 30 days, the coal company must advertise the application in a newspaper of general circulation for four consecutive weeks. A copy of the permit application is placed on public display in the county Conservation District office. The public has 30 days after the last of the four newspaper advertisements is published to comment on the proposal.

If an objection is filed, several months could be added to the review process, since DER then would hire an independent hearing examiner to preside over a public hearing. This usually is scheduled within two months and the hearing examiner makes his recommendations a month or two later. DER either accepts or rejects the report when making the final permit decision, which also can be appealed to the Environmental Hearing Board in Harrisburg. If the permit is approved, the coal company can begin mining during the appeal process.

Even in the most simple site — for example, a 20-acre location in a remote area away from any watershed or dwelling — the permit review could take at least nine

months in Pennsylvania. During this time, the company receives correction letters from DER if any portion of the permit is found to be in error or data are questioned. Inspectors visit the site to take samples and check the company's submission, along with reviewing all geological factors.

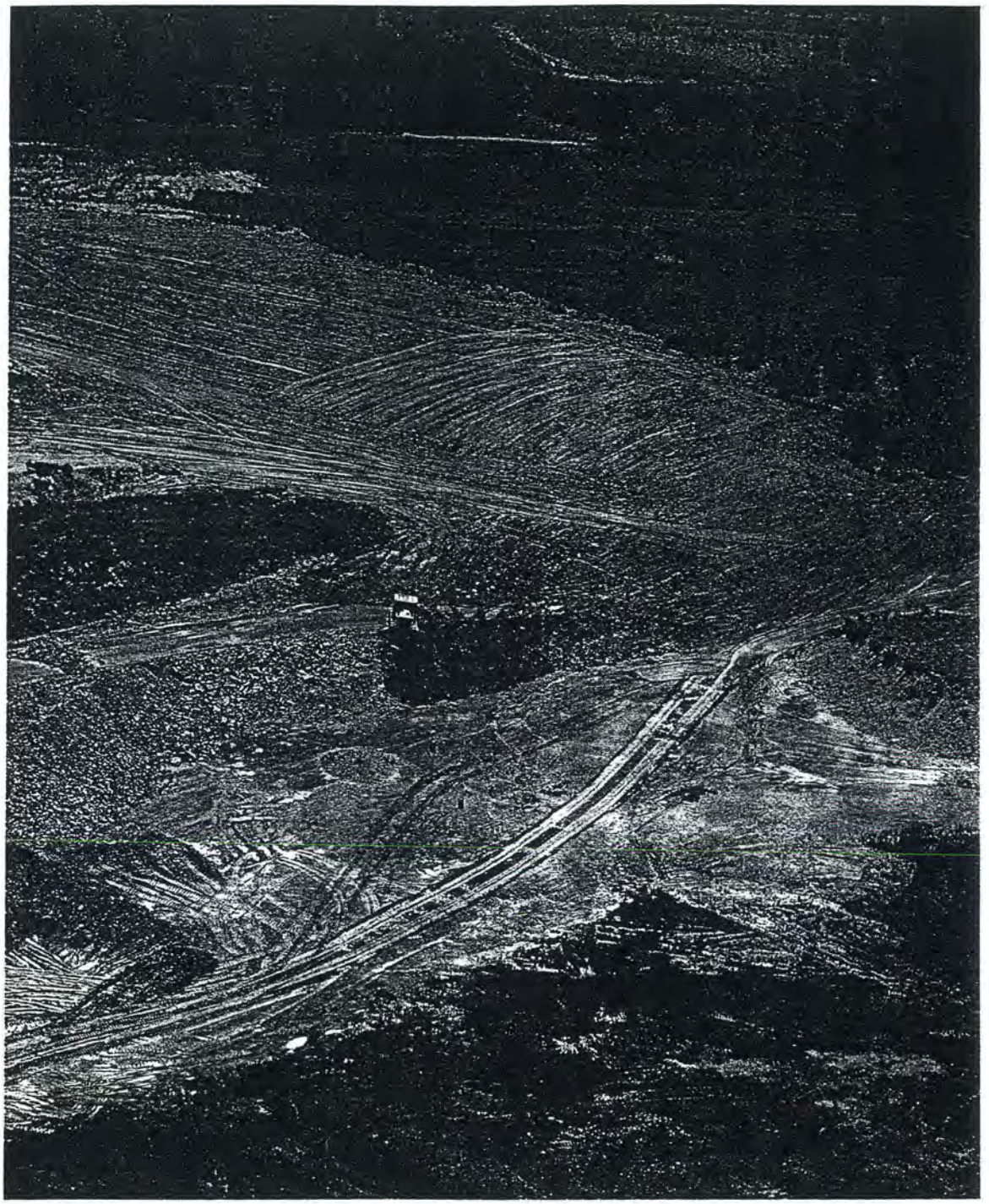
At this point, the workers begin preliminary preparations, such as flagging the area to determine its perimeter, while residents within one-half mile of the mining site are notified that they may request a pre-blast survey. The company pays for this study, in which the homes are photographed in case any possible damage results during blasting. Another newspaper advertisement must be made for two consecutive weeks announcing the intent to conduct blasting operations.

While these requirements are being satisfied, heavy equipment rolls onto the site to construct sediment ponds, haul roads and diversion ditches for controlling runoff. An operations trailer is installed as the field office and signs are erected listing the company's name, job name, telephone number, permit numbers, blasting schedule and warning anyone who might wander onto the site. Paper work is put into place for the quarterly water samples that must be sent to DER and for tabulating the daily production figures, which will be needed to pay royalties and federal production coal taxes.

The mining operation swings into high gear as bulldozers remove the topsoil to storage areas so that it can be replaced during reclamation. If the coal is close to the surface, the bulldozers scrape down to the seam and the front-end loaders begin breaking up the mineral and loading it onto trucks. If the vein is lower, benches are made within 40 feet for the dragline, which can remove 10 tons of earth with each pass if it has a seven-yard bucket. The ground is loosened by blasting operations that take place before the dragline swings into action.

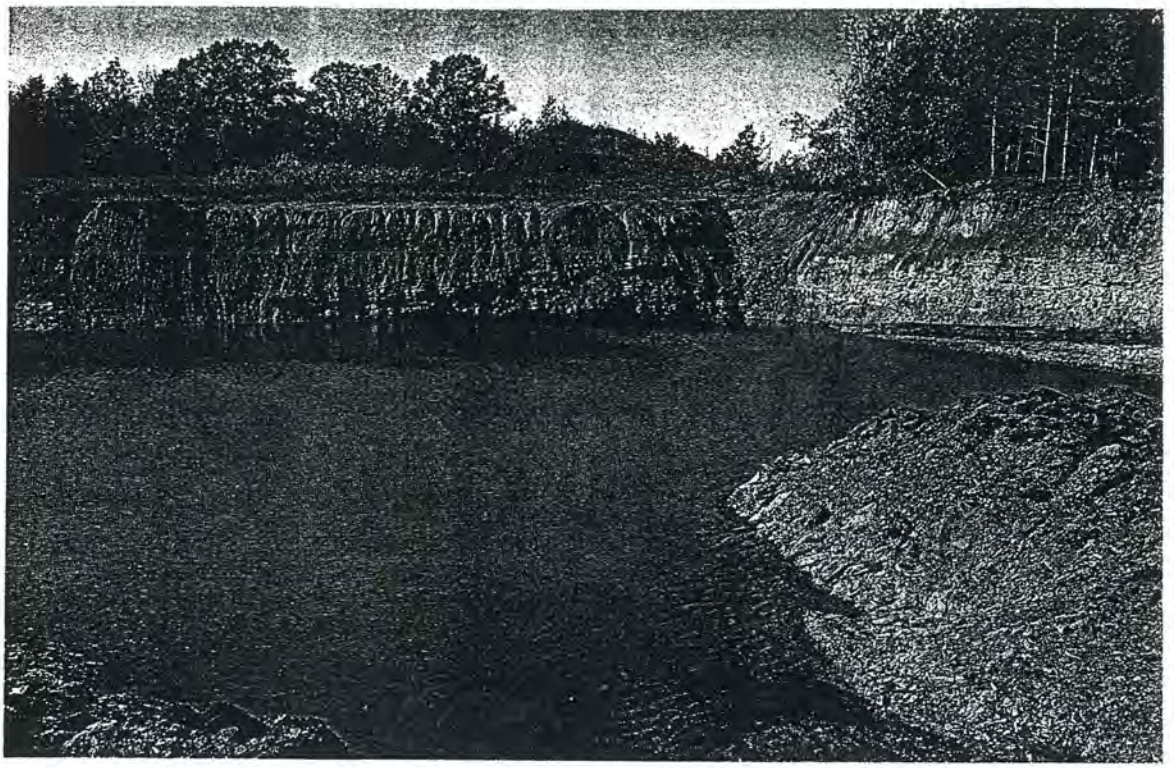
Reclamation work begins immediately after the coal is removed, since backfilling must be concurrent with mining to minimize the exposed area. DER inspectors enforce this by visiting the site each month. Unless the mining permit has a variance for alternate reclamation, the land must be returned to the approximate original contour that existed prior to mining.

The reclamation actually takes place in three phases, starting with backfilling to remove the highwall, which makes the company eligible for a 60 percent bond release. The next stage is seeding the site and obtaining a 70 percent cover for one year, after which another 25 percent of the bond is released if no major erosion problems develop. Once the first seeding takes place, a five-year-clock starts. If no major problems occur during this time, the company can receive the remaining 15 percent of its bonding increment. All three bond-release applications must be advertised in a newspaper of general circulation.

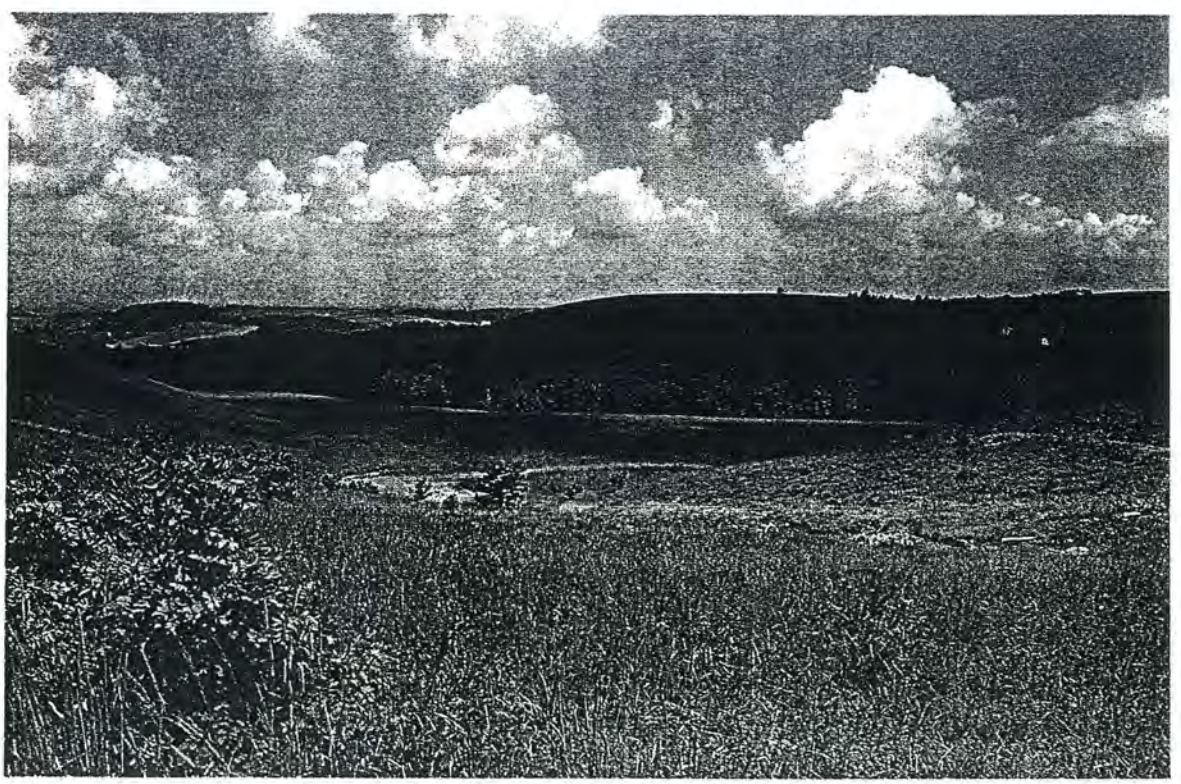


A bulldozer levels the land for planting, which is shown in the distance.

After the five-year clock winds down at a site, cows may be pasturing on the field or corn may be growing on the rolling hillsides. The mining company has explored other sites and made permit applications, following the same complicated procedure to ensure that a steady supply of coal is available for the customers, while at the same time safeguarding the environment.



Highwalls and ponds at abandoned-mine sites are dangerous.



This site once looked like the one above before reclamation.

Today's Coal Operator Heals Yesterday's Scars

Coal mining to many people will conjure images of abandoned highwalls, deadly ponds and sinkholes left by decades of unregulated mining activity. That is the legacy strip mining's past has left for today's new generation of operators, who live within strict state and federal laws that safeguard the environment.

Many of these scars were created during World War II when Pennsylvania was called upon to help fuel Uncle Sam's war effort. There was little time for reclamation when the War Production Board set quotas that coal companies had to meet. Highwalls from later mining activity in the 1945 to 1960 era were left in place because existing mining laws permitted them to remain as long as the coal seam was covered. Coal operators of that era could not afford to do more reclamation than their competitors, and thus the minimum standards were met until the 1960s' laws mandated more thorough reclamation.

Today's environmentally-conscious operators are helping to eliminate many of these problems from previous times through remining abandoned locations. If the coal industry did not shoulder a portion of the burden, the sites would remain unattended well into the next century and continue posing dangers to public safety.

The state Department of Environmental Resources (DER) estimates Pennsylvania has 250,000 acres of abandoned-mine land since mining began in the anthracite and bituminous regions, with the total price tag for reclaiming these areas projected at $15 billion. This is considerably more than the $700 million the state agency expects to receive through 1992 from the federal coal tax established in the Surface Mining Control and Reclamation Act of 1977, which requires surface miners to pay 35 cents per ton and the underground industry 15 cents per ton. This money is used to reclaim mining sites abandoned prior to 1977. The state reclamation fee of $50 per acre, which operators pay when filing a permit application, helps pay for acreage abandoned after 1977. Established in 1981, it brings in an estimated $1.2 million per year. Both funds combined, however, leave a tremendous shortfall between the $15 billion need and the several million that is available.

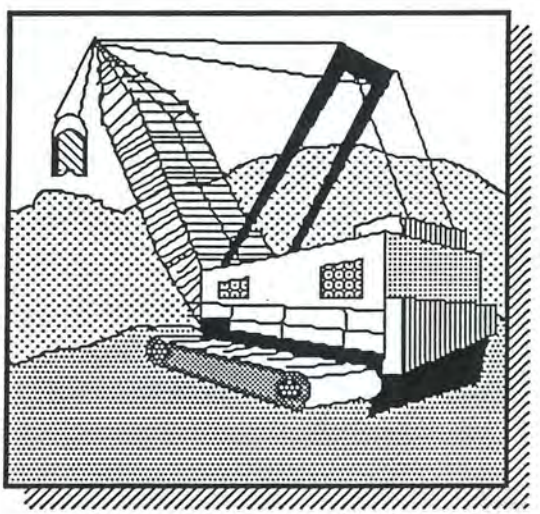
A healthy coal industry can help make up the funding differential by reclaiming these lands at no cost to the taxpayer while the sites are remined for any remaining coal. DER estimates that 100,000 of the 250,000 abandoned acres have recoverable coal reserves. Encouraging the industry to go after these reserves is the goal of two legislative initiatives: Act 158 and Act 181.

In 1984 the General Assembly passed Act 158, which eliminated the "you touch it, you bought it" concept. Prior to the act, operators were reluctant to mine abandoned areas because they were required to bring pollutional discharges from the site up to

Wanted

Bounty For Reclamation

PCMA



The Pennsylvania Coal Mining Association seeks a reward for responsible coal operators who reclaim abandoned mine sites.

Potential Revenue Sources Abound

The coal industry could become a partner in reclamation if the state would encourage mining at abandoned sites by offering a reward for this effort. The money could come from:

*** Forfeited bonds, which range from $1,000 to $3,000 per acre.**
*** The federal production coal tax of 35 cents per ton.**
*** The state reclamation fee of $50 per acre that operators pay.**

Reclamation Manager Could Help

The state Department of Environmental Resources should appoint a manager of reclamation in the district offices. This person could locate abandoned mining operations adjacent to areas that coal companies are requesting to mine and then offer the bounty for reclamation.

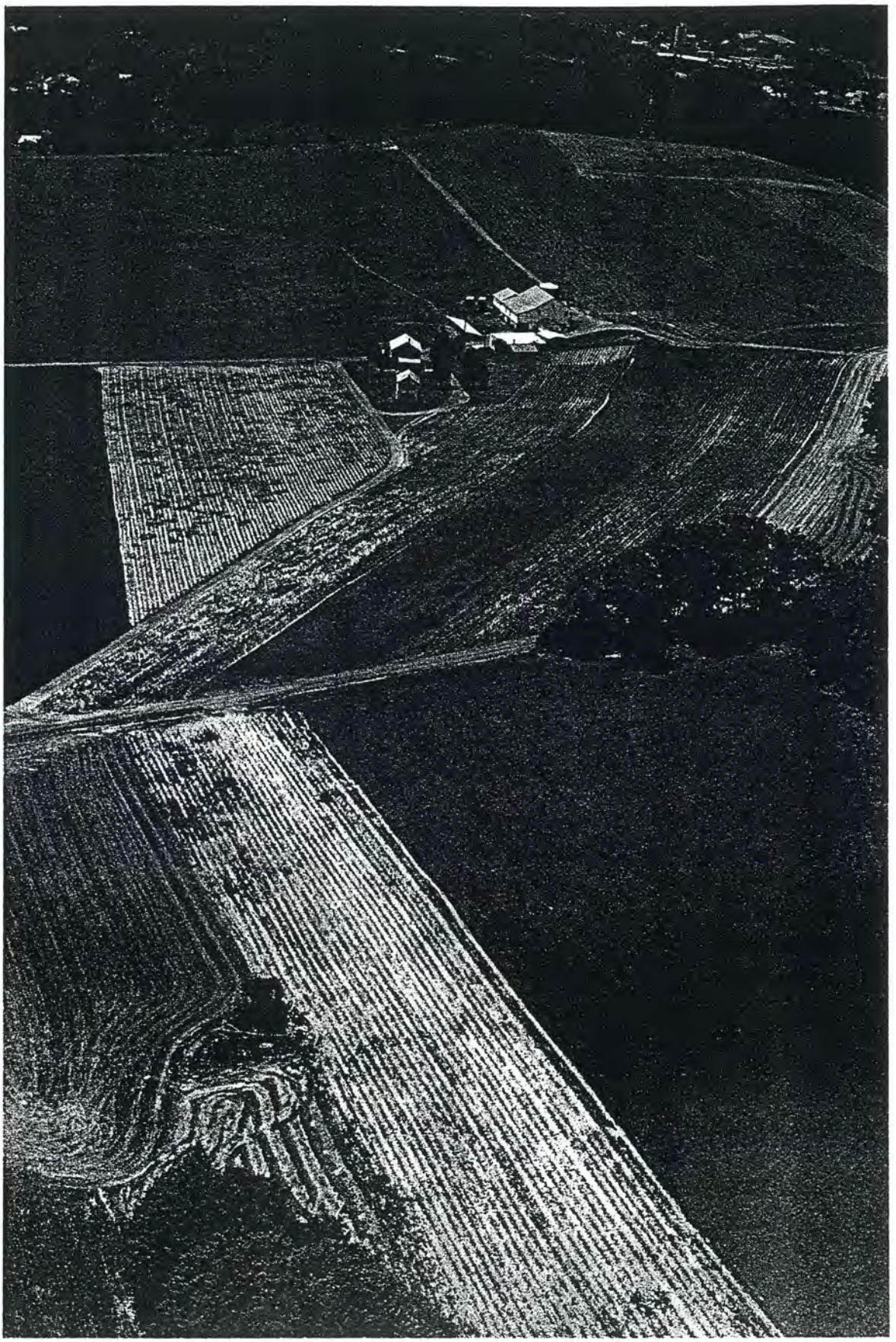
regulatory standards, even if previous deep or surface mining activity made that impossible. Some cases would mandate perpetual treatment techniques that could cost more than the value of the recoverable coal. By making the coal company that mines an abandoned site only responsible for acid discharges that are further degraded after mining concludes, Act 158 serves as a measure to encourage reclamation. While the mining activity may not make pristine water flow from the site, it certainly will improve the discharge and remove hazards. During 1986 DER put the concepts of Act 158 into a regulatory initiative called Subchapter F.

The state's reclamation backlog received another helping hand in 1984 when the General Assembly passed Act 181, which gives DER authority to negotiate directly with landowners or surety companies to secure reclamation at abandoned-mine sites. Thus, newly abandoned sites that may have sat for five years until the bond-forfeiture process is completed can be reclaimed in a matter of months if all parties consent to a reclamation arrangement.

A proposal set fourth by the Pennsylvania Coal Mining Associaton would help eliminate even more of these scars if adopted by the state. Called "Bounty for Reclamation," the idea would make today's coal operators modern-day bounty hunters who would use draglines and bulldozers, rather than six-guns. PCMA proposes that DER establish a fee of $1,000 to $3,000 per acre, which equals the per-acre bond that operators post, as a type of "bounty" payment for reclamation work. This fee could come from forfeited bonds, federal money or the state fund from the $50-per-acre reclamation fee companies pay when applying for a mining permit. Accepting this proposal would stretch state and federal dollars even further by providing cost-effective reclamation, along with creating additional employment for coal miners who are experiencing furloughs because of depressed market conditions.

PCMA proposes that DER designate in each district office a "manager for reclamation," who would review all mining-permit applications and locate any abandoned sites adjacent to or in the general area of the proposed mining operation. The regulatory agency could then offer the bounty money to the coal company as an incentive to reclaim the abandoned site while that operator's equipment is nearby doing the mining and reclamation work at the active site. This could make another dent in the $15 billion reclamation backlog and give today's coal industry the profit incentive to correct problems from the past.

A healthy coal industry can save the state millions of dollars by being a partner in the reclamation process. Although the industry is unique in that successful companies are required to pay for the failure of mismanaged competitors, the operators are willing to participate in the process and help clean up the environment. Yesterday's companies left a legacy filled with scars. Today's coal operator leaves rolling hillsides that look like they've never been mined.



Modern reclamation returned this farm to productive use after mining.

DER Monitors The Coal Industry

The state Department of Environmental Resources Bureau of Mining and Reclamation has primary responsiblity for regulating the Pennsylvania coal industry and ensuring that state and federal mining laws are enforced. Through a statewide network of district and regional offices, the agency reviews permit applications for potential environmental impact, monitors active-mining sites and makes sure that reclamation afterward complies with the law.

District offices maintain a staff of geologists and other professionals to review permit applications for potential impact on drinking-water supplies, possible pollution to waters of the Commonwealth and the potential for pollution due to the geological nature of the site. Agency records are reviewed to determine if any pollution resulted from previous mining activity in and around the proposed location.

If the area in question has a history of past pollution, the department can ask the company to do an overburden analysis. This sampling will reveal if the soil contains acid-forming material that could trigger acid-mine drainage during the mining process. Key components that would signal this potential would be overburden that contains elevated concentrations of pyritic materials or has a high sulfur content.

These studies and other regulatory requirements add to the time it takes to review a mining permit. Although the agency has streamlined its operations, the review process is complex even in the most simple permits, taking from three to nine months in DER's hands during 75 percent of the cases. If pre-existing discharges are at the site, the tendency has been for that time period to lengthen prior to passage of Subchapter F, which frees the operator from perpetual liability for discharges that exist from previous mining.

During the initial 60 days, staff members begin reviewing the permit and DER notifies 13 other state and federal agencies that the application has been filed. These agencies examine the application for any potential impact on roadways, fisheries, game animals, historical sites, dams and numerous other areas. DER prepares a revision letter for the company, incorporating all public comments, observations by the reviewing agencies and notes from its staff. The company then has 45 days to respond to the first revision letter, and DER has 30 days after receiving this and future responses to answer with a revision letter.

If no objections are filed and the mining plan is environmentally sound, DER informs the company that a permit will be issued. The firm submits its performance bond for review and pays a $50-per-acre reclamation fee. DER seeks proof that the blasting plan has been advertised and that pre-blast surveys have been done for anyone requesting it within one-half mile of the proposed operation. The company

must send letters to townships, utilities and nearby residents informing them of the impending mining. Although these requirements add time to the review process, often it is lengthened by other factors, including the time it takes for a surety company to approve a bond.

DER has imposed on itself a 120 to 150-day time limit under which the permit cannot remain in the agency's offices for more than that time without being acted upon. This deadline does not take into account the days out of the office, which can include, for example, the 45 days an operator has to respond to the revision letters. The company can apply for extensions beyond this limit.

Once the permit is approved and mining begins, state and federal laws mandate monthly inspections at active sites. Inspectors continue monitoring the operation throughout its active phases and oversee the reclamation process from the initial backfilling through the various stages of bond release. Monthly inspections continue until Stage II bond release has been completed, which means that all the backfilling has been done, the topsoil is back in place and planting has successfully stabilized the site after one or two years of growth. After this the inspections are done quarterly. Some district offices have over 600 active and stage-release sites to oversee.

All factors considered, DER's permit-review process and subsequent monitoring of the mining site safeguard the environment and make modern coal mining a safe practice. The agency helps to protect the citizens of the Commonwealth and works with coal companies to ensure the safest, most environmentally sound mining methods are used.