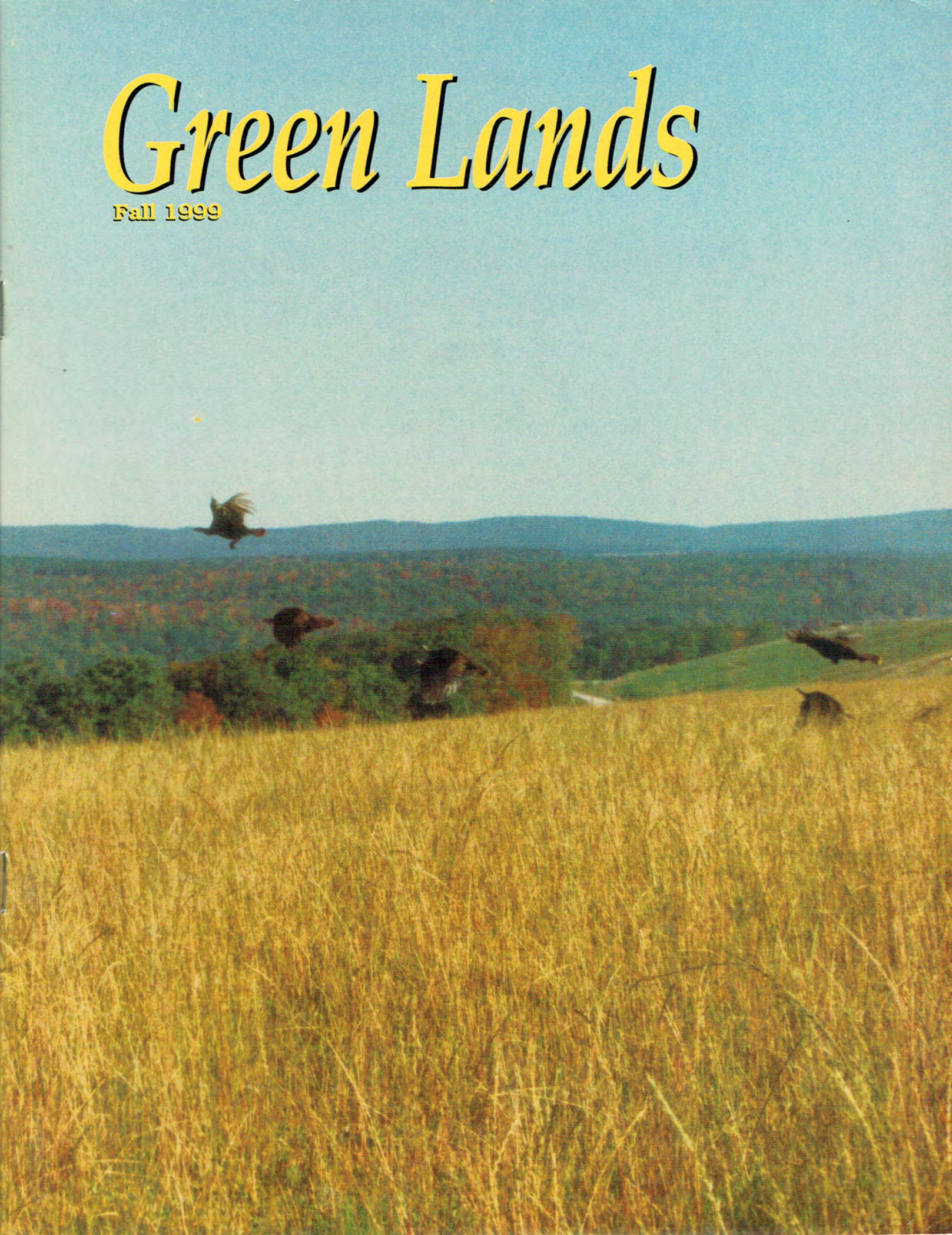
Green Lands

Fall 1999



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Green Lands

Volume 29 Number 4

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Green Lands
is a quarterly publication of the
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Charleston, West Virginia 25311
(304) 346-5318, FAX 346-5310
E-Mail: wvmra@wvmra.com

On the Cover
Turkey, deer, bear, and even coyote are often seen on Buffalo Coal 's completed operations. The Difficult Creek job seen here, is located along U.S. Route 50 and was reclaimed five years ago. Buffalo Coal has received more reclamation awards from the WVMRA than any other company. See related story on page 30.

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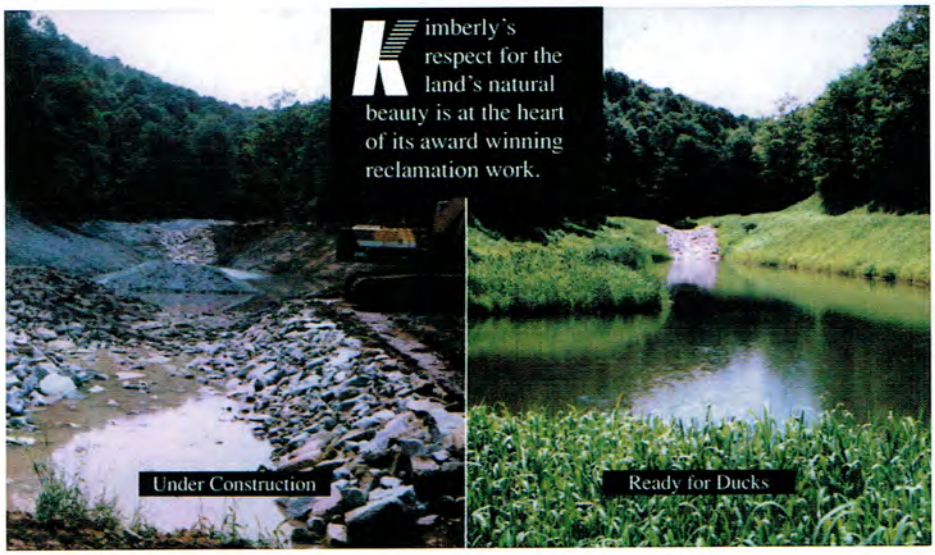

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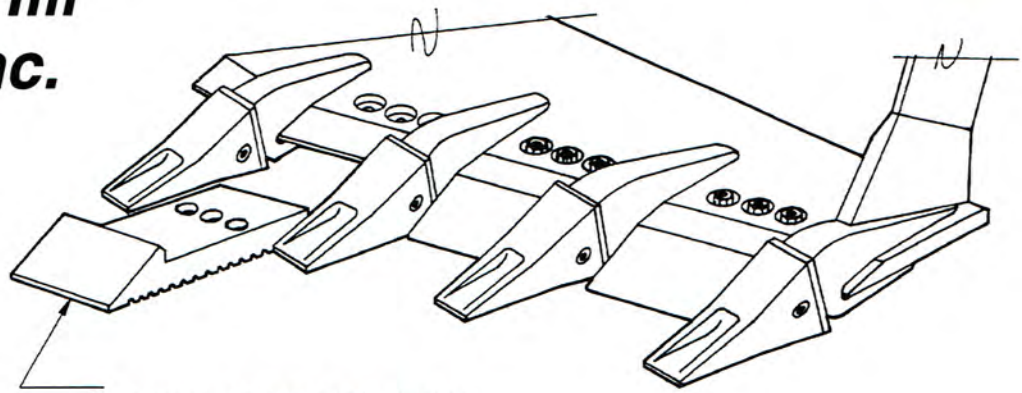
Bolt-On Segments & Heel Plates Available from Crown Hill Equipment,Inc.



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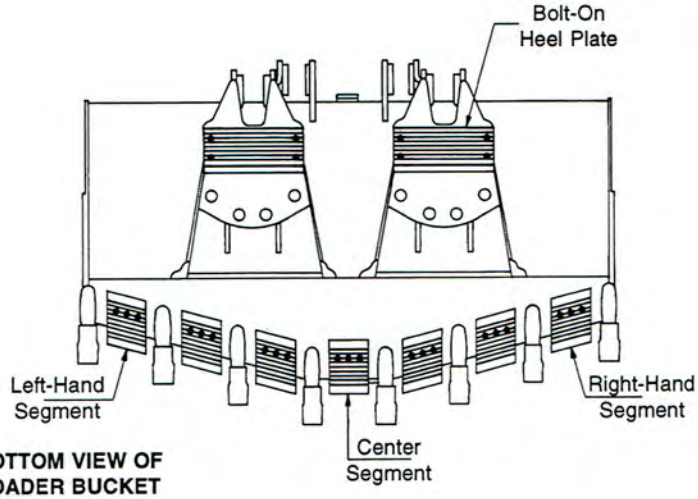

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Broshears Named WVMRA Chairman

William E. "Bill" Broshears, group executive, resource development for the Peabody Group, was elected chairman of WVMRA during its 33rd annual meeting in White Sulphur Springs on August 5-8.

He succeeded Wayne H. Stanley, of Bridgeport, who has served as chairman for the past year.

"I am excited to have the opportunity to participate," Bill said. "I look forward to fulfilling my role as WVMRA chairman."

Bill began his long and industrious career with Peabody in 1975 as project and office engineer. From there, his duties included manager-scientific systems; director-operations engineering and; director-engineering and environmental services.

In 1992, he was named vice president and general manager for Peabody Venezuela Coal Corp. and a year later, vice president of engineering for Eastern Associated Coal, a subsidiary of Peabody.

In 1996, Bill was named vice president-surface operations for Eastern and in 1998, was promoted to vice president-operations for Peabody Coal Company. He was promoted to his current position in July of this year.

Bill earned a BS from University of Missouri-Rolla, in civil engineering and a MBA from Washington University, St. Louis.

"I think Bill is very capable of handling the job as WVMRA chairman," Wayne said. "As you can see, he has a great background and I know he will move us forward."

Both Wayne and Bill realize it is a tough road ahead for the state's coal industry. Nonetheless, Bill plans to attack many issues including, some say, the toughest one of all, changing the public's opinion.

"The public has been bombarded with misinformation," he said. "One of my goals is to try to make the public understand the contributions that coal makes to West Virginia and to the nation. I will feel a sense of accomplishment if we can make progress in this arena."

Bill Broshears will be leading the WVMRA and the state's coal industry in what appears to be an uphill journey crossing into the next millennium.

He has the backing and drive to

(See Broshears on page 13)

Meet the New Officers of WVMRA

Below are the new officers that were elected at the WVMRA annual meeting in August.

1st Vice President
Steve Capelli
Charleston

PHOTO NOT AVAILABLE

2nd Vice President
Kevin Bealko
Bridgeport

Secretary
Jim Bunn
Grundy, Va.

Treasurer
John Skidmore
Charleston

Associate Chairman
Dan Pochick
Bluefield

1st Place Winners Show Off Their Compar

1999 General Member Winners
Chafin Branch Coal Company

After missing out last year, "Buck's Bunch" resurfaced to grab top honors in the general division. Although "Buck's Bunch" had overwhelming supporters on Kate's Mountain, in Gilbert, the employees are extremely proud of their contribution to the community by pulling together and funding the $107,000 bronze artwork in the new community center.

any Pride on Kate's Mountain and at Home

1999 Associate Member Winners
Rudd Equipment Company

In the associate division for company pride, Rudd Equipment is this year's "King of the Hill." Based in Nitro, Rudd employees are proud of a family atmosphere and their top quality support to its customers that goes above and beyond all expectations.

A WVMRA First:
Tied in Company Pride's General Division

For the first time in the history of the WVMRA company pride competition, there was a tie in the general membership division for the Runner Up spot. Last year's winner, Arch Coal, was selected as a runner up, but Ford Coal Company could not be ignored with t-shirts having the historical reference of French railcars and said "*Still Chugging Along!*" and "*Celebrating Four Dozen Years of Mining.*"

Runner Up (tie)
1999 General Member Division
Arch Coal

Runner Up (tie)
1999 General Member Division
Ford Coal Company

Runner Up

1999 Associate Member Division
Rish Equipment Company

For the second year in a row, Rish Equipment, had a strong showing as Runner Up in the associate division.

It's a Family Affair

WVMRA Chairman Bill Broshears (far left) made a special presentation at Kate's Mountain to the Bolyard family who represented R&K Enterprises.
In demonstrating company pride, family style, the Bolyard family, Larissa, Kim, Russ, Erica, and Josh and were presented the Pecan Mountaineer.

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Broshears from page 6

move the coal industry forward and make things happen. "We need to eliminate the stereotype that is associated with coal mining. We are a socially responsible industry and it's time we let people know the good things we are doing. You cannot live without coal. It's time the public realizes this."

Companies and New Board Member Join WVMRA

New members joining the WVMRA at the association's annual meeting were: United Energy Coal, Inc., Frostburg, Md., (Gerald Ramsburg) and Victory of West Virginia, Inc., Fairmont, (Donald Holyman).

Also, James W. Copley, Jr., Cowen, was elected as a new board member for the WVMRA.

Vecellio & Grogan, Inc.

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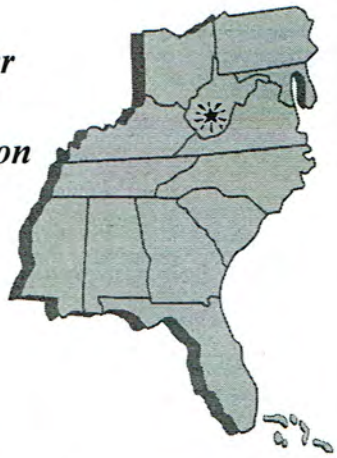

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More From Kate's Mountain

1998 Company Pride Winners

Arch Coal

WVMRA Bill Broshears presents plaques for the first place winners of the 1998 Company Pride award. (Left) Ken and Grace Woodring accept the General Member award for Arch Coal and Charlie Morton (below) accepts the Associate Member award for RMI, Ltd.

RMI, Ltd.

(Top) Several people in "Buck's Bunch" celebrate winning the company pride award earlier that evening; (Right) Walker Machinery gets the "thumbs up" award for a strong showing; and (Below) Hannah and Jared Dearth give the WVMRA an extra hand with gifts on Kate's Mountain.

A Few More Snap Shots from

(Top) Stuart McGehee, of the Eastern Regional Coal Archives, captivated everyone at the New Chairman's breakfast on the history of the coal industry in West Virginia; (Above Right) Bruce Meeker is presented the Shortest Drive award by golf chairman Tom Taylor; (Right) and Carol Ford and Brenda Gould try some specially prepared dishes during the culinary class.

the WVMRA Annual Meeting

(Below right) The McDaniels family add up the score after the putting contest. Keri and Katie McDaniels placed first and second in the contest; (Bottom) Sam Broverman shows what it takes to hit the long ball; and (Left) Kip Power leaves the competition in the dust, as it were, during the WVMRA Fun Run.

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High Lift	48,000 lbs. (21,773 kgs.)	60,000 lbs. (27,216 kgs.)	78,000 lbs. (35,381 kgs.)
SAE-Rated Bucket Capacity			
Standard	17 yd^3 (13.00 m^3)	22 yd^3 (16.82 m^3)	28 yd^3 (21.4 m^3)
High Lift	16 yd^3 (12.00 m^3)	20 yd^3 (15.29 m^3)	26 yd^3 (19.9 m^3)
Dump Heights			
Standard	18′-5″ (5.61 m)	18′-10″ (5.74 m)	21′-6″ (6.55 m)
High Lift	19′-10″ (6.04 m)	20′-0″ (6.10 m)	23′-6″ (7.16 m)

Thanks to the Sponsors of the Associate Members' Welcoming Reception

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(Top, l-r) Caroline Coleman, Etta Nicewonder, Debbie Fletcher and Paula McLean take a moment to get caught up; (Right) Jim Bunn (left) greets Charlie Morton as Steve Capelli looks on; (Below) and Jennie Digon (right) chats with WVMRA Chairman Bill Broshears and his wife, Marilyn.

A Special "Thank You" to All

GOLF TOURNAMENTS

Anderson of West Virginia
(Dave Gettman) - $10,000 Hole in One
Appalachian Mining Services
(Charlie Miller) - $100
Beckwith Machinery Company
(Dave Trueman) - $100
Cecil I. Walker Machinery Company
(Steve Walker) - $100
Crown Hill Equipment, Inc. (Chris Supcoe) - $50
Cummins Cumberland, Inc. (Dave Hibbs) - $100
EICO, Inc. (John Bussey) - $50
Fairchild International (Gary Fairchild) – Golf Balls
Heavy Machines (Dan Blizzard) – Golf Wedge
Hitachi Construction Machinery Corp.
(Braxton Griffin) - Golf Bag
Logan Corporation (Cal Nelson) - $50
Kimberly Industries, Inc. (John Wellford) - $100
Nelson Brothers, Inc. (Tab Hudson) - $75
Pace Carbon Fuels, LLC (Jim Treptow) - Golf Bag
Penn Line Service (Larry Roberts) - $50
Petroleum Products (Tom Taylor) - $100
Rish Equipment Company (Dan Pochick) - $100
RMI, Ltd. (Charlie Morton) - $250
Rudd Equipment Company (Bruce Meeker) - $100
Smith Helms Mulliss & Moore (Jerry Oliver) - $100

BOWLING TOURNAMENT

Cecil I. Walker Machinery Company
(Steve Walker) - $50
Cummins Cumberland, Inc. (Dave Hibbs) - $50
Kimberly Industries, Inc. (John Wellford) - $50
Logan Corporation (Cal Nelson) - $50

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Crown Hill Equipment (Chris Supcoe) - $25
Kimberly Industries, Inc. (John Wellford) - $25
Triangle Surety Agency, Inc. (John Jacobs) -
(2) $50 bonds

CHILDREN'S PUTTING TOURNAMENT

Austin Powder Company (Herm DeProspero) -
Trophies
Crown Hill Equipment (Chris Supcoe) - $25
Kimberly Industries, Inc. (John Wellford) - $25
Triangle Surety Agency, Inc. (John Jacobs) -
(2) $50 bonds

CHILDREN'S FISHING TOURNAMENT

C.O.A.L., Inc. (Greg Mergenthaler) –
4 Mint Sets of Silver Dollars

FISHING TOURNAMENT

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EICO, Inc. (Eda Bussey) - $50
Nelson Brothers, Inc. (Tab Hudson) - $75
Potesta & Associates (Dana Burns) - $50

TRAP TOURNAMENT

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Cecil I. Walker Machinery Company
(Steve Walker) - $50
EICO, Inc. (John Bussey) - $50
Nelson Brothers (Gary Self) - $75

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Penn Line Service (Larry Roberts) - $50
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Black Diamond Construction, Inc. (Bill Casto) - $100
Carter Machinery Company (Jim Humphries) - $100
Cecil I. Walker Machinery Company (Steve Walker) - $100
Cummins Cumberland, Inc. (Dave Hibbs) - $100
Dyno Nobel Appalachia (Grant Shrader) - VCR
EICO, Inc. (Eda Bussey) - $50
Employers Service Corporation (Tom Cloer) - $50
Kimberly Industries, Inc. (John Wellford) - $100
Nelson Brothers, Inc. (Tim Zeli) - $75
Pace Carbon Fuels, LLC (Jim Treptow) - $100
Republic Industries (John Krebs) – Gold Coin

NAME TAG DRAWING

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Bright Enterprises (Bill Bright) - Day at Winterplace Ski Resort
Carter Machinery Company (John Humphries) - $300
Cecil I. Walker Machinery Company (Steve Walker) - $150
Crown Hill Equipment, Inc. (Chris Supcoe) - $100
Cummins Cumberland, Inc. (Dave Hibbs) - $150
EICO, Inc. (Eda Bussey) - $50
Employers Service Corporation (Tom Cloer) - $50
The Greenbrier (Lee Doggett) - Weekend at The Greenbrier
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Nelson Brothers, Inc. (Gary Self) - $75
Pace Carbon Fuels, LLC (Jim Treptow) - $100
Rish Equipment Company (Dan Pochick) – Floral Arrangement
Rudd Equipment Company (Bruce Meeker) - $100

LADIES PROGRAM

Black Diamond Construction, Inc. (Bill Casto) - $100

KATE'S MOUNTAIN

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FUN RUN

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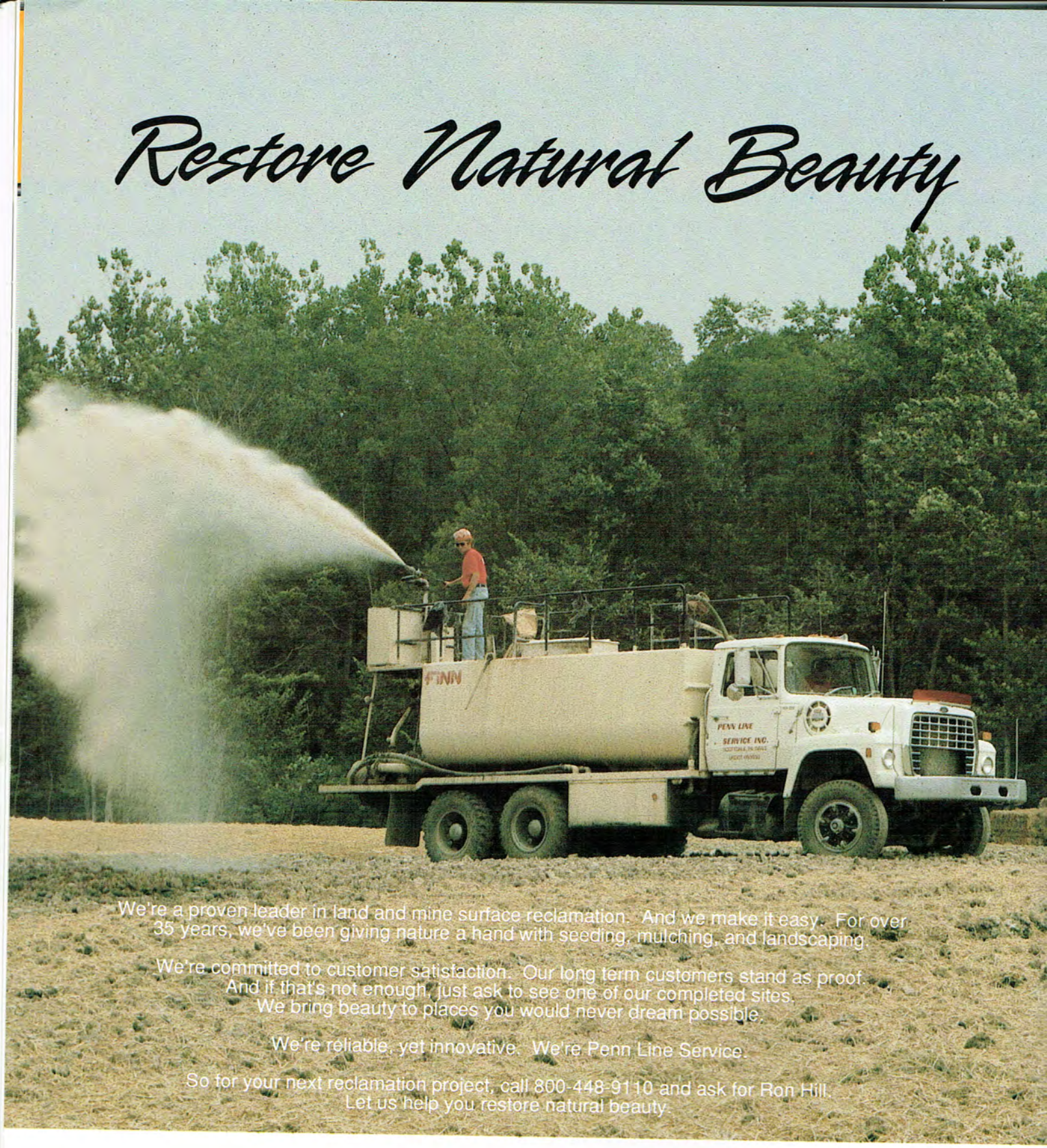

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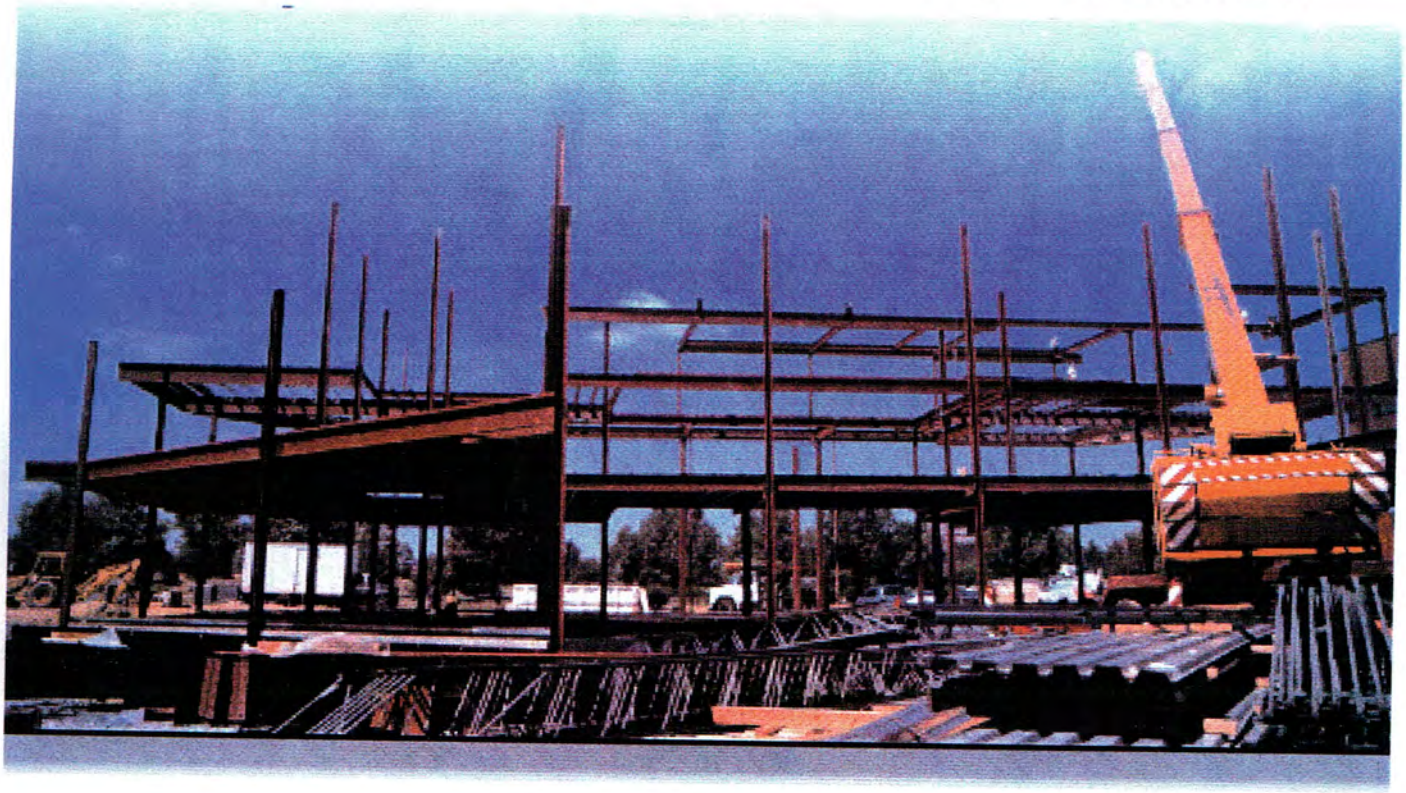

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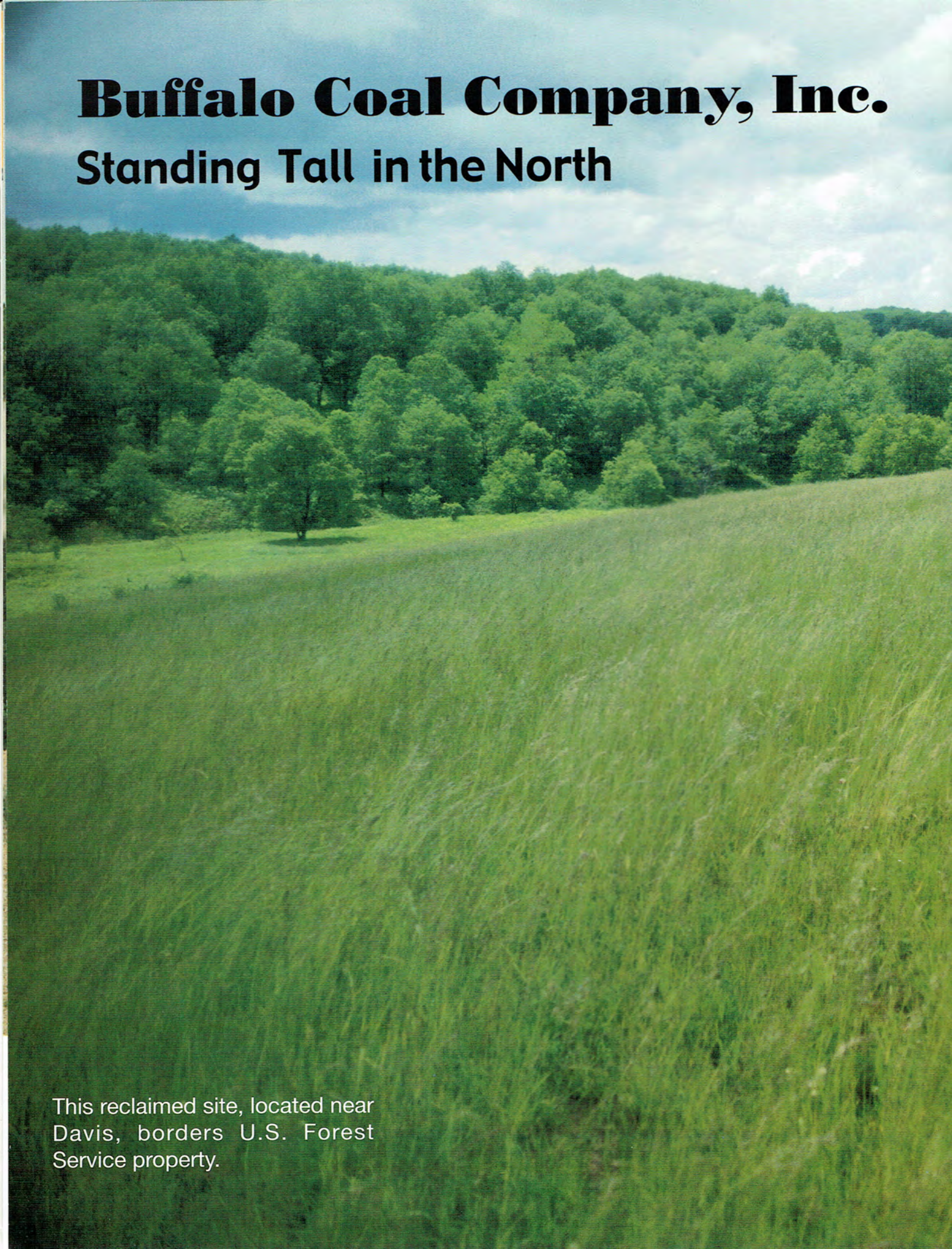
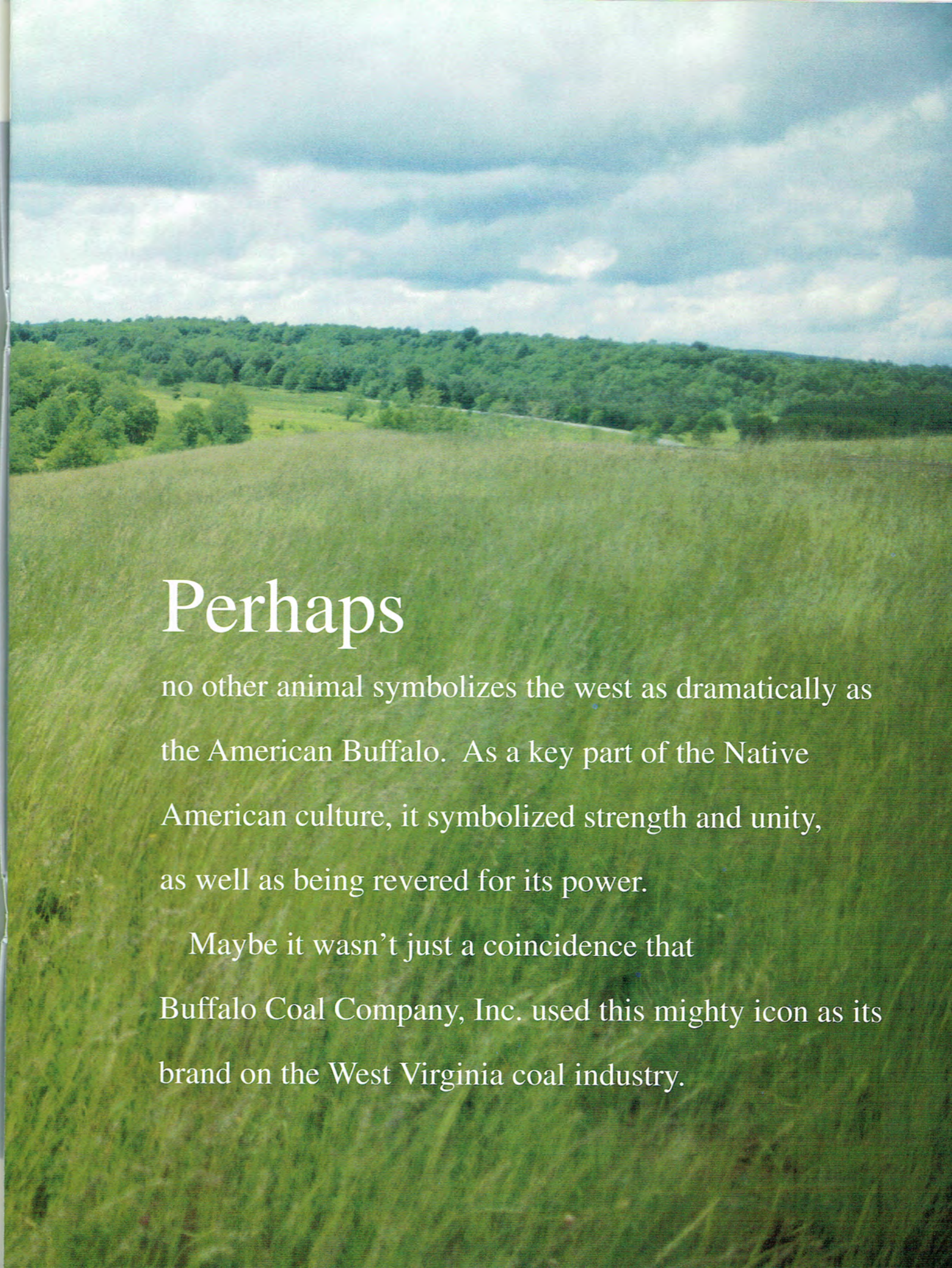
Buffalo Coal Company, Inc.

Standing Tall in the North



This reclaimed site, located near Davis, borders U.S. Forest Service property.



Perhaps

no other animal symbolizes the west as dramatically as the American Buffalo. As a key part of the Native American culture, it symbolized strength and unity, as well as being revered for its power.

Maybe it wasn't just a coincidence that Buffalo Coal Company, Inc. used this mighty icon as its brand on the West Virginia coal industry.

Buffalo Coal's history goes back more than 40 years, originating in 1957 by the DelSignore brothers, Carl, Warren and Carmen. They were mostly involved with the lumber industry and had only dabbled in a small part of the coal industry through a family-owned mine, which had been started by their father during World War II.

Buffalo Coal has received the David C. Callaghan Award, the association's (WVMRA) most prestigious reclamation award, three times since 1985, a feat unprecedented by any other company.

Although the DelSignore brothers derived the company's name from Buffalo Creek nearby, today it symbolizes the Native American depiction as an award winning company that demonstrates unity in everything it has accomplished.

"It takes more than one person to work an operation," said Don Cussins, president of Buffalo Coal. "It started out as a family operation and we still try to keep it that way."

Cussins, a 38-year employee of Buffalo Coal, began his career as a clerk with the company in 1961. Working his way up through the ranks, he became president in 1984.

"My promotion was never mentioned to me prior to the announcement," Cussins said about being named president. "We were at a luncheon with a customer in Washington D.C. finalizing some details and Carl (who was CEO at the time) made the announcement in front of everybody. It caught me off guard. I didn't know what to say."

Now owned by the Carl DelSignore Family Trust, the company currently has 130 employees working on operations in both West Virginia and Maryland producing about 1 million tons of coal annually from seven different seams.

The company's operations and prep plants are primarily in Grant and Tucker counties in West Virginia with smaller operations in Garrett and Allegany counties in Maryland.

Of the two prep plants owned and operated by Buffalo Coal, one is located near Gatzmer, W.Va. It is a heavy media cyclone plant of modular construction with flood loading and multiple blending capabilities. The second is a hydocyclone-deister plant in Lonaconing, Md. Both sites are capable of loading 7,000-ton unit trains.

"We have 40 million tons of clean coal reserves still to be mined," Cussins said. "We plan to be here for awhile if we have the market for it."

Buffalo Coal uses more than 100 pieces of heavy equipment that includes 25 bulldozers, ten 85-ton haul trucks and nine 50-ton haul trucks to mine its coal.

Overall, it has made an investment to West Virginia of about $50 million, not including direct payroll.

The company mines its coal using the block cut method which incorporates immediate backfilling along with overburden removal.

The block cut method was initiated as a result of Buffalo Coal's operations being in some acid-producing seams requiring strict attention to material handling and providing for concurrent reclamation activity.

Buffalo Coal also knows the importance of community relations.

"It is important that we keep close contact with the community," Cussins said. "We live where we mine and we're a part of the community."

Buffalo Coal's employees stay involved with little leagues, local churches, civic organizations, scouting,

as well as many of the families are involved with the local schools.

Employees have used company equipment to plow snow for the town of Davis, supplied trucks in the winter to help with the town's water supply, worked on projects around the local nursing home such as installing a drainage control system, and also have constructed baseball fields and recreations facilities for local communities including the Tucker County High School athletic field.

In one particular instance, Buffalo Coal mined and reclaimed land that was later donated to the town of Davis by landowner Western Pocahontas Properties Ltd. Town officials used this land to expand the local cemetery.

"This is the only known cemetery in the United States located on a reclaimed surface mine," said Steve Shaffer, vice president of engineering and assistant secretary.

Like many companies, Buffalo Coal invites groups to the operation in order to communicate and educate the public and community.

"Buffalo has always tried to make its operations and employees available for tours and educational functions, all in the spirit of a better education and community involvement," he said.

Shaffer also stated that the West Virginia Free Enterprise Conference, which is comprised of the state's top high school rising juniors and seniors, tour Buffalo Coal every year to learn about the state's coal industry.

Cussins recalls a time several years ago, when a professor from West Virginia University brought a group of high school teachers to see one of Buffalo Coal's operation sites.

"One teacher, when getting off the bus, stated that the area looked so nice that she sure hoped the company didn't mine it," he said. "She was shocked when we

Buffalo Coal Company, Inc. was the first company to be issued a surface mine permit to reconstruct this wetland area which is near Davis. The academic community is using the 34 acres of wetlands for instruction and tours. Many groups have no idea that a wetland can be a part of a mining operation.

told her it had already been mined and reclaimed."

During a different time, a group of citizens from Baltimore came to West Virginia as a part of a tour organized by the state's Division Natural Resources and stopped at Buffalo Coal.

"At 9 a.m. they were all against surface mining," he said. "Then we visited the operation and by 2 p.m. they had changed their minds."

In 1990, the U.S. Office of Surface Mining chose to use 57 pine trees from a site that was reclaimed in the 1960's. These trees were used in the president's Christmas tree lighting ceremony in Washington, D.C. It was the first time that live Christmas trees from a reclaimed surface mine site were used for the national event.

Like most coal companies, Buffalo Coal works to enhance the environment while providing the energy needs for this country and state.

Buffalo Coal was the first company to be issued a surface mine permit to reconstruct a wetland area. The academic community is using the 34 acres of wetlands for instruction and tours. Many groups have no idea that a wetland can be a part of a mining operation.

Cussins also notes how the company cleaned up a coal tipple near the town of Davis that had shut down many years ago.

"The area used to have bad water and high walls. We remined the site, reclaimed it and cleaned up the area completely," he said.

This area is a part of the Difficult Creek project that was mined near Bayard. Two seams of coal were removed, the upper portion was Bakerstown and the lower was Freeport.

Working many long hours to help the local community, mining coal in an environmentally conscious manner, keeping a family atmosphere in a society that is down sizing and impersonal, Buffalo Coal has not gone unnoticed. The company has received numerous top awards, both nationally and on the state level, for its outstanding reclamation work.

Since 1985, Buffalo Coal has received three national awards from OSM for excellence in mining.

And, this year, the company will receive the Maryland's top mining award for reclamation. It is the company's third award from that state since 1986.

Being recognized for their job near Gorman, Md., this particular award seems to have a little more significance for the company than most.

"Steve's (Shaffer) Dad started this job and Donny (Cussins' son) completed it," Cussins said.

With Buffalo Coal having a larger presence in West Virginia, it is no surprise that it has received most of its awards from here.

The West Virginia Mining and Reclamation Association has presented Buffalo Coal with 13 awards for its reclamation work, more than any other company, since the awards originated in 1971.

In addition, the company has received an award for oustanding reclamation, for the past 11 consecutive years.

More importantly, Buffalo has received the David C. Callaghan

This site, located near the old Stoney Run River dam in Grant County, was completed in the late 1980's and is now abundant with wildlife. Numerous sites have become unrecognizable as surface mined areas due to the outstanding reclamation work that Buffalo Coal has done over the years.

Award, the Association's most prestigious reclamation award, three times since 1985, a feat unprecedented by any other company.

Also, Buffalo has received the Association's Mountaineer Guardian award on several occasions for maintaining an outstanding safety record.

"It is quite an honor to receive these awards. It gives everyone here a great sense of pride in what they do," Cussins said.

However, sometimes it seems that even all the awards don't balance out the frustration in the everyday grind and turmoil facing today's coal industry in West Virginia.

"It's not as much fun as it used to be," he said. "It is just a lot tougher to operate today than it was 25 years ago."

Cussins noted that there are always new and different regulations with more environmental extremists to contend with like ever before.

"Any more, you have to go two steps better than what the job requires. Just doing what the law requires is not enough," he said.

He also noted that regulations continue to get tougher and yet the quality of coal has to be better today than in 1984.

"We lost the contract with Potomac Electric Power Company last year due to the Clean Air Act," he said about the 14-year customer.

Today, Virginia Power at the Mt. Storm facility is the company's only remaining major customer.

And, to make matters even more difficult, the price of coal declined for the last 18 years.

Nonetheless, the employees of Buffalo Coal Company are hard working people who meet the expectations of its western symbol and have pride in their jobs, company, families, and community.

Cussins thinks there is one thing that makes it all worthwhile - seeing the reclaimed land green, teaming with wildlife, clean water flowing, trees growing tall and even in some cases, watching a promising young ball player circling the bases after hitting a home run.

"As you look over the area, you can feel good about what you did," he said.

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The House That Buck Built

One Extraordinary Example of Giving Back to a Local Community

Driving into the small town of Gilbert, population about 500, a new building rests on the banks of the Guyandotte River, seeming to stand out more than any other.

Less than a year ago, the Larry Joe Harless Community Center and YMCA opened its doors and it is and always will be, an everyday reminder how one coal operator gave back to his community.

In this case, it is James H. "Buck" Harless, chairman of Chafin Branch Coal Company and International Industries, Inc. which are based in Gilbert.

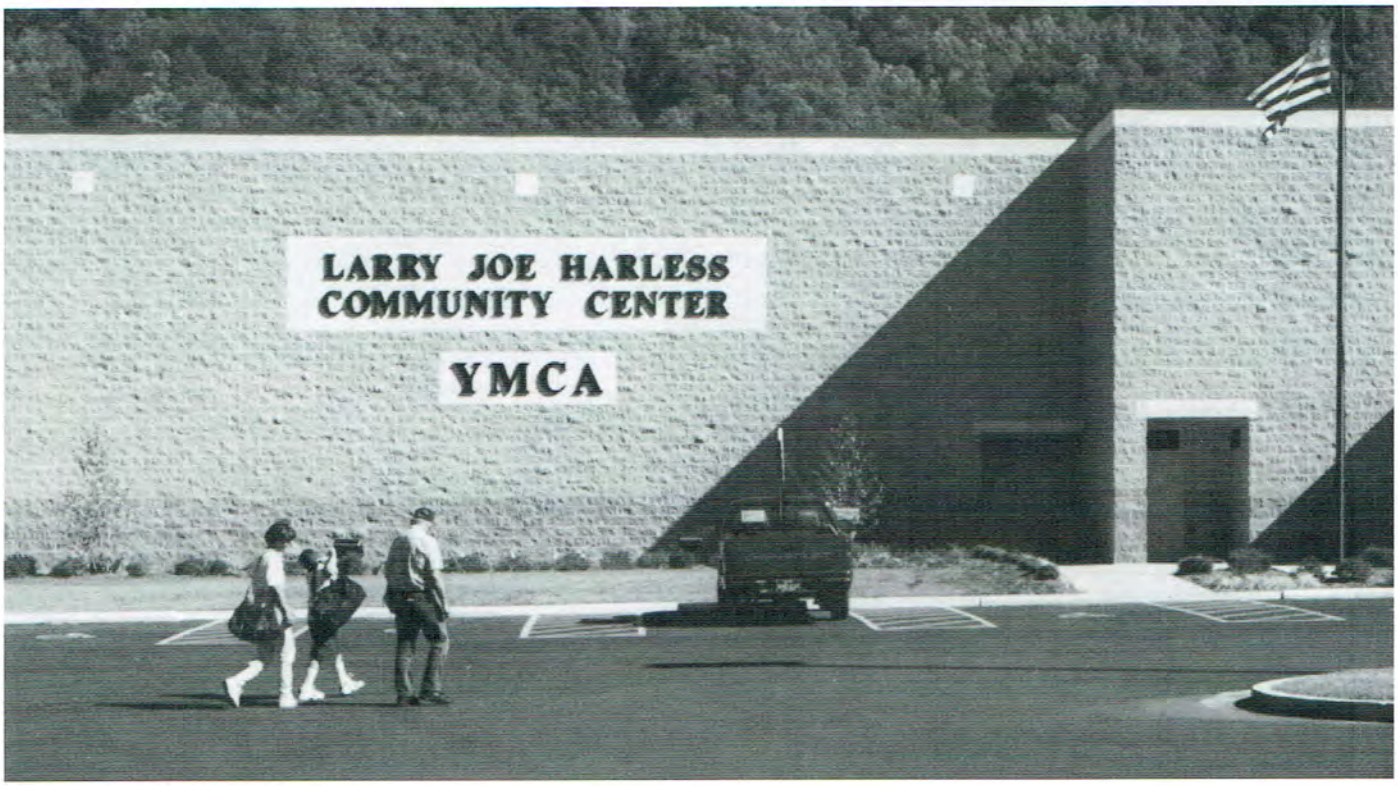
Although Buck was the driving force initiating the plan, Fred Shewey, his vice president, was also a strong supporter and an active force that resulted in construction of the 61,500 square-foot facility. It is a facility that all residents of Gilbert and the surrounding area will enjoy far into the next millennium.

Not only was Buck heavily involved in the planning and construction of the facility, but he and his late wife, June, contributed four dollars for every one dollar donated to the project.

A project, that when completed, cost $8.8 million.

Built as Buck Harless' gift to his community in memory of his son, Larry Joe Harless, this center is considered to be the most complete YMCA facility in the state and arguably in surrounding states as well.

"We wanted to make sure that we designed a comprehensive building with something for everyone," Buck said.



The center is equipped with:

- an arena which accommodates three full-length basketball courts, seats for spectators and a running track located on the balcony;
- Olympic-size swimming indoor pool with electric doors that open the area up to the outside during warm summer days;
- personal fitness exercise areas for aerobics and weight training;
- a meeting room complex that can also be used for receptions and conferences for up to 300 people;
- two tennis courts, basketball courts and a playground outside the facility;
- three first-run movie theaters. All three theaters are wired for interactive video audience video programs and one is also wired for interactive audience programs and can seat up to 500 people;
- and rooms designated for classes as a part of the Marshall University Learning Resource Center which has a direct link to the Marshall main library. The MULRC has access to live on-site courses, student advising, books, and periodicals. As a part of the MULRC, these classes will be a part of the curriculum toward associates, bachelors or graduate degrees offered by Marshall University.

Also, as visitors enter the facility's lobby, they are greeted by a large bronze artwork of four men overshadowing hills, forest and a bridge crossing a mountain stream.

These figureheads salute four people who constantly strive for a better community and a better way of life.

The likes of Buck Harless, Larry Joe Harless, Frank Allara and Fred Shewy are rendered in the bronze artwork weighing nearly 1,000 pounds.

The bridge that spans a stream in the foreground is illustrated by the poem "Bridge Builder" by Alex Dromgool.

The 1880 poem praises those who turn back on their path to build a bridge to help others behind them in the road of life. It is considered to be one of Buck favorite poems.

The bronze artwork is being funded by employees and friends as a gift to Buck and Fred.

Sharon Murphy, an officer of the Larry Joe Harless Foundation and International Industries employee, stated the bronze artwork was just a small way to say "thank you" to Buck and Fred for all their generosity, their offering the Employee Stock Ownership Plan as well as providing employees an opportunity to give something back to the community.

James H. "Buck" Harless has given a tremendous amount of his own time and energy to the local community, as well as the state's coal industry.

In fact, he has given so much to the coal industry that he was one of the charter members of the West Virginia Coal Hall of Fame, being inducted two years ago.

His latest project, a tribute to his son, will stand tall for a very long time, for Larry Joe, the community of Gilbert, the state's coal industry, everyone.

The Larry Joe Harless Center and YMCA in Gilbert offers a mulititude of services to the community. Pictured at the top is the exercise area and above is the bronze artwork that is prominent in the lobby as a tribute to four men and their contribution to the community.

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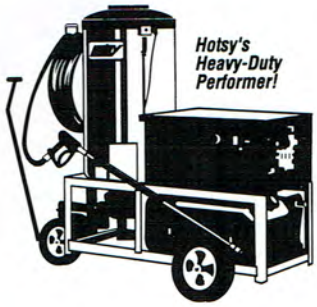
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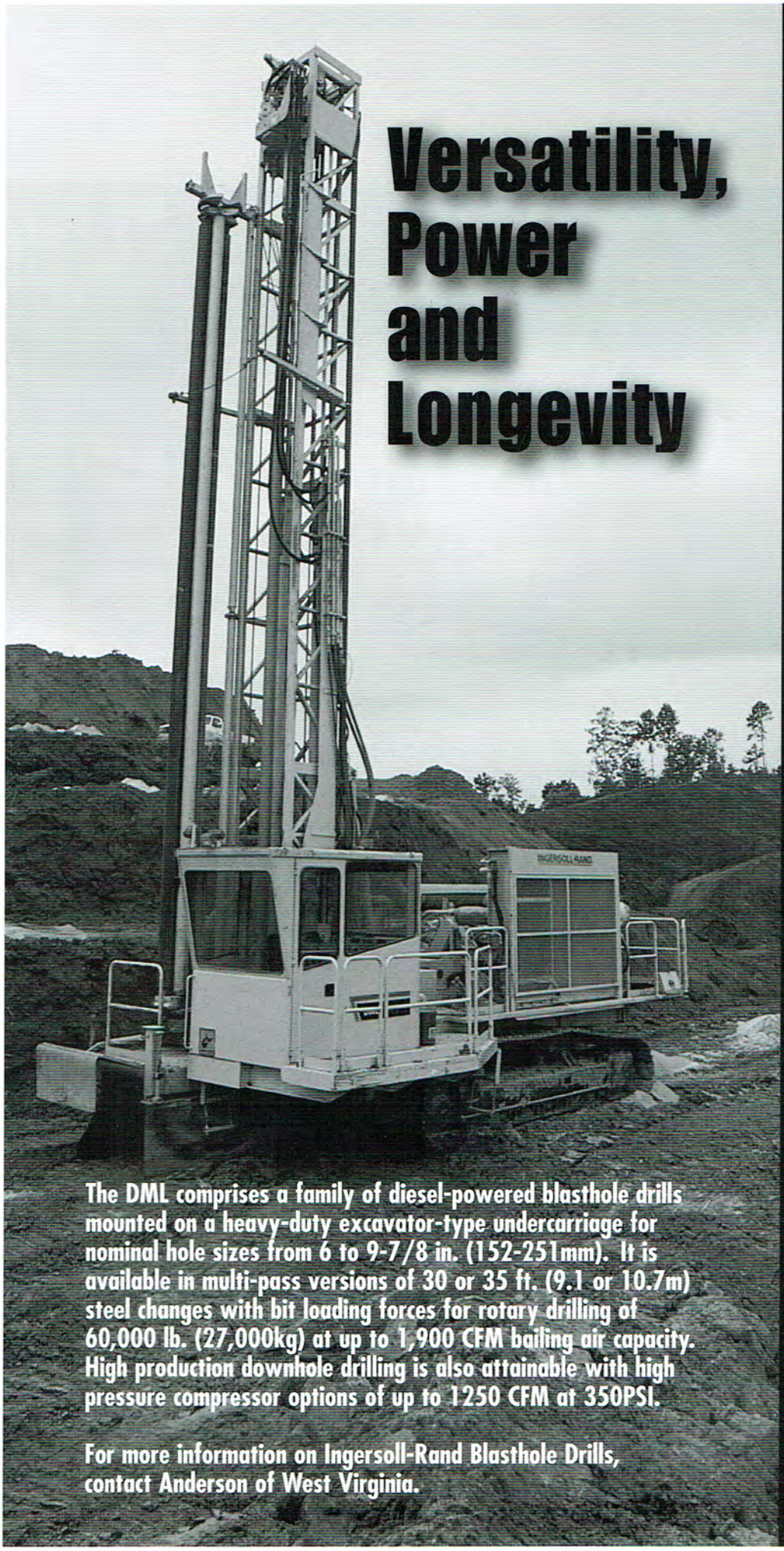

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Coal Calendar

October

11-13 Coal Market Strategies Conference, Eldorado Hotel, Santa Fe, NM.

14-16 Kentucky Coal Association Annual Membership Meeting, Hyatt Regency Downtown Lexington, KY.

18-20 1999 International Ash Utilization Symposium, Lexington Center at Heritage Hall/Hyatt Regency, Lexington, KY. Contact Geaunita Caylor (606) 257-2820.

21 Tug Valley Mining Institute Meeting, Brass Tree Restaurant. For reservations, call (304) 946-4100.

25 North Branch/Potomac River Symposium, Frostburg, MD. Co-sponsored by the Maryland Coal Association. Contact MD Bureau of Mines (301) 687-4721.

November

4-6 West Virginia Coal Association Fall Membership Meeting, Lakeview Scanticon Resort & Conference Center, Morgantown, WV. Contact Sandi Davison (304) 342-4153.

18-19 Kentucky Mining Institute 60th Annual Meeting, Lexington Center at Heritage Hall, Lexington, KY. Contact Geaunita Caylor (606) 257-2820.

December

14-15 Construction & Mining Expo, Kentucky Fair & Exposition Center, Louisville, KY.

14-16 The 43rd Annual Louisville Forke-Brandeis Auction, Kentucky Fair & Exposition Center, Louisville, KY.

1999-2000

January

12-14 West Virginia Mining Symposium, Holiday Inn Charleston House, Charleston, WV. Contact Patty Bruce (304) 346-5318

23 Mountain State Coal Classic Banquet, Raleigh County Armory, Beckley, WV. Contact Terry Miller (304) 252-8528.

24-29 Mountain State Coal Classic Basketball Tournament, Raleigh County Armory, Beckley, WV. Contact Terry Miller (304) 252-8528.

DECEMBER

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THE GOLDEN-WINGED WARBLER: AN IMPERILLED MIGRANT SONGBIRD OF THE SOUTHERN WEST VIRGINIA COALFIELDS

Ronald A. Canterbury and Dollie M. Stover
Concord College and the Southern WV Bird Research Center

INTRODUCTION

The Golden-winged Warbler (*Vermivora chrysoptera*) is an endangered, long-distance migrant songbird that breeds in Eastern North America (Confer 1992). Formerly a widespread, insectivorous songbird of the Northeast, it is now extirpated from much of its former range. For example, the Golden-wing has disappeared from much of New York, the New England states, and rarely breeds in Ohio. It is in rapid decline throughout most of its range except for West Virginia, and perhaps, Minnesota, southern Canada and the extreme northern part of its range.

The Golden-winged Warbler has declined because of (1) competition and genetic introgression with its sister species, the Blue-winged Warbler (*V. pinus*), (2) advancing succession of forests, (3) nest parasitism by the Brown-headed Cowbird (*Molothrus ater*), and (4) loss of breeding habitat from suburban sprawl and decreased abandonment of farmland (Confer 1992).

However, these factors usually cannot account for the decline of Golden-wings in many areas of West Virginia (Canterbury et al. 1996). For example, expansion of Blue-wings into West Virginia populations of Golden-wings has been slowed by the mountains and sloped terrain. Moreover, Golden-wings breed in forest slopes of mine lands that are in secondary succession, which have very few or usually no cowbirds, and have not yet been subjected to suburban sprawl.

Adult birds require habitats in secondary succession for nesting and commute each year from their wintering grounds in Central and South America in search of adequate nesting territories.

In West Virginia, however, the Golden-winged Warbler is a bird of the sloped, mine lands dominated by Black Locusts, *Robinia pseudo-acacia*, woody shrubs, and large tracts of forest edge created by mining activities. They occur in small numbers (e.g., 1-4 birds per farm) in early succession old fields, but are found in greatest numbers (e.g., 70-80 males per 100 ha.) in a variety of surface mines from contour to mountaintop (Canterbury et al. 1996).

Golden-wings also occur in cut-over forests dominated by sapling growth (Canterbury et al. 1996). Golden-wings have been noted to have high reproductive success on surface mines (Canterbury 1990, Canterbury et al. 1993, 1996), but their nesting success in cut-over forest is in need of further study.

In this paper, we expand on a 13-year, on-going study that disclosed that mining and forestry practices have virtually saved Golden-wings from extinction. In fact, the southern Appalachian coalfields have been shown to harbor massive populations of this "rare" warbler (Canterbury et al. 1996). This is notably important because of the current controversy of mountaintop mining.

Mountaintop mining and reclamation practices on surface mines are poorly understood by many environmentalists and the public, and have received considerable media attention. Extreme cases may dismay conservation biologists, but in most cases there are minimum valley fills, minimal loss of elevation (lands are often restored back to their original contours) and depletion of habitat of native species.

Furthermore, the variety of habitat created by succession of native plant species back into the mine-altered landscapes produces considerable food, nest sites, and hiding places for many avian species. It has often been debated whether shrub species, such as the Golden-winged Warbler, were common prior to European settlement and cutting of the Eastern deciduous forest. Many biologists would agree that natural events such as fire probably kept these populations adapted to a changing landscape.

Whether or not Golden-winged Warblers were common prior to cutting of the Eastern Forest really doesn't

matter and is of relatively little importance, since we may never know the answer. They are presently an integral part of successional ecosystems and have changed their distribution for almost two centuries in response to human-induced habitat change. We recommend that those in favor of nothing but pristine uncut forests use a direct hands-on approach and compare avian diversity and species abundance patterns between successional or edge habitat with forest interior.

We have collected data that show that most bird species are more abundant and have higher reproductive success in disturbed habitats (forest edge, cut-over forest, and shrubland) rather than forest-interior. This is not to say that forest-interior and contiguous tracts of forest are unimportant, but that mosaic of habitats, such as those created by mining activity (forest edge abutting succession and shrubland) harbor the highest avian diversity.

. . . the Golden-wing has disappeared from much of New York, the New England states, and rarely breeds in Ohio. It is in rapid decline throughout most of its range except for West Virginia . . .

METHODS

Methods are outlined in more detail in Canterbury et al. (1993 and 1996) and will be briefly noted here. The number of territorial singing males were counted and/or banded (see Canterbury 1994) and spot-mapped on a USGS topographic map. For each bird, we recorded the center of its territory with a Garmen GPS unit. Banding, singing male censuses, and territory mapping data were used to estimate density of birds per unit area. Birds were counted during the peak breeding period from May 5 - June 5.

Vegetation and secondary succession of each occupied territory was quantified in September by estimating the percent cover of herbs, shrubs, and trees, and counting the number of Black Locusts (see Sparks and Canterbury, in press; Watson and Canterbury, in press).

Sites with greater than 60% herb cover were denoted as early succession, while sites with at least 60% shrub and tree cover were denoted as mid and late secondary succession, respectively. Percent slope was determined with a Suunto clinometer.

Types of mining activity (e.g., contour or mountaintop) were obtained from interviews with miners and forestry personnel. Data were analyzed with SPSS 10.0 for Windows. Analysis of Variance (ANOVA), Pearson's product-moment correlations, and multiple regression analysis were used to analyze data.

RESULTS

Golden-winged Warblers were found on all types of surface mines. The density of Golden-winged Warblers was positively associated with abundance of Black Locust (Pearson's $r=0.85, P<0.001$). We found no significant difference in the relative abundance (number of birds per unit area) across mine types (ANOVA, $F=6.93, p>0.51$). Steep slope and sampling density were significant predictors of Golden-wing abundance in multiple regression models.

(The Golden-winged Warbler) occur in small numbers . . . in early succession old fields, but are found in greatest numbers . . . in a variety of surface mines from contour to mountaintop.

Table 1 shows a sample of some of the sites surveyed. Additional sites and data are included in an unpublished report to the West Virginia Division of Natural Resources (Canterbury, in prep.) and are being used for a status report to the U.S. Fish and Wildlife Service (Buehler, Confer, and Canterbury, in prep.).

DISCUSSION

The current paper shows that Golden-wings occur at all types of reclaimed surface mines and that their

abundance is not correlated with mine type, but is dependent upon sapling growth and percent slope. Precisely how slope terrain (created naturally or by man) is linked to the success of Golden-wings on minelands is in need of further study.

Previous studies in West Virginia have shown that Golden-wings occur most often in high density on surface mine sites, and are uncommon in the lowlands dominated by small communities, farms, or wetlands (Canterbury et al. 1993, 1996; Canterbury 1993).

In addition, years of data now indicate that Golden-wings are better adapted to the sloped mine lands than Blue-winged Warblers, and that mining activity may have decreased hybridization in the s. WV coalfields (Shapiro and Canterbury, unpubl. mitochondrial DNA and behavior data). Hybridization between the two

Table 1.
Atlas data for Golden-winged (GWWA), Blue-winged (BWWA), and hybrid warblers from 1997-1999.*

Location	County	Number of Territorial Males GWWA	BWWA	Hybrid	Date[1]	Mine Type[2]	Succession[3]
Beury Mt.	Fayette	5	2		05-05-99	A	3
Crab Orchard	Raleigh	12			05-15-97	MVF	2
Crane Cr.	Wyoming	7			06-01-97	C	3
Cunard Landfill	Fayette	8	6		05-25-98	C	1
Egeria	Mercer	8			05-15-98	C	3
Gary	McDowell	6	1		06-05-99	A	1
Ghent	Raleigh	15		1	05-19-98	C	1
Glen Rogers	Wyoming	10			05-24-98	PM	2
Guyandotte Mt. "Little Bolt"	Wyoming	34	2		05-23-98	A	1
Lillybrook	Raleigh	10			05-26-98	PM	3
MVHS, [a] Welch	McDowell	9	2		05-06-97	MVF	1
Pinnacle Cr.	Wyoming	10	2		05-11-97	MVF	1
Princewick	Raleigh	8	2	1	06-04-99	C	3
Sharples	Boone/Logan	8	3	1	05-17-97	MVF	1
Slab Fork	Raleigh	13	2		05-23-98	C	3

*** Sites shown represent a sample of 69 new sites surveyed since 1996 (see Canterbury et al. 1996). [1] Date site was surveyed. [2] Surface mine type includes contour (C), partial mountaintop with outslope and minimal valley fill (PM), and mountaintop with valley fill (MVF) or all (A) types present. [3] Succession was classified as early (1), mid (2), and late (3), see Methods. [a] MVHS = Mount View High School.**

Table 2.
Population densities (number singing males per 100 ha) of 15 bird species at three sites (Guyandotte (Bolt) Mountain, Highland Mountain, and Whitby) where Golden-winged Warblers are in high density along surface mine sites. Density estimates shown are mean values for each species from 1989-1999. Numbers determined by standardized point counts. Bolt Mountain contains mostly contour strip mines, Highland Mountain contains mostly mountaintop removal and Whitby has a variety of mine lands from mountaintop and contour (mixed mine site).

Species	SITE Bolt (contour)	Highland (mountaintop)	Whitby (mixed)
Red-eyed Vireo [1]	120	112	63
Rufous-sided Towhee [3]	93	75	69
Golden-winged Warbler [3]	79	74	79
Ovenbird [1]	83	88	33
Yellow-breasted Chat [2]	58	20	26
Indigo Bunting [3]	50	49	58
Black-and-White Warbler [1]	45	63	47
Hooded Warbler [1]	43	35	40
Chestnut-sided Warbler [2]	32	81	18
American Redstart [3]	30	20	20
Field Sparrow [2]	30	39	40
Wood Thrush [1]	29	27	22
Gray Catbird [2]	29	20	32
Common Yellowthroat [2]	25	19	29
Eastern Titmouse [1]	15	18	10

[a] Habitat association: [1] Forest, [2] shrubland, and [3] edge.

warblers is very rare on surface mine sites (Canterbury et al. 1996). *We know of no other factor, other than high elevation, that has decreased hybridization between these warblers.*

Because this paper is mainly concerned with one species of songbird, one may wonder what impacts mining activity has on other bird species. Many reclaimed surface mines present a mosaic of microhabitats with edge effects. For example, contour mines at Eccles, Whitby, and Guyandottee Mountain (Peachtree Ridge) offer a variety of habitat from grasslands, shrubs, wetlands, and forest edge and areas where forest species can be found in close associate with shrubland birds (see Table 2).

We firmly believe that not only are Golden-wings dependent upon mining activities, but that mining has kept out other human activities from disturbing many acres of land, such as suburban sprawl, and virtually saved this songbird from extinction. Additional studies have shown that Golden-wings cannot adapt to encroachment by people, e.g., increase in housing density and habitat fragmentation caused by human dwellings (Canterbury et al. 1995, 1996). Reclaimed mine lands, especially abandoned surface mines, are often devoid of human activity and provide remote habitats preferred by Golden-wings. However, recreational use of shrubland habitats by remote terrain vehicles have significantly impacted upon snake populations, which are important predators in our ecosystems.

Abandoned reclaimed surface mines provide habitat for both Golden-winged Warblers and Timber Rattlesnakes (*Crotalus horridus*). Similarly, recent suburban sprawl in Putnam County and parts of Boone and Logan counties, as well as many areas in the Kanawha River Valley near Charleston may impact heavily upon bird populations and other wildlife. The foremost problem facing West Virginia and many areas in the Americas is not mountaintop removal, it is suburban sprawl and human population growth.

FUTURE DIRECTIONS

Spatial analysis models are currently being used to predict how mining and forestry practices impact bird populations, and to link any these practices with habitat management. Many mining activities have created a mosaic of habitats with viable bird populations. We will apply for funding to complete a literature search on the history of mining activity and incorporate these data as well as interviews with experts in mining industry into a database on bird populations, habitat type and succession, types of mining activity and reclamation, age of secondary succession, and size of land involved to predict correlations among these variables.

We will provide answers to many unresolved questions, such as how much valley fill can be done, what percent slope and landscape topology is best, what types of reclamation and non-native plants support succession of native species and biodiversity?

We are using these data to develop conservation plans, to nominate some WV surface mine lands as Important Bird Areas (IBA, sponsored by the National Audubon Society), and to develop a web page about this research.

It must be pointed out that we have most of the necessary data to address the aforementioned questions. We believe this research ensures that we can invest in the future of our children, i.e., by saving jobs and biodiversity, and that there is a medium between industry and environment.

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REFERENCES

Canterbury, R.A. 1990. Breeding ecology of the Golden-winged Warbler (*Vermivora chrysoptera*) in Raleigh County, West Virginia. Proc. W. Virginia Acad. of Sci. 62(3):83-93.

Canterbury, R.A. 1993. Golden-winged Warblers are common residents of abandoned surface mines in southern West Virginia. Redstart 60(2):46.

Canterbury, R.A. 1994. Banding News: A Vermivora study. Redstart 61(1):50-53.

Canterbury, R.A., D.M. Stover, and T.C. Nelson. 1993. Golden-winged Warblers in southern West Virginia: status and population ecology. Redstart 60(4):97-106.

Canterbury, R.A., N.J. Kotesovec, Jr., and B. Catuzza. 1995. A preliminary study of the effects of Brown-headed Cowbird parasitism on the reproductive success of Blue-winged Warblers in northeastern Ohio. Ohio Cardinal 18(4):124-125.

Canterbury, R.A., D.M. Stover, and N.J. Kotesovec, Jr. 1996. Population ecology of Golden-winged Warblers in southern West Virginia. Unpubl. report submitted to West Virginia Division of Natural Resources, Elkins.

Confer, J.L. 1992. The Golden-winged Warbler. In The Birds of North America, No. 20 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences: Washington, DC: the American Ornithologists' BNA account.

Watson, E.L., and R.A. Canterbury. 1999. Distributional survey of Golden-winged and Blue-winged warblers. McNair Scholarship Symposium, Vol. II. Concord College, Athens, West Virginia. In press.

Sparks, T., and R.A. Canterbury. 1999. Distributional survey of the Golden-winged warbler and the effect of tree size on choosing a habitat. McNair Scholarship Symposium, Vol. II. Concord College, Athens, West Virginia. In press.

Golden-winged Warbler

Blue-winged Warbler

Pinnacle Creek Mine site near Pineville in Wyoming County.

Black Locust habitat on the reclaimed mine site at Slab Fork in Raleigh County.

Glen Rogers in Wyoming County.

Bolt Mountain in Raleigh County.

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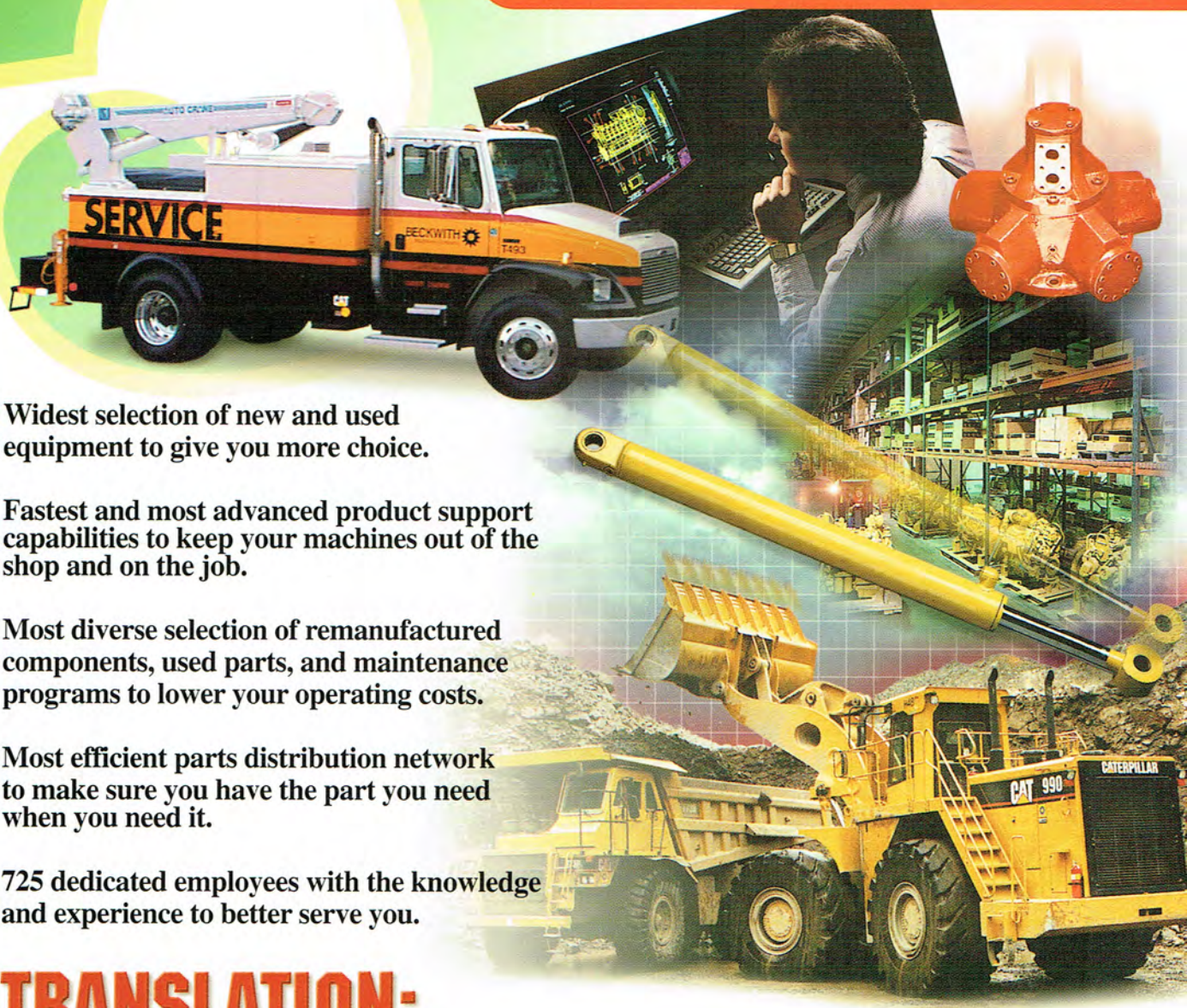

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