

PENWEST Annual Report 1991

The core business grew at 22%

Our return on operating capital was 23%

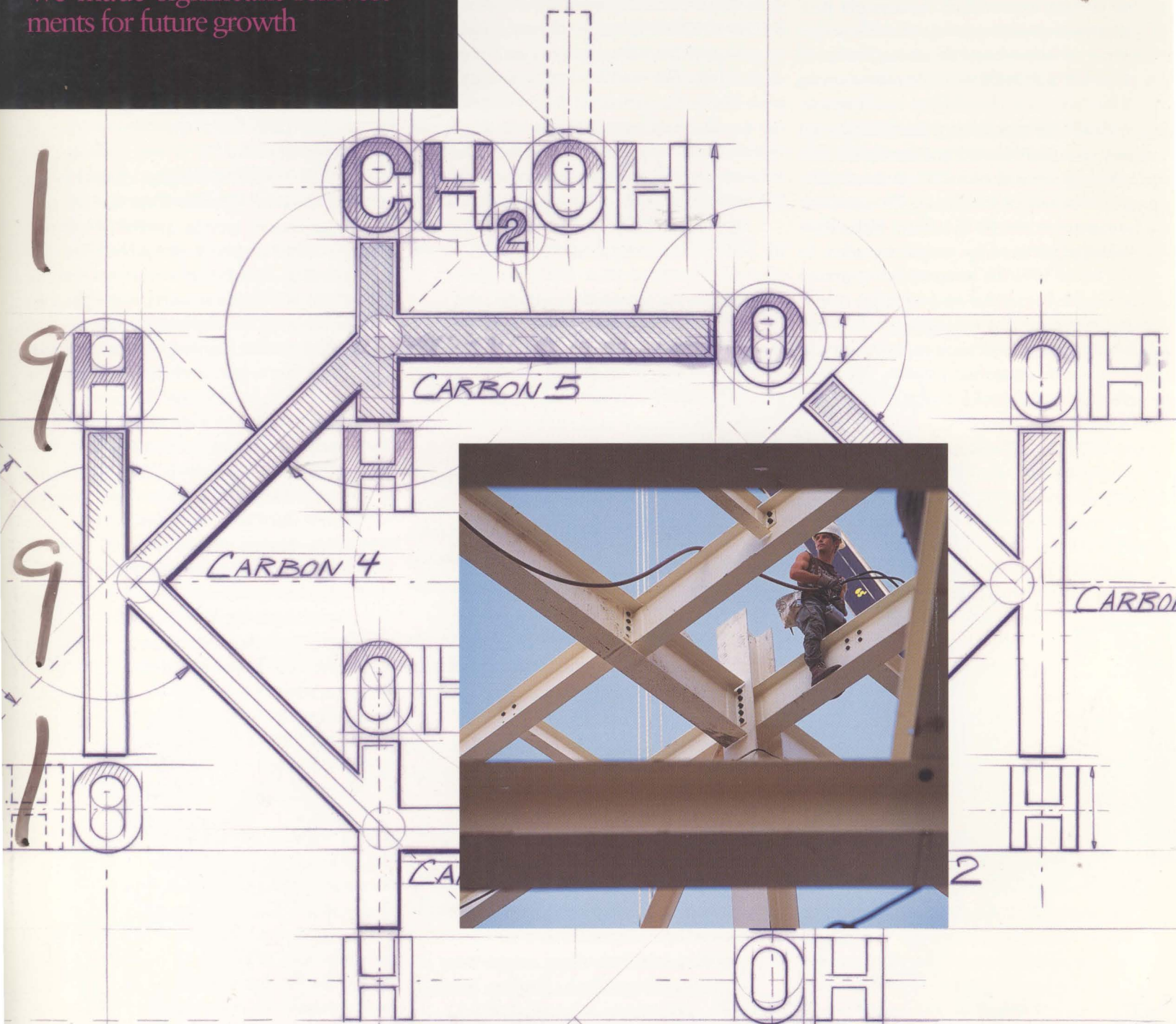
We made significant reinvestments for future growth

BUSINESS &
TECHNOLOGY

PROFILE A MURKIN

ROOM REFERENCE

Stack



The Company PENWEST develops, manufactures and markets specialty carbohydrate and synthetic polymer chemicals. The company also produces and markets specialty food ingredients, agricultural nutrition supplements and pharmaceutical excipient products.

PENWEST's principal source of revenue is Penford Products Co., the paper industry's major supplier of specially modified starches. Penford's plants are in Cedar Rapids, Iowa and Idaho Falls, Idaho.

The company competes in the pharmaceutical excipients market through a wholly-

owned subsidiary, Edward Mendell Co., which manufactures and distributes products in North America and Europe. Mendell has plants in the U.S. and Finland.

PENWEST FOODS Co. makes and markets specialty dextrose and dextrose-like products, along with food-grade potato-starch-based products and plant nutrition supplements. PENWEST FOODS manufactures its products in Cedar Rapids and Richland, Washington.

PENWEST's corporate headquarters are at 777 108th Avenue NE, Suite 2390, Bellevue, WA 98004-5193. Telephone (206) 462-6000.

"On The Cover" Completion of new drying capacity at PENWEST's primary manufacturing facility in Cedar Rapids (inset photo) caps a seven-year, \$50 million capital expansion program to serve increasing across-the-board demand for the company's diverse products.

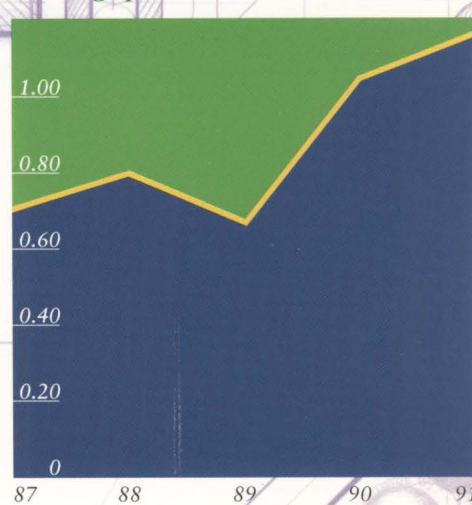
In addition to capital spending, PENWEST also has made a significant commitment to developing broad-based expertise in carbohydrate chemistry. The "blueprint" on the cover represents the basic building block of the three carbohydrates from which the company develops a wide variety of products.

The fine printing papers in this annual report have been treated with specialty starch products developed and sold through PENWEST's Penford Products Co.

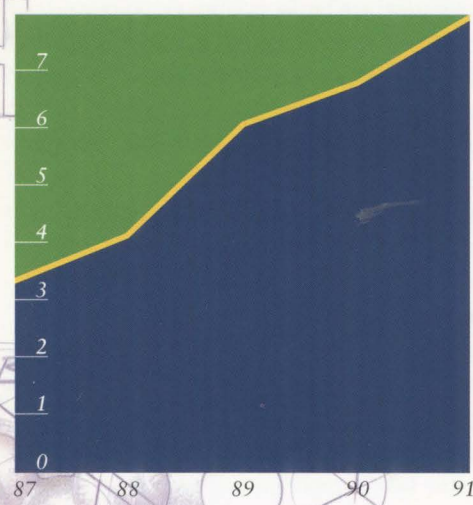
Five-Year Summary

	Year Ended August 31				
(Thousands of dollars except per share data)	1991	1990	1989	1988	1987
Operating Data:					
Net sales	\$110,910	\$ 91,998	\$ 79,826	\$ 65,819	\$ 64,004
Income from continuing operations	8,813	7,950	5,562	6,979	6,022
Earnings per share from continuing operations	1.17	1.06	0.68	0.81	0.71
Average shares outstanding	7,558,910	7,514,637	8,163,857	8,566,700	8,480,901
Effective tax rate	29.6%	24.9%	29.6%	33.8%	45.2%
Balance Sheet Data:					
Investments	28,815	30,993	38,146		
Long-term debt	31,550	23,050	23,650	49,456	39,747
Shareholders' equity	60,120	51,103	49,637	35,729	27,667
Capital expenditures	14,006	13,537	7,591	8,471	4,605
Current assets	52,086	47,977	53,582	36,085	32,623
Current liabilities	17,674	15,725	12,980	11,326	16,634
Working capital	34,412	32,252	40,602	24,759	15,989
Total assets	121,464	102,090	95,965	107,933	96,002
Total liabilities	61,344	50,987	46,328	72,204	68,335

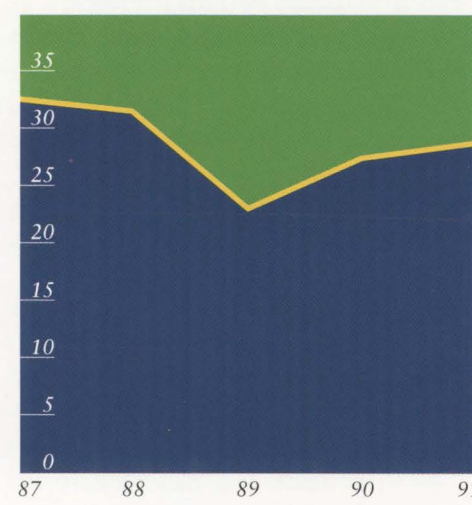
Earnings per share Dollars



Book value per share Dollars



Gross margin Percentage



Interest-bearing debt to equity ratio

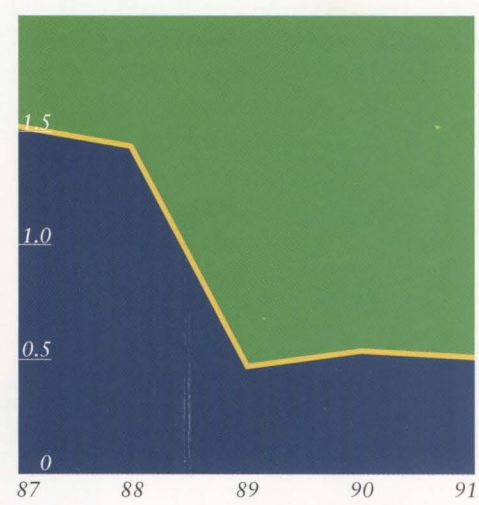


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Tod Hamachek
President
and Chief
Executive
Officer

Letter to Shareholders

An excellent year PENWEST had another excellent year in 1991, with record sales and earnings, significant reinvestment for future growth and solid contributions to shareholder value.

It was a year of very strong growth in the core business, high returns from operating capital, and the launch of some exciting new business opportunities for the years ahead.

Earnings were \$8.8 million, or \$1.17 per share, up 10 percent from \$8 million and \$1.06 per share in fiscal 1990. Sales were \$111 million, up 21 percent from \$92 million.

We achieved substantially all of our major quantitative goals for PENWEST: an after-tax return on operating capital of 18 to 25 percent, an after-tax return on capital expenditures of 20 percent, growth in revenues and operating income of 12 to 15 percent.

Strong earnings momentum continued throughout the year, although the rate of increase eased somewhat in the second half as Penford Products Co., PENWEST's core business, reached full production capacity. Construction of new capacity was begun last year and completed in October, adding 30 percent to the company's finishing capability. Additional milling capacity will come on line in February 1992.

Our company completed the year in excellent financial health. We increased debt slightly to finance an acquisition, but we also increased shareholders' equity. Debt was 53 percent of equity for the year, compared with 54 and 49 percent in each of the last two years. Our healthy cash position gives us a wide range of options for financing future growth through new product development, acquisition or joint venture.

Significant realignment While we take satisfaction from record financial performance in 1991, our most important achievement for the year is a significant realignment of the company that will have a fundamental impact on the shape and direction of PENWEST in the years ahead.

The realignment includes the acquisition of the Edward Mendell Co., a leading producer and supplier of pharmaceutical excipients (the non-active ingredients in tableted and capsulized medicines and vitamins). Also included in the realignment is the creation of PENWEST FOODS Co. as an independent division. PENWEST FOODS draws on the company's existing food ingredients lines, but has been expanded and reshaped with new management and more aggressive plans for sales and customer service. Penford Products Co., our specialty chemicals business, continues as the paper industry's leading supplier of specialty chemical starch products for coatings and sizings.

Like all strategic decisions at PENWEST, the realignment reflects the company's basic mission, which is spelled out in our certificate of incorporation: create the maximum continuing rate of value growth through long-term profit on invested capital and the growth of that capital.

To serve the mission, our company formalized its broad business objectives through a statement we call our strategic vision: to become a leading, innovative global manufacturer and marketer of high value-added natural polymers and related specialty chemical ingredients.

The mission statement describes our destination, the strategic vision is our route. The vehicle is PENWEST's broad and growing competence in carbohydrate chemistry — a competence that may be unique in American industry.

Illustrations elsewhere on these pages visualize the expansion of our capability in the core technology. This core, based on the chemical modification of carbohydrate molecules, is the technical centerpiece of three distinct business units. Each of the units, in turn, is organized along market lines, with dedicated

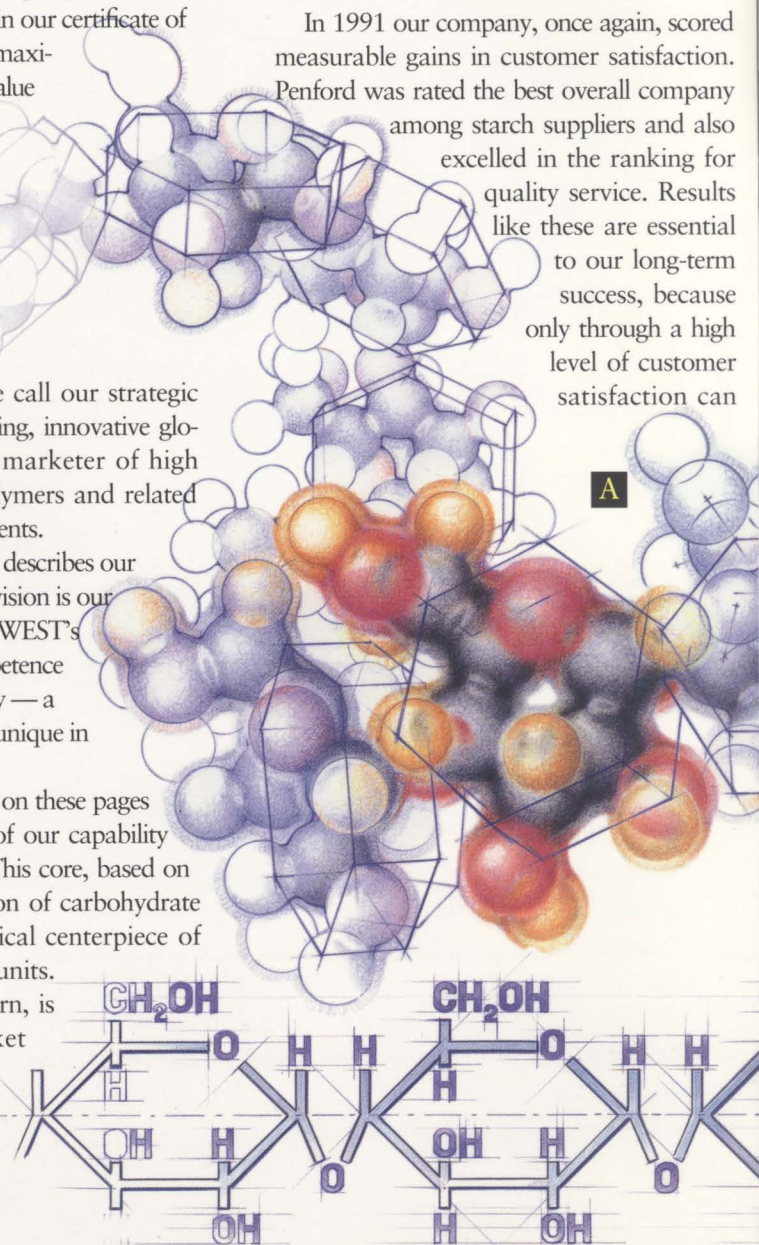
marketing, sales and customer technical service capabilities for the paper, food and pharmaceutical industries.

The net effect of the realignment is to leverage our technology base more effectively over our business units and into new markets for greater PENWEST growth overall. It will enable us to strengthen our role as a partner to customers by developing value-added products that will answer real customer needs.

Six goals Our management group has identified six qualitative goals that will guide our strategic decisions for the next five-year period. We believe that achieving these goals will produce the quantitative results for shareholders we identified earlier in this letter.

1 We will exceed customer expectations in all markets served Customers remain at the center of our focus as we grow the business. Customer satisfaction has been central to the success of Penford Products and will be the key to growth at Mendell and PENWEST FOODS Co.

In 1991 our company, once again, scored measurable gains in customer satisfaction. Penford was rated the best overall company among starch suppliers and also excelled in the ranking for quality service. Results like these are essential to our long-term success, because only through a high level of customer satisfaction can



we deliver results to shareholders. We will continue the dialogue with customers and become even more responsive to their needs. By 1993, for example, Penford expects to be fully certified as a supplier under ISO 9000, a new international quality standard which, among other things, enables our customers to become an interactive partner with our own quality control staff. Both Mendell and PENWEST FOODS have aggressive internal goals for improving customer satisfaction and will adopt the ISO 9000 standard.

2 PENWEST will successfully diversify to reduce dependence on a single geographical or industry segment The acquisition of Mendell and the reorganization of PENWEST FOODS Co. comprise a strong foundation for diversifying our business. Mendell, with an active presence in Europe as well as North America, is the world's only company devoted exclusively to the production and sale of excipients. The company competes in the \$175 million high-value-added segment of the excipient market. In the fall of 1991 the company broke ground in Cedar Rapids for an \$8 million manufacturing plant that will expand the business, substantially increasing our capacity to supply microcrystalline cellulose (MCC) to the North American pharmaceutical industry.

PENWEST FOODS Co. is an extension of and a refocus on a growing existing business. To manage the growth of that business we recruited John M. Darcy as president of PENWEST FOODS Co. and vice president of PENWEST. John previously was president and chief operating officer of Avis

Enterprises, a private investment group, and also served in senior management positions with the Carnation Company and the Pillsbury Company.

The acquisition of Mendell and the reorganization of our specialty food ingredients business is a natural evolution of our strategic planning process. While our company has been able to grow at a very strong rate despite sharp fluctuations in the fortunes of the North American paper industry — our principal customer — we recognize that our basic expertise in carbohydrate chemistry offers market opportunities beyond that industry.

Mendell's growth has been

in double digits for the past five years, and we expect favorable basic trends in its industry to continue. Aging populations in North America and Europe almost certainly will translate into continuing growth in pharmaceuticals, but there are other trends at work that also support optimism for this business.

We see a sharp increase in the use of controlled release chemistry for pharmaceuticals at a time when we have introduced a state-of-the-art process for a controlled release excipient.

There is a growing worldwide effort to contain escalating medical costs of all kinds. In the pharmaceutical industry those efforts suggest, in part, a larger role for generic drugs. The trend suggests a continuing source of growth business for the company.

Our food ingredients business also should benefit from some basic trends. It seems apparent that consumers will continue to reduce their calorie intake and seek products that are more fresh and natural. The acquisition last year of our food-grade potato

Carbohydrate chemistry is the technical base for PENWEST's three business units. Carbohydrate molecules are both similar to and different from one another depending on the raw material from which they originate.

Illustrations **A** and **C** represent starch molecules from corn and potatoes, respectively. They are identical structurally, except that the potato starch molecule contains occasional phosphate groups (upper right in illustration C).

Illustration **B** in the center represents cellulose, a carbohydrate which is different chemically from the other two in the direction its atoms are linked.

Carbohydrates are organic compounds composed of carbon (black circles), hydrogen (orange) and oxygen (red) atoms.

While the basic building blocks are the same in each of the three illustrations, PENWEST scientists make a wide variety of products from the raw materials themselves — chemical starches for coated papers, controlled-release components for sophisticated medicines, dextrose products for candies and pastries, potato starches for gravies and sauces.

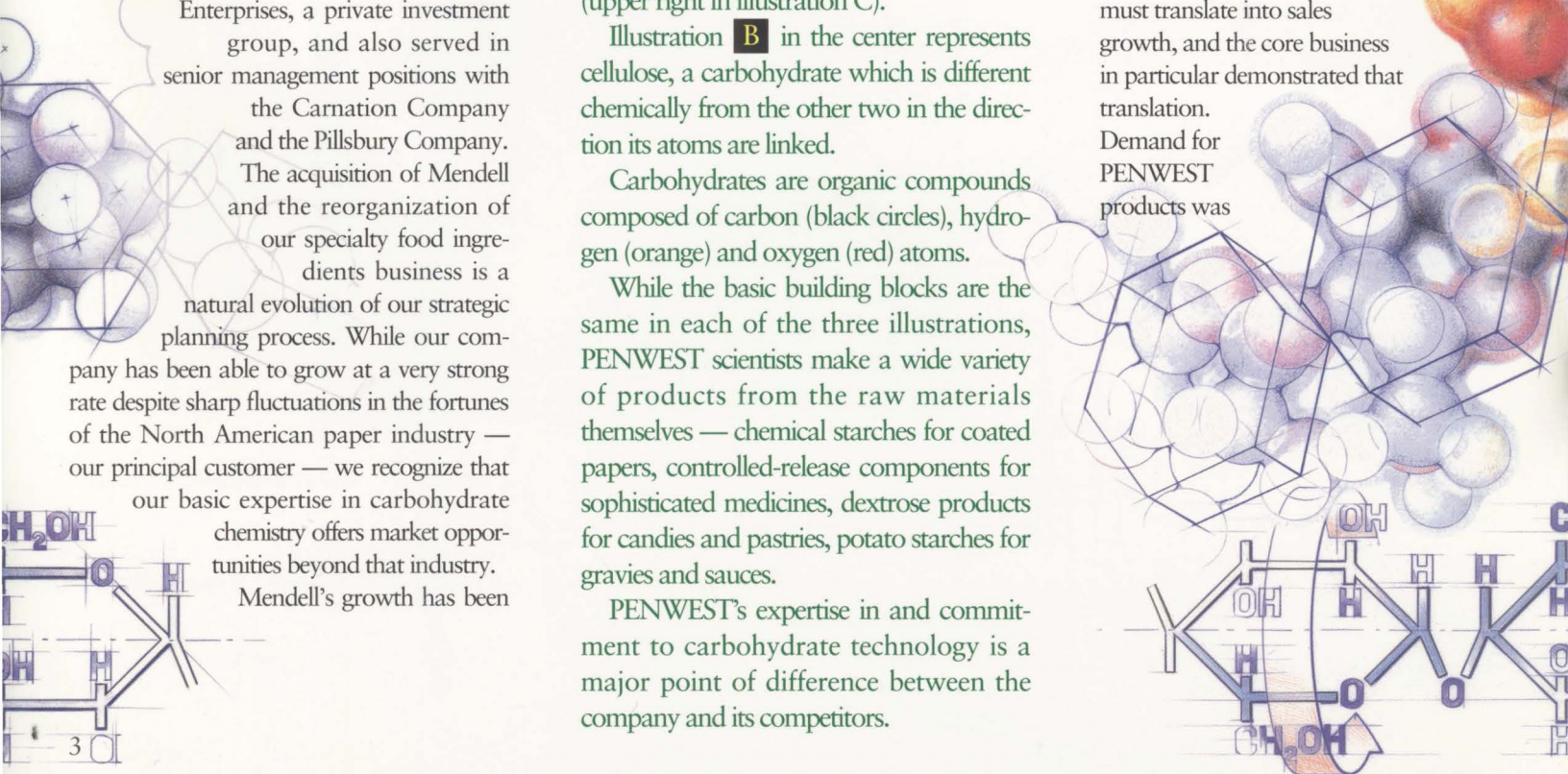
PENWEST's expertise in and commitment to carbohydrate technology is a major point of difference between the company and its competitors.

starch business has opened a window of opportunity for the development of products that fit these criteria. Consumer desire for greater convenience in packaged food products also should bolster potato starch sales because they are more suitable than corn starches for microwave applications.

In a generally stronger commitment to "eat right," consumers are paying closer attention to food labels, seeking fewer artificial ingredients and more natural foods. PENWEST food products are natural. As the 1990s unfold, we anticipate increasing pressure on food producers to bring new consumer products to market quickly in order to remain competitive. Because our R & D efforts are market-driven, we expect to be a valuable, fast-response supplier of carbohydrate-based specialty products to food producers.

3 PENWEST will seek a leadership position in the markets it serves The new organization, serving quite different and specialized customer groups, will draw its technical development from a common source. PENWEST is well established among the leaders in carbohydrate chemistry — particularly in understanding how carbohydrate molecules work, and how they can be modified to produce new products or applications that can help our customers. We are clearly the technical leader in carbohydrate chemistry for the paper industry. The acquisition of Mendell presents an opportunity for such leadership in excipients, and we have demonstrated an ability to innovate in specialized products for food ingredients.

Leadership in technology must translate into sales growth, and the core business in particular demonstrated that translation. Demand for PENWEST products was



strong throughout the year and across the board. The core business grew at 22 percent despite recession-related sales declines in coated and uncoated freesheet papers, our principal markets. Specialty starches grew at a 16 percent annualized rate for the last five years and at 25 percent last year. For the final six months of the fiscal year we were essentially sold out, with key products on allocation. While we anticipate double-digit growth to continue into 1992, we would not expect to sustain the rates of the past two years.

Penford Gums, our hydroxyethylated starches, were the product lines with the strongest growth profile in 1992, but other PENWEST products also enjoyed increasing demand. Dollar sales of the company's food-grade potato starches gained 196 percent from the previous year. Specialty corn-sugar-based food products were up 23 percent.

4 Our company will achieve growth with value-added products through successful new product and business opportunities New product development receives a high priority at PENWEST and in each of its three business units. In 1991 Penford launched PENGLOSS®, a unique coating binder product that we expect to add significantly to sales and earnings within the next five years. The depressed state of the paper industry during the year was not an ideal environment for an innovative new product, however, and while PENGLOSS technology

recovers in 1992 and beyond. PENGLOSS is significant as a new product, but its larger significance rests on the new technology it represents. PENGLOSS is distinctively different from starch or latex for coatings, and almost certainly will have broad applications beyond the coated paper segment of the industry.

Penford Products continues its new product development efforts, and will have several ready for production testing during the new fiscal year. Both the foods and the excipients groups also have new projects in the works, some of which are discussed elsewhere in this report.

In addition to growth opportunities through value-added new products, PENWEST evaluates, on a continuing basis, joint ventures with other companies and additional acquisitions in industries related to ours. We recognize that internal growth is only one of several ways of leveraging our assets.

In making a full commitment to the development of new opportunities and products, we recognize that the business climate for each of our profit centers is characterized by change. Indeed, our business strategies are based on the idea that PENWEST will be an active participant in changing markets, and in bringing improved technology and new products to our customers as quickly as possible. PENWEST welcomes change as a challenge and as a source of future growth.

Despite fluctuating demand and periodic recession in the paper industry, several major changing trends in that industry auger well for PENWEST. Indeed, the company already has been the beneficiary of a fundamental focus by papermakers on improving paper quality. Emphasis on quality products has been driven both by increased customer demand and by tougher global competition, especially from European papermakers. Specialty chemical products from Penford Products Co. help paper manufacturers improve the quality of coated and uncoated freesheet papers, and also deliver measurable gains in productivity.

North American freesheet papermakers are shifting from acid- to alkaline-based papers. Alkaline papers use less fiber, release fewer effluents and therefore require more chemical and mineral supplements.

Recycling is another basic trend that is good news for PENWEST. While paper recycling in Europe is somewhat more ad-

vanced than in North America (Germany recycles 70 percent of its newsprint), virtually all American mills recycle some paper, and we estimate that as much as 50 percent of all papermaking fibers will be from recycled sources by 1995. There has been a direct relationship between the increase in sales of our ethylated specialty starches and the trend to greater reuse of fiber resources. Recycling — at least in North America — reflects environmental concern about solid waste disposal. The fiber itself remains plentiful and renewable.

So, while our basic markets — coated and uncoated freesheet papers — may show only modest growth in the 1990s, we anticipate the continuation of double-digit growth in specialty chemicals for papermaking.

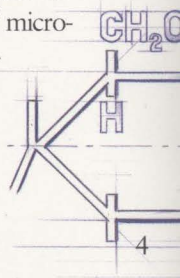
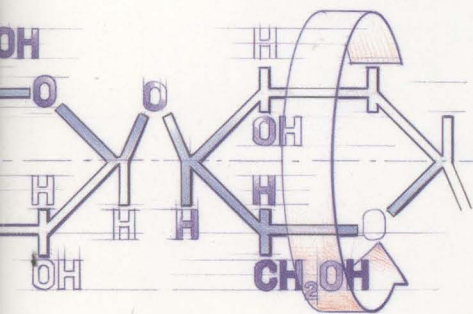
To accommodate that growth we added significant plant capacity during 1991, as part of a continuing reinvestment in the core business. Our main plant, in Cedar Rapids, Iowa, has been expanded by 100 percent since 1984. We've doubled capacity at the industrial potato starch plant in Idaho Falls, Idaho, while production in the food-grade potato-starch plant in Richland, Washington, is up threefold in the past year alone. The MCC plant now under construction will complement our MCC plant in Europe and pave the way for our expanding role in the North American excipients market, as well as freeing capacity for further growth in Europe.

5 We will maximize technology transfer across business units To obtain the best return on our technological capital, we have established internal methods of technology sharing.

At the corporate level, we have an R & D planning committee, which I chair, that includes PENWEST's chief innovation officer and the presidents and R & D heads of each business unit. The purpose of this committee is to plan and manage PENWEST's technical development. Members of the committee will be aware of the technical developments of each business unit and consider its developing applications for their respective markets. It is through this committee, for example, that we are exploring further applications of microcrystalline cellulose in pharmaceuticals and foods products.

B

was validated through dozens of real-world mill trials and production runs, we expect its sales potential to be more fully realized as the industry



Each business unit has its own R & D steering committee. These divisional committees are chaired by the divisional president and include R & D, manufacturing, sales and marketing. The purpose of the R & D steering committees is to explore, evaluate and direct developments and business opportunities that arise within each business unit and its marketplace. The focus of these efforts is to produce value-added products and services for customers.

6 We will encourage an innovative culture To fuel our growth, we have attracted high-caliber professionals from a number of other industries and have promoted many from within. We realize that to fully tap the broad array of talent available to us, we must create and sustain an environment congenial to innovation and creativity. While such an environment will be especially productive for R & D, we seek and encourage innovation from all corners of our company, including manufacturing, marketing, sales, human relations, customer services and others.

As an example, in May 1991 PENWEST signed a new, three-year joint accord with the Grain Millers Local 100, which represents 166 of the company's 370 employees, after using a resolution process that broke new ground in labor-management relations. The process included a completely open discussion in which

everything was on the table, rather than the more conventional environment of presenting mutual demands. The participative sessions resulted in a "joint accord" three months ahead of the expiration of the old agreement, and under terms beneficial to both sides.

The spirit of innovation we hope to foster at the company is well represented by Kenneth W. Kirby who retired this year as chairman and technical director of Penford Products Co. During a distinguished 31-year career with our company, Ken has been a key influence in new product development and in the technical excellence which has characterized our research. We have all benefitted from his wide-ranging expertise and creativity and are delighted that he has agreed to be available to PENWEST as a consultant.

We also are indebted to Russell E. Hamachek and F. Lowry Wyatt who retired as directors of the company in 1991. Both had served on the board since PENWEST's spin-off in 1984, and each played a key role in shaping our company's mission and direction. They are succeeded by David R. Hinson, chairman and chief executive officer of Midway Airlines, and Harry Mullikin, chairman emeritus of Westin Hotels and Resorts.

The new directors continue a tradition at PENWEST. Except for the chief executive, PENWEST's board is comprised exclusively of outside directors, including its chairman. We believe this structure provides the maximum oversight flexibility for the board as it acts to promote shareholders' interests.

Environmental management As a manufacturer and as a good corporate citizen of several communities, PENWEST is fully aware of its obligation to have a positive influence on the environment. Responsibility for environmental management and control begins at the board level, and includes my participation as well as that of other key members of management. Everyone at PENWEST knows that sound environmental practice is a top priority. During the

year we adopted a new policy and procedures manual to help our employees adhere to our strict environmental standards and take corrective action when it may be necessary.

PENWEST ownership While board members are external to the PENWEST organization, they have a direct interest, along with management, in the financial performance of the company. Directors and management, directly and indirectly, own 18 percent of PENWEST's common stock outstanding. PENWEST employees also are shareholders through a 401(k) savings plan and through profit sharing. These owners have increased their holdings of PENWEST stock in recent years.

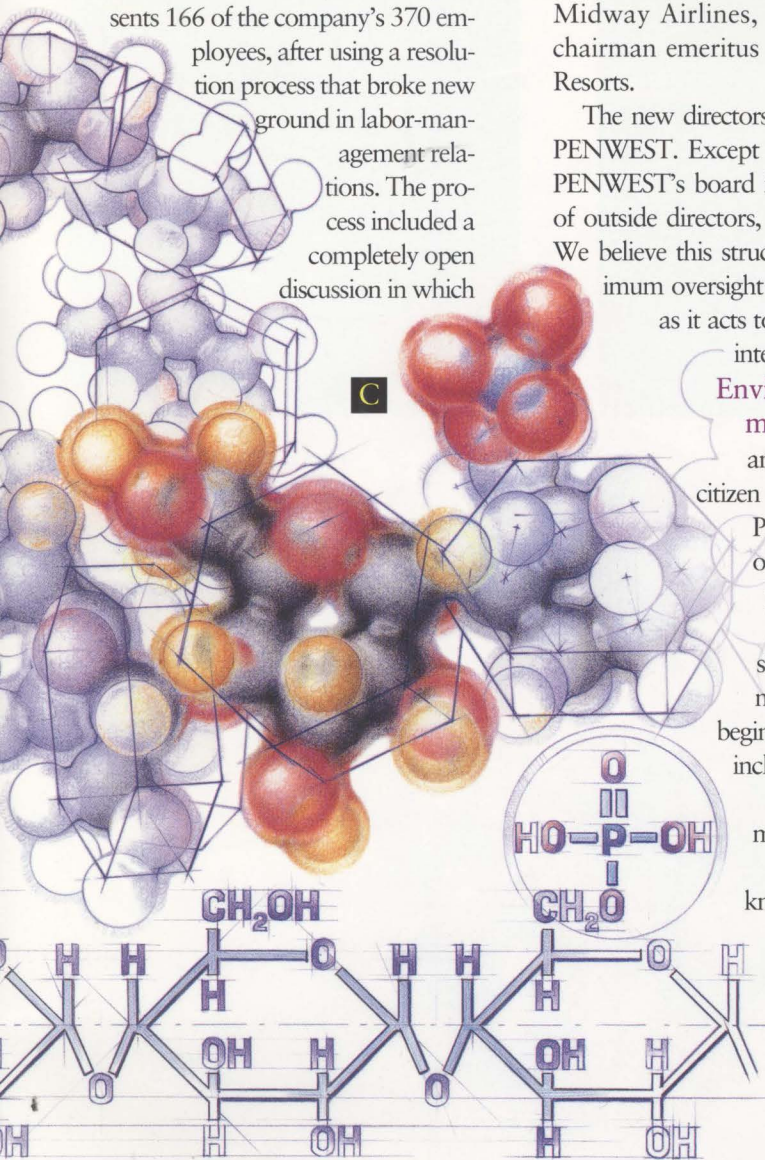
Exciting prospects Well before we closed the books on fiscal 1991, the PENWEST management group was focusing its resources on 1992 and beyond. We are very excited about our developing business groups and prospects for growth. We have a solid technology base, with an innovative, market-driven research and development capability. From a common technology we are shaping three business units, each with its own customer base and marketing organization. We have made substantial reinvestments in new product development, manufacturing capacity and customer service. We have the internal resources to finance further growth, either through expanding existing operations or by acquisitions.

In addition to PENWEST's tangible assets, our management group brings to our efforts a consuming commitment to excel at all we do — and to win in our competitive struggles in the marketplace. We have a first-rate, motivated team with a shared passion to be the best in products and service to customers. Our decisions are based on a detailed operating plan which is constantly renewed. Management compensation is tied to results. Our business base, our people and our plan make us confident of achieving some very ambitious growth goals in the years ahead.

Finally, we remain absolutely committed to building long-term value for our shareholders.



Tod R. Hamachek
President and Chief Executive Officer
December 3, 1991





Tom Reed, President
and General
Manager,
Penford
Products
Co.

Specialty Chemicals for Paper

Growth in the core business Penford Products Co., which manufactures and sells high-value specialty carbohydrate-based chemicals to papermakers, had its best year ever. Sales of core products were up 22 percent and the division recorded significant across-the-board gains in market share.

Penford sold more high-margin specialty starches in 1991 than total starch volume just five years ago.

Growth at Penford has been a direct reflection of a higher level of specialty products and services offered to customers in recent years. Penford specialty products contribute measurably to paper quality and productivity. Penford's success is a reflection of the total value

of its products and services to customers.

Penford's customers include all major North American paper manufacturers, with more than 100 plant locations. The company's products are used by the makers of uncoated freesheet papers for "sizing," a process which renders paper resistant to liquids and imparts smoothness to paper surfaces for high-quality printed images. These products also are used as binders in premium coated freesheet grades and in coated groundwood magazine papers.

Other products include cationic corn and potato starches for the "wet end" of papermaking, for adding strength to paper fibers.

Although total industry production of coated and uncoated freesheet papers declined during 1991 as a result of the recession, Penford continued to show very strong growth, both in total volume and in market share. High demand reflects the industry's increased awareness of the value of Penford's specialty products and their fit with our customers' needs.

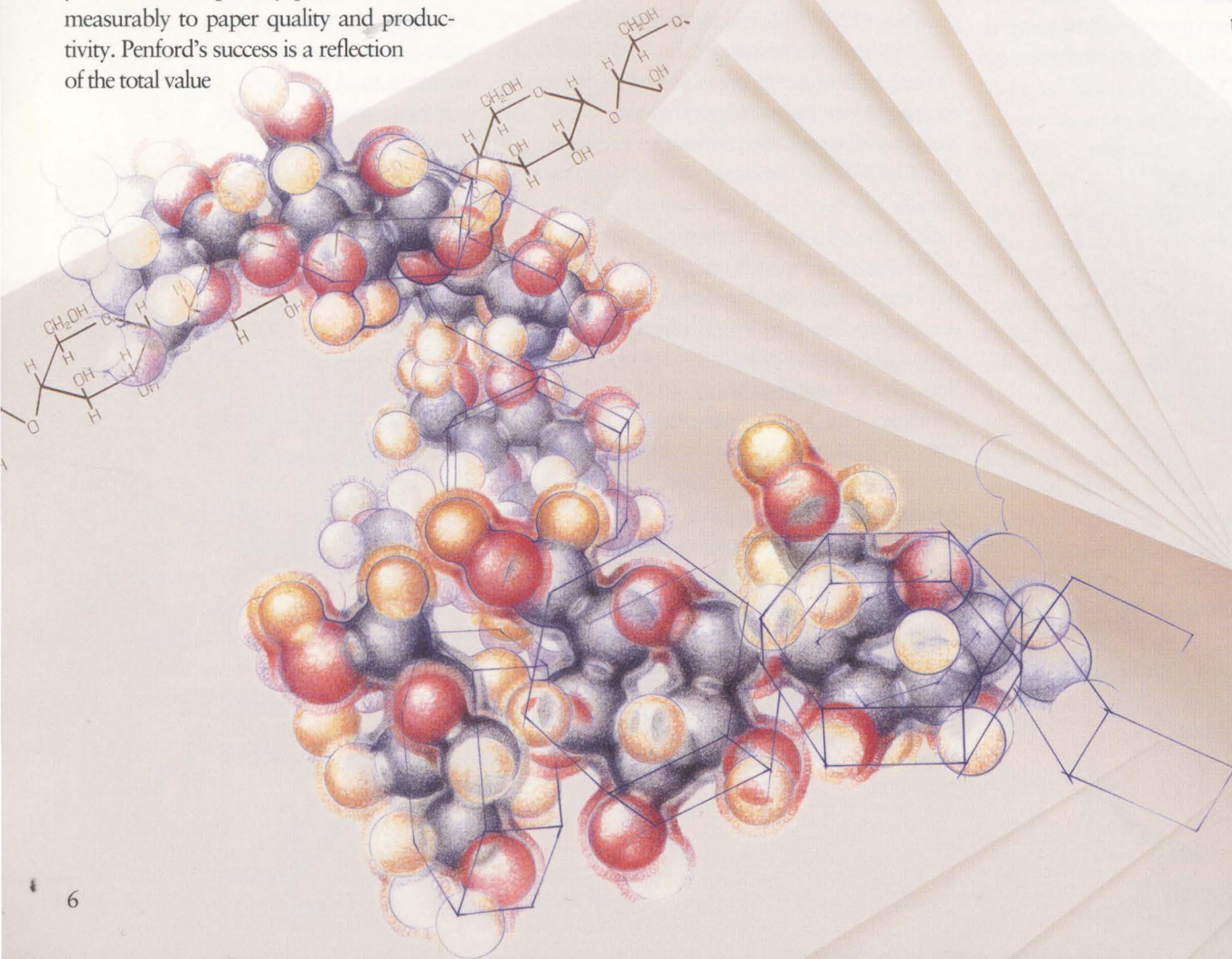
The shift to the alkaline process has continued to benefit Penford. Industry estimates for 1991 are that about 65 percent of

uncoated freesheet papers are alkaline based, and that the percentage could reach 90 in four years. One of the driving forces behind this change is the cost of fiber. The alkaline papermaking process permits replacement of some wood fiber with less expensive pigment and therefore is more cost effective as fiber costs increase. Penford is the industry's best technical resource for starches and binders as papermakers convert to the alkaline process.

Penford's people offer customers more than just products and services. Employees at all levels know that genuine value to customers includes innovative solutions to problems, fast-response consulting services and leadership in new ideas. Penford people are flexible within their job descriptions, recognizing that business opportunities often cut across lines of responsibility. The company's goal in developing people is to preserve entrepreneurial initiative in the organization.

PENGLOSS In the first quarter Penford brought PENGLOSS to market, a revolutionary coating binder which replaces latex in many papermaking applications. PENGLOSS was successful in mill trials and production runs throughout North America during the year, and produced excellent results in European trials in the fourth quarter.

PENGLOSS offers important advantages to both papermakers and printers. In lightweight coated papers, the product



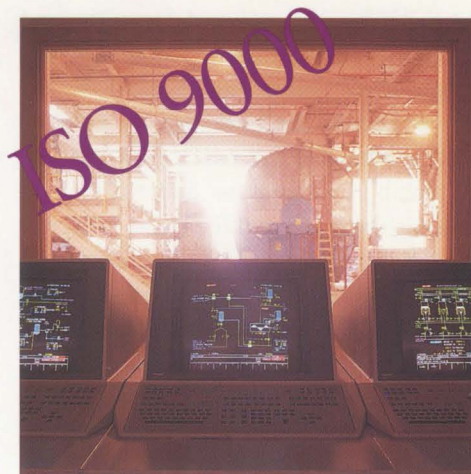
improves smoothness, brightness and opacity. It has demonstrated a unique ability to hold out ink, which improves ink gloss. PENGLOSS improves paper stiffness when it replaces latex, a particularly important consideration as the use of recycled fiber increases. It also enhances porosity, which affects the way in which printed papers receive inked images. Dot fidelity can be improved through PENGLOSS. In offset printing, a dot with good fidelity shows a clean, circular edge with a solid, uniform film of ink on the surface. To the reader, good dot fidelity means a sharp, clear image with good definition. PENGLOSS — and PENGLOSS technology — will continue to contribute importantly to Penford's ability to serve customers.

Earning good marks from our customers

Through independently conducted research, Penford maintains a close watch on how its products and services rate with customers. In 1991, a major report — supplementing baseline studies conducted in 1985 and 1988 — concluded that the company is regarded by customers as "the best overall" starch supplier to the paper industry, that Penford excels in the quality of its service, and that an increasing percentage of customers ranks the company's modified, ethylated and cationic starches as "excellent." The company significantly outscored its competitors in all major categories of customer evaluation, validating a five-year-long concentrated effort to improve product quality and customer service. The customer survey also confirmed that Penford's unique expertise in starch carbohydrate technology is widely recognized in the industry.

Plant expansions A new dryer and treating capacity which came on line in October 1991 and new grind capacity being completed in February 1992 will increase capacity at the company's production facility in Cedar Rapids, Iowa, by 30 percent, effectively doubling capacity since 1984.

This expanded capacity represents an investment of \$50 million in the last seven years to serve growing sales of Penford's products, including PENGLOSS, and in anticipation of a continuing strong de-



mand in the years ahead.

At each expansion stage, the board weighed the capital requirements against the probable return to shareholders. Capital expenditures generally must offer a 25 percent pre-tax return before they are approved by the board. While earnings short-term reflect relatively heavy capital expenditures in recent years, longer-term returns should be consistent with the 25 percent standard. Of particular interest to shareholders is the company's ability to generate excellent growth in earnings while at the same time funding, mostly from internal sources, the plant and equipment that will generate profits well into the next century.

Paper recycling Public sentiment for recycling materials of all kinds, including paper, will accelerate in the years ahead, producing challenges and opportunities for Penford Products Co. While our customers in the paper industry hold varying views on how pervasive paper recycling will become in North America, it appears likely the environmental movement here and in Europe, together with changing value systems among younger generations for whom conservation is the norm, will help provide the economic incentives to make recycling viable. We estimate that within two to three years as much as 50 percent of all papermaking fibers will be from recycled sources. Penford's ethylated starches play a positive role in recycling. They form an excellent film on fine papers,

Penford's specialty starches are found in most coated and uncoated freesheet papers sold in North America. Penford is the industry leader in starch-based specialty chemicals for coatings and sizings, and also supplies specialty cationic starches for "wet-end" strength in paper.

making the sheet stronger, stiffer and more printable with less fiber. PENGLOSS, because of better stiffness than latex, offers the paper maker an opportunity to use higher percentages of recycled fiber while maintaining the stiffness of virgin fiber sheet.

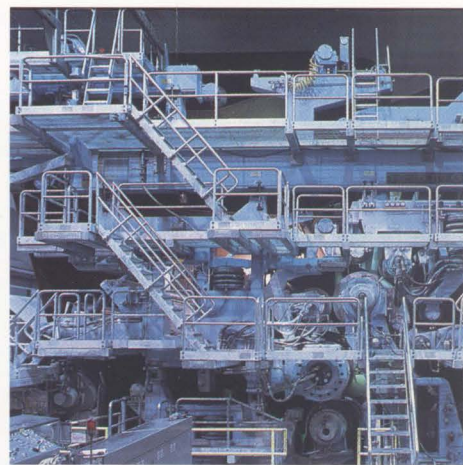
Penford's strengths Penford Products Co. is unique in its knowledge of starch carbohydrate chemistry and its ability to transfer into production the new applications and products which grow from that chemistry. This core competence — combined with a strong sense of team purpose and strategic vision — will make Penford an even stronger competitor in the years ahead.

The company enthusiastically supports an internal culture of change in which innovation is encouraged and rewarded. Management compensation is tied to profitability and the development of commercially saleable products. While the paper industry is, in many respects, traditional in its outlook, its needs are dynamic. Change is inevitable — and Penford, inevitably, will be a partner to some of those changes.

The company's high-quality products, combined with a dedicated customer service team, have excellent credibility among customers. Penford has a dominant share of market in its niche and may well expand on that leadership.

The development and successful launch of PENGLOSS creates significant new opportunities — as a new product with incremental sales potential as well as a technological base from which other profitable products might evolve.

Penford's core business is strong and growing. The company has ambitious but realistic plans for additional growth in the years ahead.



Chemically modified specialty starches from Penford help improve quality and productivity at major paper manufacturers throughout North America.

 **Penford Products Co.**



John Blanco, President and General Manager, Edward Mendell Co.

Pharmaceutical Excipients

Excipients: A new growth business The acquisition of the Edward Mendell Co. in March 1991 has opened exciting new business opportunities for PENWEST.

Mendell is a manufacturer and supplier of pharmaceutical excipient products, the non-active ingredients in tablet and capsule prescription pharmaceuticals, over-the-counter drugs and vitamins. Mendell's mission is to be a leading worldwide developer and marketer of these and other related products.

The company is well established and highly respected in the industry, with a strong customer base and good long-term relationships with major drug companies.

Mendell has offered widely recognized trademarks and quality products in North America and Europe for 40 years, and has distributed Penford products for some 20 years. Mendell brands like Emcocel®, Explotab®, Emcompress® and Emdex® are among the leading excipients in North America and Europe. The company's presence in these markets offers access to regions which account for about half of world pharmaceutical sales.

Growth in the core business has been good, and the company also is developing some very promising new products that will come on line within a year or two. PENWEST supports the growth of this new business through an expanded technology base and additional capital investment.

Mendell's core products include binders,



A new, \$8 million plant to produce microcrystalline cellulose will strengthen Mendell's ability to compete in the excipients market in North America and Europe. The plant should be completed in the fall of 1992.

Mendell manufactures and markets a variety of excipients for prescription and over-the-counter tablets and capsules. The products include many pharmaceutical industry standards, including microcrystalline cellulose, which provide bulk, shape, disintegration properties and controlled release for orally administered medicines and vitamins.



lubricants, fillers and disintegrants. As the terms imply, the products provide bulk for concentrated medicines, ease of manufacture, product integrity, and disintegration and release of the drug in the body.

The company markets 14 excipient products, some made to Mendell specifications by suppliers, and others manufactured at the company's plants in Nastola, Finland, and Patterson, New York. Mendell in recent years has focused on developing branded, proprietary products that can be produced in-house. Today, about 40 percent of Mendell's total volume is proprietary.

New controlled release products A number of new products now in development offer growth opportunities for the company, especially a controlled release technology, **TIMERx®**, introduced in 1991. This patented technology, developed over five years, will compete in the rapidly emerging worldwide commercial market for orally administered medicines. It affords the drug manufacturer an economical means of developing a once-a-day product, where

current products require continual administration several times a day. Mendell markets the product directly to pharmaceutical companies through licensing agreements. **TIMERx** should hold particular

appeal for the makers of many prescription medicines that will lose patent protection in 1992 and beyond. In many of those cases the patent can be extended by reformulating the drug into a controlled release product.

Expanding MCC production

In June of 1991 the board authorized a significant expansion in production capacity for Mendell's microcrystalline cellulose (MCC) business. MCC is the industry's most widely accepted excipient, and finds broad application as a tableting aid. The new \$8 million MCC plant is under construction in Cedar Rapids with commercial production expected by the summer of 1992. Together with the Mendell plant in Finland, this additional source of supply is expected to be wel-

comed by the pharmaceutical industry and will improve the company's position as a valuable supplier of high-quality MCC in North America and Europe.

Rising costs of health care Growing worldwide concern over health care costs at all levels offers opportunities for Mendell. In the pharmaceutical industry, the concern most probably will translate into a more spirited competitive environment in which Mendell can gain some market share from larger competitors.

Becoming more valuable to customers

Satisfying customer requirements is at the core of Mendell's strategy. Mendell is developing a systematic method for sharing with customers statistical data on the manufacturing process for each of its products. The data, both historic and specific by lot, will certify that finished products fall within strict parameters, reducing the overall costs

of quality control testing by customers. **Additional investment in Mendell** PENWEST will invest in Mendell's growth through the development of technology as well as through plant and equipment. Carbohydrate chemistry is the common denominator between Mendell and Penford, and PENWEST's research scientists will share project work with Mendell on a number of commercially promising projects.

Mendell also will bolster its marketing staff and add production management people.

A pivotal year 1992 is a pivotal year for Mendell. The subsidiary expects to grow revenues well in excess of industry averages short term as well as long term, and much of the foundation for that growth will be laid in the coming year. Mendell will grow by expanding market share and increasing production in its core business, developing new

excipient products keyed to customer demand, and by acquiring businesses closely related to the core business.

The synergy between Mendell and PENWEST offers shareholders a number of continuing opportunities for long-term growth and diversity in a dynamic worldwide market.





John Darcy, President and General Manager, PENWEST FOODS Co.

Food Products

PENWEST FOODS Co. is a small but growing business leveraging core technologies in carbohydrates and proteins to achieve exceptional growth. PENWEST FOODS is dedicated to addressing customer needs through manufacturing and marketing high value-added and proprietary specialty products.

Strong markets Currently, PENWEST FOODS serves two distinct markets with products which have received strong customer acceptance. Each product offers distinct formulation or processing advantages.

Within the food additives market, which is projected to grow from \$5.5 billion to \$7 billion by 1995, PENWEST FOODS Co. product lines include specialty corn-sugar-based bulking and processing aids and potato-starch-based food ingredients. PENWEST

FOODS intends to increase its share of this diverse market by broadening the existing business base and by focusing on new products for special applications.

Importantly, the base business has already demonstrated encouraging growth.

High product acceptance The dextrose (corn sugar) product lines were up 30 percent in volume for the year. The growth was led by CarriDex®, a new product introduced in 1990, which was very well received by major food companies. CarriDex is used as a bulking agent for low-calorie sweeteners, like those sold to consumers in packets. Confectioners use the product for soft candies, while meat processors use it for curing.

CarriDex dissolves quickly in fluids and is ideal for powdered drink mixes, diet meals, candy, fruit coatings and powdered low-calorie sugar substitutes. CarriDex flows evenly and rapidly on the manufacturing line, making it especially suitable for automated plants where speed and lower "sugar dusting" are important characteristics.

CarriDex fits with consumers' grow-

ing awareness of and higher demand for natural ingredients. CarriDex is identified simply as "dextrose" on consumer-food labels, and requires no additives. Some competing products, on the other hand, need to be used with adjuncts like magnesium stearate, silica, silicates or tricalcium phosphate — and these chemicals must be disclosed on the label. While this may be more semantic than substantive to scientists, food producers attach a great deal of weight to label content issues.

PENWEST FOODS Co. also produces and markets Cantab®, a 95 percent dextrose equivalent brand that is the premier sugar product for applications such as fruit dusting, candies, and consumer packaging tablets. Sales of the division's food-grade potato starch products

tripled in 1991, the first full year of competition in the food starch market. PENWEST FOODS Co. produces and markets eight products under the PenPlus trademark. These products provide texture to a wide variety of consumer products like sauces, soup, gravy, pudding, pie filling and cookies. Two new starches were introduced during the year, and have found initial acceptance in the frozen food and extruded snacks markets.

The PENWEST FOODS Co. production facility is the only U.S. source of modified pregelatinized food-grade potato starches. Plant production capacity is sufficient to supply substantial sales increases of both sugar and starch lines without an additional commitment of capital.

Plant nutrition products In 1991 PENWEST FOODS Co. also successfully competed in the plant nutritional supplement market. Fast Break® and Fast Break Plus® are uniquely formulated nutrients marketed to the commercially harvested mushroom industry. These products work by encapsulating protein within a starch carrier, producing a "time release" effect. When Fast Break is added to the growing medium, the starch acts to control the release of the internal protein. Mushroom production yields noticeably improve.

Introduced three years ago, Fast Break has captured a significant share of its potential market. PENWEST FOODS Co. anticipates additional volume growth and market share gains in the future.

New products to fuel growth

New product development is key to PENWEST FOODS' plans for future growth. In November, PENWEST was granted a U.S. patent for a

low-calorie bulking agent that replaces sugar and other sweeteners in a variety of consumer foods. The product offers significantly fewer calories than conventional products now being used by consumers. PENWEST is at the early

stages of reviewing opportunities for commercializing this product.

As consumers increasingly turn away from fatty foods, the market for fat replacers will expand. There may be market niche opportunities for PENWEST as this trend accelerates.

To fully exploit the food division's opportunities for growth, the sales force and technical service areas were expanded during 1991, and there was greater emphasis on the development of key accounts. These activities will accelerate in 1992.

At the top of the agenda for the new year is continued high growth in overall food division volume both internally and through potential acquisitions, vigorous new product development, and improvements in customer service.

Reorganization In recognition of this commitment, PENWEST FOODS Co. was reorganized during the year. John M. Darcy came aboard as president and general manager with overall profit responsibility for this growing business. He brings a wealth of management experience to PENWEST, including senior level positions at the Carnation Company, where he was vice president and group general manager accountable for three divisions. Previously, he held increasingly responsible positions in marketing management at the Pillsbury Company and at International Playtex. Recently, he has been a consultant to various companies, and was president of Avis Enterprises, a diversified private investment group.

PENWEST FOODS products are used in a wide range of consumer foods, from pastries and candies to gravies and sauces. The division, which develops and markets specialty products from corn sugars and potato starches, is targeted for significant growth.

 Penwest Foods Co.

Specialty Chemicals
for Paper

	Coating	Size Press	Wet End	Calender Stack	Product Features
Penford Gums 200, 220, 230, 240, 250, 260, 270, 280, 290, 295, 300, 330, 360, 380; <i>Pencote, Pensprae 3800, Pensurf</i>	▲	▲	▲		Hydroxyethyl ether derivatized corn starches – clear, strong, flexible, water-holding films – uniform viscosity – high gloss and ink holdout
PENGLOSS 110, 115	▲		▲		Starch/latex copolymer – ready-to-use at coater
Apollo 500, 600, 600-A, 700			▲		Cationic corn starches – increases retention and strength – alkaline size emulsion stabilizer
Apollo 4250, 4260, 4280		▲			Cationic corn starch – superior surface sizing – increases strength – reduces effluent from scrap paper
Astro Gums 3010, 3020	▲	▲	▲		Carboxymethylated corn starches – specialty starches for use with PVA
Astrocote 75	▲				Highly modified specialty potato starch – high solids, low viscosity for specialty papers
Polaris Gums HV, MV, LV	▲	▲	▲		Hydroxyethyl ether derivatized potato starches – very clear, strong, flexible water-holding films – uniform viscosity – excellent gloss and ink holdout
Astro X 50, 100, 101, 200			▲		Cationic potato starches – increases strength and retention – alkaline size emulsion stabilizer
Astro Gum 21			▲		Anionic corn starch – increases strength – high alum systems
Calender Size 2283			▲		Oxidized corn starch containing lubricant
Douglas-Cooker 3006, 3007, 3012-T, 3018, 3019, 3040	▲	▲	▲		High shear cooker corn starches – lightly oxidized – strong films, stable viscosity
Clearsol Gums 7, 8, 9, 10	▲	▲	▲		High oxidized corn starches – clear, strong, flexible films – stable viscosity
Douglas-Enzyme 3622, E-3610, E-3615, 3022, 3023, 3024, E, EC	▲	▲	▲		Full line enzyme converting corn starches – both slight modification and unmodified – cost-effective in-house conversion
Crown Thin Boiling X-10, X-18, XD, XF, XH, XJ, XL, XN, XP, XR		▲	▲		Acid modified corn starches – improve surface size and bonding

Pharmaceutical
Excipients

	Binders/Vehicles	Disintegrants	Lubricants	Product Features
Emcocel <i>Microcrystalline Cellulose, NF/BP</i>	▲			High binding capability, facilitates production of hard elegant tablets that can disintegrate rapidly
Emcompress <i>Dibasic Calcium Phosphate, USP/BP</i>	▲			A tablet binder that provides excellent flow characteristics
Compactrol <i>Calcium Sulfate, NF</i>	▲			Economical and efficiently flowing vehicle for D.C. tableting
Emdex <i>Dextrates, NF</i>	▲			Outstanding fluidity and compressibility with a cool soft mouthfeel which is desirable for chewable tablets
Emvelop <i>Hydrogenated Vegetable Oil, NF</i>	▲			Simple wax matrix for controlled release tablets which are produced by direct compression
Non Pareils <i>Sugar Spheres, USP</i>	▲			Uniform inert sugar/starch beads that provide a homogeneous surface for coating
Explotab <i>Sodium Starch Glycolate, NF/BP</i>		▲		Proven super disintegrant which can be utilized in tablets made from direct compression or wet granulation
Satialgine <i>Alginic acid, NF</i>		▲		One of the original naturally occurring disintegrants
Emcosoy <i>Soy Polysaccharides</i>		▲		Soy fiber disintegrant utilized in products with non-starch claims
Lubritab <i>Hydrogenated Vegetable Oil, NF</i>			▲	Natural lubricant that acts without the drawbacks of stearate lubricants
Pruv <i>Sodium Stearyl Fumarate, NF</i>			▲	Unique lubricant, hydrophilic nature combined with high lubricity and anti-adherent properties
Solka Floc <i>Powdered Cellulose, NF</i>	▲			A vehicle in wet-granulation and direct compression which aids in distribution of the binder

PENWEST
Foods

	Tableting/Compaction	Dusting	Bulking	Thickening	Product Features
Cantab <i>Corn-based sugar</i>	▲	▲			Crystalline form of 95 DE corn syrup – superior binder in consumer packaging tablet applications – coating for dried fruit
CarriDex <i>Corn-based sugar</i>		▲	▲		Spray crystallized dextrose – non-dusty, high flowability and solubility – excellent bulking agent and flavor oil carrier
Accutab <i>Corn-based sugar</i>	▲				Modified form of Cantab – designed to produce softer yet consistent tablets for the confectionery industry
PenPlus 10		▲	▲	▲	Heavily crosslinked pregelatinized potato starch – acid stable – texture and bulk to sauces – coating for nuts
PenPlus 47				▲	Crosslinked modified pregelatinized potato starch – moderate viscosity and acid stability – custard creams, soups
PenPlus 205				▲	Crosslinked modified pregelatinized potato starch – high viscosity and water binding – dry mixes, sauces, meats, gravies
PenPlus UM				▲	Unmodified pregelatinized potato starch – very high viscosity – general purpose thickener and binder
PenPlus 3000				▲	Lightly crosslinked pregelated modified potato starch – extremely high viscosity and water binding – baked goods
PenPlus 40 & 40M				▲	Modified pregelated potato starches – superior performance in a variety of extruded products
PenPlus 16FT				▲	Modified pregelatinized potato starch – excellent freeze/thaw stability – cake and pie fillings – gravies and sauces

Comparison of Fiscal 1991 to 1990 Results

Sales increased \$19.0 million, or 20.6 percent during 1991, a direct result of continued increasing sales of specialty ethylated starches for the paper industry and five and one half month sales of pharmaceutical excipient products from the March acquisition of Edward Mendell Co., Inc. (Mendell). Production of ethylated starches reached capacity in the second half of fiscal 1991 and will continue to be constrained until new capacity is scheduled to come on line in the first half of fiscal 1992. Fiscal 1992 will reflect a full year of sales from the Mendell acquisition. PENGLOSS®, a new paper coating introduced to the paper industry in fiscal 1991, made a very small contribution to sales in fiscal 1991. PENGLOSS trial activity with customers is strong entering fiscal 1992, demonstrating good technical and functional performance results. The foods product line contribution remained consistent with 1990 aided by improved volumes in food-grade potato starch products.

Gross margins were 29 percent for 1991 compared to 27.4 percent in 1990. Margins were generally stable during 1991 and should remain stable due to continued strong performance in the higher margin specialty products and the company policy of hedging raw material prices.

Operating expenses increased \$4.4 million or 28.8 percent during 1991. The primary increase is due to the acquisition of Mendell. The remaining increase was largely due to higher human resource costs associated with current and anticipated growth.

During March 1991, the company acquired Mendell for approximately \$8 million. Mendell manufactures and markets excipients to the pharmaceutical industry. Mendell's gross margins for the six months ended August 31, 1991 were in line with PENWEST's expectations. However, operating expenses were slightly higher than the company's expectations due to non-recurring costs resulting from the change in ownership.

The effective tax rate was 29.6 percent in 1991 compared to 24.9 percent during 1990. The effective tax rate for both years is less than the statutory rate because of tax-advantaged investment income and the reversal of deferred taxes, which is partially offset by the effect of state tax expense net of the federal benefit. The effective rate increased in 1991 compared to 1990 due to a higher level of operating earnings taxed at the statutory rate versus tax-advantaged investment income, and an increase in state tax expense.

Without exception, all major business trends for PENWEST remain favorable as fiscal 1992 begins. Demand for our core business specialty paper chemical products continues to grow at a rapid rate despite cyclical paper industry sales. As paper products sales decline, the industry focuses greater attention on quality and production efficiency, both of which are enhanced by PENWEST's core paper chemical products. The contribution of PENGLOSS, a new paper coating technology, will be dependent upon a continued high level of consistent strong performance mill trial activity as well as a strengthening in the overall paper industry in fiscal 1992. PENWEST's pharmaceutical excipient business anticipates making significant investment in fiscal 1992 to support long-term growth plans.

Generally soft economic trends in North America have had no visible impact on PENWEST's sales or earnings from core businesses, nor at this time does the company see any signs of a negative effect in fiscal 1992.

Comparison of Fiscal 1990 to 1989 Results

Sales increased \$12.2 million, or 15.2 percent during 1990. Almost all of the change was additional volume, led by specialty ethylated starches.

Gross margins were 27.4 percent for 1990, up from 1989's 23.0 percent. Last year's gross margin was unusually low in the first half of the year because of higher drought-related raw material prices. Margins were generally stable during 1990 due to the company's policy of hedging raw material prices on fixed price sales contracts. The mix of products sold shifted to include more higher margin specialty products.

Operating expenses increased \$4.3 million, to \$15.3 million in 1990. The change relates to higher personnel costs and greater expenses in sales and research and development in anticipation of PENGLOSS. This new product was announced in February 1990 and shipments began in the first quarter of fiscal 1991.

The company continues to invest the proceeds from the sale of Great Western Malting in a portfolio of short-term securities. Investment income was \$2.9 million compared to \$3.5 million in 1989. The decline is due to a smaller average investment portfolio in 1990. Yields were comparable between years.

Interest expense was \$700,000 less in 1990 because of lower average borrowings (\$27 million vs. \$49 million in 1989) partially offset by the allocation of interest expense to discontinued operations in 1989. The average interest rate was about one half percentage point lower in 1990.

Income tax expense was \$2.6 million at an effective rate of 24.9 percent. The effective rate is less than the statutory rate because of tax-advantaged investment income and the reversal of deferred taxes.

Income from continuing operations was \$7.95 million, an increase of 42.9 percent from 1989. Weighted average shares outstanding declined to 7.5 million, which reflected a full year's impact of the Dutch auction stock purchase completed in March 1989. A total of 1.1 million shares was purchased through the Dutch auction.

Liquidity and Capital Resources

PENWEST is in a highly liquid position as a result of the 1989 Great Western sale. About 24 percent of assets are in short-term investments. In addition, the company has a three year, \$15 million revolving credit agreement. At year-end, there were no outstanding borrowings under this agreement.

Operating cash flow was \$17.8 million, \$10.4 million and \$11.9 million in 1991, 1990 and 1989 respectively. The increase in 1991 was due to increased sales and volumes from the paper chemical products business and the addition of Mendell.

The acquisition of Mendell was completed during March 1991. The acquisition was funded from cash and a temporary borrowing under uncommitted lines of credit. The acquisition of Mendell allowed PENWEST to expand its business in the pharmaceutical excipient market.

Capital expenditures increased to \$14 million from \$13.5 million in 1990. Expenditures have been funded from operations and, when necessary, temporary borrowings under the uncommitted lines. The largest projects are the corn grind expansion and the starch finishing capacity expansion, both of which will be completed in fiscal 1992. These expansions initiated in fiscal 1991 will enable PENWEST to meet the growing demand for specialty ethylated starches by the paper industry. In addition, the new PENGLOSS manufacturing plant was completed during the first quarter of fiscal 1991.

Capital expenditures in fiscal 1992 will at least be at the 1991 level and will be funded from operations, cash resources and borrowings, if necessary. New capital projects in fiscal 1992 will include an \$8.0 million microcrystalline cellulose plant for Mendell, as well as the completion of projects started in the prior year.

The company did not pay a dividend during the year. The Board of Directors reviews the dividend policy on an annual basis.

Other long-term assets increased \$4.0 million. The increase represents investments to fund the Supplemental Executive Retirement Plan, investments to fund another benefit program, and the addition of Mendell.

In December 1987, the FASB issued Statement No. 96, "Accounting for Income Taxes," adopting the liability method of accounting for deferred income taxes. Statement No. 96 must be adopted by PENWEST no later than the fiscal year ending August 31, 1993. Deferred taxes will be adjusted to reflect federal income tax rates in effect at the time of adoption. Based on current tax rates, the benefit from adoption at August 31, 1991 would be approximately \$1.2 million. The company intends to adopt Statement No. 96 in fiscal 1993.

In December 1990, the FASB issued Statement No. 106, "Employers' Accounting for Post-Retirement Benefits Other Than Pensions." Under Statement No. 106, which must be adopted by fiscal year 1994, post-retirement health care and life insurance benefit costs must be accrued during the years employees render service. PENWEST currently recognizes these costs on a cash basis. PENWEST will adopt Statement No. 106 on a prospective basis in fiscal year 1994. While the impact to be recorded upon adoption is not yet quantifiable, an increase in the future annual expense is expected.

Consolidated Balance Sheets

August 31 (Thousands of dollars)

1991

1990

Assets

Current assets:

Cash	\$ 976	\$ 306
Investments	28,815	30,993
Trade accounts receivable	11,821	8,623
Inventories	7,308	5,990
Prepaid expenses and other	3,166	2,065
Total current assets	<u>52,086</u>	<u>47,977</u>
Property, plant and equipment:		
Land	1,975	1,248
Plant and equipment	94,935	79,537
Construction in progress	11,385	8,496
Less accumulated depreciation	47,072	39,273
Net property, plant and equipment	<u>61,223</u>	<u>50,008</u>
Other assets	8,155	4,105
	<u>\$121,464</u>	<u>\$102,090</u>

Liabilities and shareholders' equity

Current liabilities:

Accounts payable	\$ 9,258	\$ 8,127
Current portion of long-term debt	300	4,600
Accrued liabilities	8,116	2,998
Total current liabilities	<u>17,674</u>	<u>15,725</u>
Long-term debt	31,550	23,050
Deferred income taxes and other	12,120	12,212

Shareholders' equity:

Common stock, par value \$1.00 per share, authorized 29,000,000 shares, issued 8,501,327 in 1991 and 8,494,627 in 1990	8,501	8,495
Additional paid-in capital	12,055	12,028
Retained earnings	67,109	58,273
Treasury stock, at cost, 1,404,255 shares in 1991 and 1,399,255 shares in 1990	(21,720)	(21,600)
Note receivable from PENWEST Savings and Stock Ownership Plan	(5,825)	(6,093)
Total shareholders' equity	<u>60,120</u>	<u>51,103</u>
	<u>\$121,464</u>	<u>\$102,090</u>

The accompanying notes are an integral part of these statements.

Consolidated Statements of Income

	Year Ended August 31		
(Thousands of dollars)	1991	1990	1989
Sales	\$ 110,910	\$ 91,998	\$ 79,826
Cost of sales	<u>78,722</u>	<u>66,830</u>	<u>61,502</u>
Gross margin	32,188	25,168	18,324
Operating expenses	<u>19,673</u>	<u>15,277</u>	<u>10,957</u>
Income from operations	12,515	9,891	7,367
Investment income	2,530	2,899	3,463
Interest expense	<u>(2,528)</u>	<u>(2,203)</u>	<u>(2,935)</u>
Income from continuing operations, before taxes	12,517	10,587	7,895
Income taxes	<u>3,704</u>	<u>2,637</u>	<u>2,333</u>
Income from continuing operations	8,813	7,950	5,562
Income from discontinued operations:			
Operating results, net			5,344
Gain on sale, net		264	<u>22,404</u>
		<u>264</u>	<u>27,748</u>
Net income	<u>\$ 8,813</u>	<u>\$ 8,214</u>	<u>\$ 33,310</u>
Earnings per common share			
Continuing operations	\$ 1.17	\$ 1.06	\$ 0.68
Discontinued operations:			
Operating results, net			0.65
Gain on sale		0.03	<u>2.75</u>
		<u>0.03</u>	<u>3.40</u>
	<u>\$ 1.17</u>	<u>\$ 1.09</u>	<u>\$ 4.08</u>
Weighted average common shares outstanding	<u>7,558,910</u>	<u>7,514,637</u>	<u>8,163,857</u>

The accompanying notes are an integral part of these statements.

Consolidated Statements of Cash Flows

	Year Ended August 31		
(Thousands of dollars)	1991	1990	1989
Operating Activities:			
Income from continuing operations	\$ 8,813	\$ 7,950	\$ 5,562
Adjustments to reconcile income from continuing operations to net cash from continuing operations:			
Depreciation and amortization	6,999	5,520	4,902
Deferred income taxes	(1,273)	102	(722)
Other		(200)	(169)
Change in assets and liabilities:			
Receivables	(34)	(683)	(636)
Inventories	354	(202)	333
Other current assets		(982)	(655)
Accounts payable and other current liabilities	2,946	(1,098)	3,333
	<u>17,805</u>	<u>10,407</u>	<u>11,948</u>
Income from discontinued operations		264	27,748
Gain on sale of discontinued operations, net		(264)	(22,404)
Adjustments to reconcile income from discontinued operations to net cash from discontinued operations			553
	<u>17,805</u>	<u>10,407</u>	<u>5,897</u>
Net cash from operating activities	17,805	10,407	17,845
Investing Activities:			
Additions to plant and equipment	(14,006)	(13,537)	(7,591)
Proceeds from sale of discontinued operations			76,000
Business acquisition	(8,090)		
Other	45	19	90
Net cash from (used by) investing activities	(22,051)	(13,518)	68,499
Financing Activities:			
Proceeds from secured term agreement	22,000		
Payments on unsecured lines of credit	(17,500)		
Proceeds from long-term debt	4,300	17,775	10,575
Payments on long-term debt	(4,600)	(14,268)	(38,947)
Purchase of treasury stock	(120)	(6,599)	(19,600)
Purchase of life insurance for officers' benefit plans	(1,342)	(1,120)	
Other		(149)	198
Net cash from (used by) financing activities	<u>2,738</u>	<u>(4,361)</u>	<u>(47,774)</u>
Net increase (decrease) in cash	(1,508)	(7,472)	38,570
Cash and cash equivalents at beginning of year	31,299	38,771	201
Cash and cash equivalents at end of year	<u>\$ 29,791</u>	<u>\$ 31,299</u>	<u>\$ 38,771</u>
Supplemental disclosure of cash flow information			
Cash paid during the year for:			
Interest (net of capitalized interest)	\$ 2,266	\$ 2,168	\$ 4,476
Income taxes	1,306	4,682	28,826

The accompanying notes are an integral part of these statements.

Consolidated Statements of Shareholders' Equity

<i>(Thousands of dollars)</i>	Common Stock	Additional Paid-in Capital	Retained Earnings	Treasury Stock	Note Receiv- able from PENWEST Savings and Stock Own- ership Plan	Total Share- holders' Equity
Balances, September 1, 1988:	\$ 5,615	\$11,761	\$19,754	\$ (1,401)		\$35,729
Net income			33,310			33,310
Exercise of stock options	24	174				198
Purchase of treasury stock				(19,600)		(19,600)
Balances, August 31, 1989:	5,639	11,935	53,064	(21,001)		49,637
Net income			8,214			8,214
Exercise of stock options	35	93				128
Purchase of treasury stock				(6,599)		(6,599)
Savings and Stock Ownership Plan activity				6,000	\$ (6,093)	(93)
Three-for-two stock split	2,821		(2,822)			(1)
Pension plan minimum liability			(183)			(183)
Balances, August 31, 1990:	8,495	12,028	58,273	(21,600)	(6,093)	51,103
Net income			8,813			8,813
Exercise of stock options	6	27				33
Purchase of treasury stock				(120)		(120)
Savings and Stock Ownership Plan activity					268	268
Pension plan minimum liability			23			23
Balances, August 31, 1991:	<u>\$ 8,501</u>	<u>\$12,055</u>	<u>\$67,109</u>	<u>\$(21,720)</u>	<u>\$(5,825)</u>	<u>\$60,120</u>

The accompanying notes are an integral part of these statements.

Notes to Consolidated Financial Statements

Note A

Summary of Significant Accounting Policies

Consolidation

The consolidated financial statements include PENWEST and its wholly-owned subsidiaries. Material intercompany balances and transactions have been eliminated.

Cash

PENWEST's cash management system operates so that a cash overdraft for uncleared checks exists in the disbursing accounts. Cash in the accompanying balance sheets represent amounts to be transferred to the disbursing accounts. Uncleared checks of \$987,000 and \$2,244,000 are included in accounts payable at August 31, 1991 and 1990, respectively.

Investments

Investments are carried at cost and consist of preferred stock mutual funds, money market preferred funds, municipal bonds and preferred stock and are considered to be cash equivalents. The market value of the portfolio approximates cost.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost. Expenditures for maintenance and repairs are expensed as incurred. The company uses the straight-line method to compute depreciation for financial reporting purposes. For income tax purposes, the company generally uses accelerated depreciation methods.

Interest is capitalized on major construction projects while in progress. For continuing operations, interest of \$256,000, \$363,000 and \$300,000 was capitalized in 1991, 1990 and 1989, respectively.

Income Taxes

Deferred income taxes are provided using the gross change method on timing differences between financial and income tax reporting methods.

Earnings Per Share

Earnings per common share were computed by dividing net income by the weighted average number of common shares and dilutive common share equivalents outstanding during the fiscal year. Outstanding stock options are considered to be common share equivalents.

Segment Information

PENWEST's primary business segment is developing, manufacturing and marketing specialty carbohydrate and synthetic polymer chemicals. No single customer accounts for more than 10 percent of sales.

Research and Development

Research and development costs of \$2,972,000, \$2,393,000 and \$1,863,000 in 1991, 1990 and 1989, respectively, were charged to expense as incurred.

Post-Retirement Benefits

In December 1990, the FASB issued Statement No. 106, "Employers' Accounting for Post-Retirement Benefits Other Than Pensions." Under Statement No. 106, which must be adopted by fiscal year 1994, post-retirement health care and life insurance benefit costs must be accrued during the years employees render service. PENWEST currently recognizes these costs on a cash basis. PENWEST will adopt Statement No. 106 on a prospective basis in fiscal year 1994. While the impact to be recorded upon adoption is not yet quantifiable, an increase in the future annual expense is expected.

Reclassification

Certain prior year amounts have been reclassified to conform with current year presentation.

Note B

Inventories

Inventories and deferred gains and losses from hedging transactions are stated at the lower of cost or market. Cost, which includes material, labor and manufacturing overhead costs, is determined by the first-in, first-out (FIFO) method.

The company generally follows a policy of hedging corn purchases related to fixed price sales contracts to minimize risk due to market fluctuations. Gains and losses from these hedging transactions are deferred and included in inventory until such time as the corn is converted to finished goods and sold.

August 31 (Thousands of dollars)	1991	1990
Raw materials, supplies and other	\$ 2,372	\$ 2,829
Work in progress	414	433
Finished goods	4,522	2,728
Total inventories	<u>\$ 7,308</u>	<u>\$ 5,990</u>

Note C

Long-term Debt and Revolving Credit Agreement

August 31 (Thousands of dollars)	1991	1990
Borrowings under secured term agreement	\$22,000	
Borrowings under unsecured lines of credit		\$17,500
9.55 percent unsecured note, due in quarterly installments through 2000	5,550	5,850
10.43 percent mortgage, quarterly interest-only payments, quarterly principal installments beginning January 1993 with final maturity in October 1997; issued October 1990 subsequent to the maturity of the 8.75 percent mortgages.	4,300	4,300
	<u>31,850</u>	<u>27,650</u>
Less current portion	300	4,600
Net long-term debt	<u>\$31,550</u>	<u>\$23,050</u>

Maturities of long-term debt and the revolving credit agreement for the fiscal years ending August 31, 1992 through 1996 are as follows (thousands of dollars):

1992	\$ 300
1993	671
1994	878
1995	1,098
1996	1,268

The company has a secured term agreement of \$22 million with four banks which expires on November 30, 2000. Borrowing rates available to the company under the term agreement are at prime rate or less depending on the selection of borrowing options. PENWEST can elect to borrow under several options, including prime, certificate of deposit, Eurodollar, and as offered rates. At August 31, 1991 the interest rate was approximately 6.5 percent.

To offset the effect of future interest rate fluctuations on borrowings under the secured term agreement, the company has entered into interest rate swap agreements with financial institutions. The agreements, covering \$5 million currently and \$10 million effective 1994, of the debt outstanding under the secured term agreements fix interest rates at approximately 9 percent.

The term agreement includes, among other terms, various limitations on long-term indebtedness, minimum net worth and working capital ratios, and restrictions on PENWEST's ability to purchase or redeem its own stock. Under the most restrictive of these terms net worth at August 31, 1991, must be at least \$34,407,000.

The company has an unsecured revolving line of credit of \$15 million with four banks which expires on April 15, 1994. Borrowing rates available to the company under the revolver are at prime rate or less depending on the selection of borrowing options. PENWEST can elect to borrow under several options, including prime, certificate of deposit, Eurodollar and bankers' acceptance rates. Borrowings under the revolver can be converted, at the option of PENWEST, to term notes due on the expiration date of the revolving line of credit.

The revolver includes, among other terms, various limitations on long-term indebtedness, minimum net worth and working capital ratios, and restrictions on PENWEST's ability to purchase or redeem its own stock. At year-end, there were no outstanding borrowings under this agreement.

The company has uncommitted lines of credit which provide for financing at various floating rates.

The company has hedged the interest rate risk on a portion of its long-term debt using Treasury note futures. The cost of the hedge has been deferred and will be recognized as a component of interest expense over the life of the debt. The result of the hedge will yield an effective interest rate on the portion of its long-term debt hedged of approximately 9.5 percent.

Note D

Stock Options

Under stock option plans, options have been granted to certain officers and key employees to purchase PENWEST common stock. Changes in stock options for the three years ended August 31, 1991 are as follows:

	1991	1990	1989	1991 Option Price Range
Outstanding at beginning of year	713,707	798,971	831,186	\$2.08-22.50
Granted		52,000		
Exercised	(6,700)	(37,020)	(30,415)	2.08-16.59
Cancelled		(100,244)	(1,800)	
Outstanding at end of year	<u>707,007</u>	<u>713,707</u>	<u>798,971</u>	<u>\$2.08-22.50</u>
Exercisable at end of year	<u>116,164</u>	<u>92,917</u>	<u>100,592</u>	<u>\$2.08-12.75</u>

At August 31, 1991, 76,227 stock appreciation rights (SARs) were outstanding to certain officers under related stock option grants. The SARs were granted in December 1986 and April 1988 at the market price of PENWEST stock. As a result of appreciation and vesting of the SARs, \$342,000, \$550,000 and \$230,000 was charged to expense in 1991, 1990 and 1989, respectively. The SARs vest over a five-year period from the date of grant.

Note E

Stock Split

On February 6, 1990, the Board of Directors declared a three-for-two split of the company's common stock to shareholders of record on February 21, 1990. This stock split was effected in the form of a 50 percent stock dividend by the distribution of one additional share for each two shares of stock outstanding. The par value of the common stock remained at \$1.00 per share. As a result, \$2.8 million, representing the total par value of new shares issued, was transferred from retained earnings to common stock. Amounts per share and numbers of common shares have been restated to give retroactive effect to the stock split.

Note F

Income Taxes

Income tax expense consists of the following:

	Year Ended August 31		
(Thousands of dollars)	1991	1990	1989
Current			
Federal	\$ 4,611	\$ 2,348	\$ 2,772
Foreign	99		
State	267	187	283
	<u>4,977</u>	<u>2,535</u>	<u>3,055</u>
Deferred			
Federal	(1,266)	100	(700)
State	(7)	2	(22)
	<u>(1,273)</u>	<u>102</u>	<u>(722)</u>
Total provision	<u>\$ 3,704</u>	<u>\$ 2,637</u>	<u>\$ 2,333</u>

The sources of timing differences resulting in deferred income taxes and the tax effect of each consisted of the following:

	Year Ended August 31		
(Thousands of dollars)	1991	1990	1989
Depreciation	\$ (1,081)	\$ (234)	\$ (944)
Other	(192)	336	222
Total deferred provision	<u>\$ (1,273)</u>	<u>\$ 102</u>	<u>\$ (722)</u>

Reconciliation of the statutory federal tax to the actual provision is as follows:

	Year Ended August 31		
(Thousands of dollars)	1991	1990	1989
Statutory rate	34%	34%	34%
Statutory tax	\$4,256	\$ 3,600	\$ 2,684
State income taxes, net of federal tax benefit	176	123	186
Timing differences reversing at non-originating rate	(447)	(136)	(350)
Non-taxable investment income	(583)	(664)	(313)
Difference in effective tax rate on foreign income	19		
Other	283	(286)	126
Total provision	<u>\$ 3,704</u>	<u>\$ 2,637</u>	<u>\$ 2,333</u>

FASB No. 96

In December 1987, the FASB issued Statement No. 96, "Accounting for Income Taxes," adopting the liability method of accounting for deferred income taxes. Statement No. 96 must be adopted by PENWEST no later than the fiscal year ending August 31, 1993. Under the provisions of Statement No. 96, PENWEST may recognize the impacts of adoption by recording the prior years' cumulative effect of the new rules entirely in the year of adoption or by restating all financial statements presented. Deferred taxes will be adjusted to reflect federal income tax rates in effect at the time of adoption. Based on current tax rates, the benefit from adoption at August 31, 1991, would be approximately \$1.2 million.

Note G

Pension and Other Employee Benefits

PENWEST maintains two pension plans that cover substantially all employees in noncontributory defined benefit pension plans.

Benefits under the plan for hourly employees are primarily related to years of service. Benefits for salaried employees are primarily related to years of credited service and final average five-year earnings. Employees generally become eligible to participate in the plans after attaining age 21 and benefits normally become vested after five years of credited service.

The company's funding policy is to contribute amounts to the plans sufficient to meet or exceed the minimum requirements of the Employee Retirement Income Security Act. Effective September 1, 1989, PENWEST adopted the balance sheet reporting provisions of Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions," for both pension plans. This statement requires the recognition of an additional pension liability (included in deferred liabilities) of \$2,454,000 and \$2,159,000 and intangible asset (included in other assets) of \$2,211,000 and \$1,881,000, as of August 31, 1991 and 1990, respectively, with a direct adjustment, net of tax, to shareholder's equity of \$23,000 (credit) and \$183,000 (charge), respectively.

Net periodic pension expense consisted of the following (in thousands):

	Year Ended August 31		
	1991	1990	1989
Service cost of benefits earned during the year	\$ 246	\$ 276	\$ 269
Interest cost on projected benefit obligation	1,028	1,024	1,003
Actual return on plan assets	(2,267)	123	(1,646)
Net amortization and deferral	<u>1,607</u>	<u>(744)</u>	<u>1,139</u>
Net pension expense	<u>\$ 614</u>	<u>\$ 679</u>	<u>\$ 765</u>

Assumptions used in the accounting for pension plan expense in 1991, 1990 and 1989 included a discount rate of 8.86 percent, 8.12 percent and 9.06 percent, respectively, a rate of increase in compensation levels of 6 percent for the salaried employees, and an expected long-term rate of return on plan assets of 8 percent.

The following table sets forth the funded status of both pension plans as of August 31, 1991 and 1990 (in thousands):

	Plans with an Obligation in Excess of Assets August 31	
	1991	1990
Actuarial present value of projected obligation, based on service to date and current salary levels:		
Vested	\$13,457	\$ 11,182
Nonvested	323	152
Accumulated benefit obligation	13,780	11,334
Effect of projected salary increases	1,384	800
Projected benefit obligation	15,164	12,134
Plan assets at fair market value	12,419	10,359
Projected benefit obligation greater than plan assets	(2,745)	(1,775)
Unrecognized actuarial net loss	1,059	554
Balance of unrecognized net obligation at transition being amortized over 15 years	1,646	1,773
Unrecognized prior service cost	720	281
Adjustment to record minimum liability	(2,454)	(2,159)
Net pension liability	<u>\$ (1,774)</u>	<u>\$ (1,326)</u>

The projected benefit obligations increased by \$825,000 during fiscal year 1991 due to a change in the actuarial mortality table being used. In addition, the net assets (\$398,000) and projected obligations (\$313,000) of Mendell were merged into the PENWEST plan during 1991.

Assets of the pension plans are invested in units of common trust funds managed by Frank Russell Trust Company. The common trust funds own stocks, bonds and real estate.

PENWEST Savings and Stock Ownership Plan and Profit Sharing

The company has a savings investment plan. The savings component, available to all employees, matches 75 percent of the employee's contribution up to 6 percent of the employee's pay. The match is made in PENWEST common stock. The plan held 305,667 unallocated shares of PENWEST common stock as of August 31, 1991, including shares earned but not yet allocated. During 1991, approximately 29,000 shares of stock were earned by plan participants. The savings component expense of the plan was \$305,000, \$275,000 and \$162,000 for the fiscal years 1991, 1990 and 1989, respectively.

During 1990 the plan was amended to include an annual profit sharing component that is awarded by the Board of Directors based on achievement of predetermined corporate goals. This feature of the plan is available to all employees who participate in the company's gainsharing programs. The profit sharing expense was \$229,000 and \$242,000 for the fiscal years 1991 and 1990.

The plan acquired the PENWEST common stock by issuing a note to the company. The note is amortized ratably as stock is released to participants in the Plan.

Supplemental Executive Retirement Plan

Effective September 1, 1989 the company established a Supplemental Executive Retirement Plan (SERP) which covers certain employees. The plan is nonqualified and is subject to the provisions of Statement of Financial Accounting Standards No. 87, "Employers' Accounting for Pensions." For 1991 and 1990, the net pension expense of the SERP was \$252,000 and \$256,000, respectively.

Health Care and Life Insurance Benefits

The company offers health care and life insurance benefits to most active and retired employees. Costs incurred to provide these benefits are charged to expense when paid. Health care and life insurance expense for both active and retired employees was \$1,620,000, \$1,400,000, and \$1,240,000 in 1991, 1990 and 1989, respectively.

Note H
Shareholders' Equity
Unissued Preferred Stock

There are 1,000,000 shares of \$1.00 par value preferred stock authorized for issue; however, none are outstanding.

Common Stock Purchase Rights

On June 16, 1988, PENWEST distributed a dividend of one right ("Right") for each outstanding share of PENWEST common stock. In addition, previously outstanding Rights were redeemed for \$0.025 each. When exercisable, each Right will entitle its holder to buy one share of PENWEST's stock at \$44.00 per share. The Rights will become exercisable if a purchaser acquires 20 percent of PENWEST's common stock or makes an offer to acquire common stock. In the event that a purchaser acquires 20 percent of the common stock of PENWEST, each Right shall entitle the holder, other than the acquirer, to purchase one share of common stock of PENWEST for one half of the market price of the common stock. In the event that PENWEST is acquired in a merger or transfers 50 percent or more of its assets or earnings to any one entity, each Right entitles the holder to purchase common stock of the surviving or purchasing company having a market value of twice the exercise price of the Right. The Rights may be redeemed by PENWEST at a price of \$.01 per Right and they expire in June 1998.

Note I
Acquisition of Edward Mendell Co., Inc.

On March 15, 1991, the company purchased the net assets of Edward Mendell Co. Inc. (Mendell) for \$8,090,000. Mendell manufactures and markets excipients to the pharmaceutical industry. The acquisition was accounted for as a purchase. Net sales, which were less than 10 percent of total sales, and Mendell's results have been included in the consolidated statements since date of acquisition.

Note J
Sale of Great Western Malting Co.

On March 13, 1989, the company sold the operating assets of the Great Western Malting Co. division. In addition, PENWEST was reimbursed for the working capital employed at Great Western.

Net sales of Great Western Malting Co. for the period ended March 13, 1989, were \$53,305,000, and for the year ended August 31, 1988, were \$82,404,000. Interest expense was \$1,740,000 and \$2,633,000 in 1989 and 1988, respectively. Interest expense was allocated on the basis of net tangible assets employed as of the beginning of the fiscal year.

Tax expense for discontinued operations for the years ended August 31, 1989 and 1988, was \$3,029,000 and \$1,312,000, respectively. Tax expense associated with the gain on the sale of the property, plant and equipment was \$9,761,000. Contingencies, if any, remaining from the sale will not be material.

Note K
Quarterly Financial Data (Unaudited)

1990/91 <i>(Thousands of dollars except earnings per share data)</i>	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Sales	\$25,837	\$26,006	\$29,215	\$29,852	\$110,910
Gross margin	7,196	7,638	9,103	8,251	32,188
Net income	<u>\$ 2,087</u>	<u>\$ 2,262</u>	<u>\$ 2,430</u>	<u>\$ 2,034</u>	<u>\$ 8,813</u>
Earnings per common share	<u>\$ 0.28</u>	<u>\$ 0.30</u>	<u>\$ 0.32</u>	<u>\$ 0.27</u>	<u>\$ 1.17</u>
1989/90 <i>(Thousands of dollars except earnings per share data)</i>	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Sales	\$20,915	\$21,910	\$24,346	\$24,827	\$91,998
Gross margin	5,404	5,925	7,227	6,612	25,168
Income from continuing operations	1,762	1,963	2,252	1,973	7,950
Income from discontinued operations				264	264
Net income	<u>\$ 1,762</u>	<u>\$ 1,963</u>	<u>\$ 2,252</u>	<u>\$ 2,237</u>	<u>\$ 8,214</u>
Earnings per common share					
Continuing operations	\$ 0.24	\$ 0.26	\$ 0.30	\$ 0.26	\$ 1.06
Discontinued operations				.03	.03
	<u>\$ 0.24</u>	<u>\$ 0.26</u>	<u>\$ 0.30</u>	<u>\$ 0.29</u>	<u>\$ 1.09</u>
1988/89 <i>(Thousands of dollars except earnings per share data)</i>	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
Sales	\$18,377	\$19,627	\$22,091	\$19,731	\$79,826
Gross margin	4,307	3,536	5,753	4,728	18,324
Income from continuing operations	855	525	2,310	1,872	5,562
Income from discontinued operations	2,450	2,622	22,676		27,748
Net income	<u>\$ 3,305</u>	<u>\$ 3,147</u>	<u>\$24,986</u>	<u>\$ 1,872</u>	<u>\$33,310</u>
Earnings per common share					
Continuing operations	\$ 0.10	\$ 0.06	\$ 0.29	\$ 0.25	\$ 0.68
Discontinued operations	0.29	0.30	2.85		3.40
	<u>\$ 0.39</u>	<u>\$ 0.36</u>	<u>\$ 3.14</u>	<u>\$ 0.25</u>	<u>\$ 4.08</u>

Quarterly per share data will not necessarily sum to the annual amounts due to changes in weighted average shares outstanding during the periods.

Report of Ernst & Young, Independent Auditors

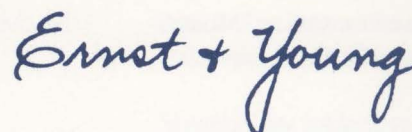
Board of Directors and Shareholders
PENWEST, LTD.

We have audited the accompanying consolidated balance sheets of PENWEST, LTD. as of August 31, 1991 and 1990, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended August 31, 1991. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of PENWEST, LTD. at August 31, 1991 and 1990, and the consolidated results of its operations and its cash flows for each of the three years in the period ended August 31, 1991 in conformity with generally accepted accounting principles.

Seattle, Washington
October 11, 1991



Report of Management

The management of PENWEST, LTD. has prepared and is responsible for the integrity and fairness of the financial statements and other financial information presented in this annual report. The statements have been prepared in accordance with generally accepted accounting principles and, to the extent appropriate, include amounts based on management's judgment and/or estimates. In order to discharge its responsibilities for these financial statements and information, management maintains accounting systems and related internal controls. These controls are designed to provide reasonable assurance that transactions are properly authorized and recorded, that assets are safeguarded, and that financial records are reliably maintained. The concept of reasonable assurance, however, incorporates an acknowledgement that the cost of a control system must be related to the benefits derived.

Ernst & Young, independent auditors, are retained to audit the Company's consolidated financial statements. Their accompanying report is based on an audit conducted in accordance with generally accepted auditing standards including a review of internal accounting controls and tests of accounting procedures and records.

The Audit Committee of the Board of Directors, which is composed solely of outside directors, meets periodically with management and with the independent auditors to review the quality of financial reporting, the operation and development of the internal control systems, and the results of independent audits.

The independent auditors regularly meet with the Audit Committee without the presence of any other parties.

Jeffrey T. Cook
Vice President Finance

Edward T. Larkin
Controller

Board of Directors



Richard E. Engebrecht Chairman, President and Chief Executive Officer, Momentum Distribution, Inc.



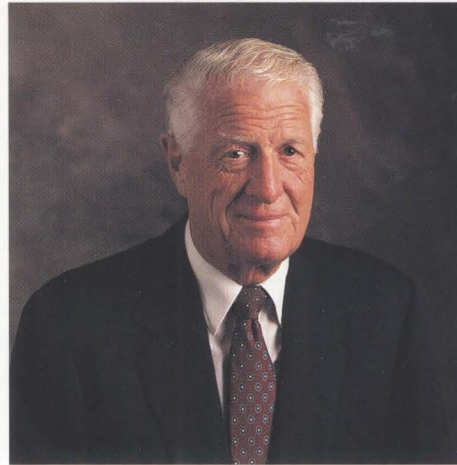
C. Calvert Knudsen Vice Chairman, MacMillan Bloedel, Ltd.



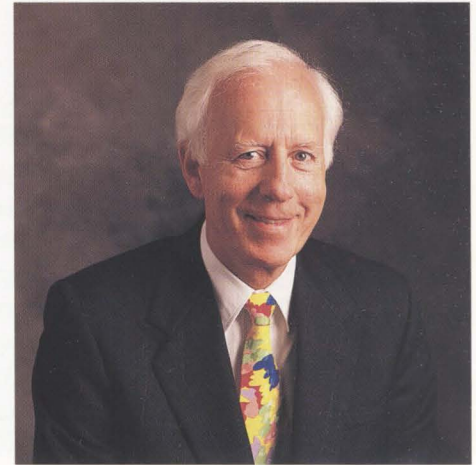
N. Stewart Rogers Chairman of the Board, PENWEST



Tod R. Hamachek President and Chief Executive Officer, PENWEST



Curtis P. Lindley Retired Chief Executive Officer, PENWEST



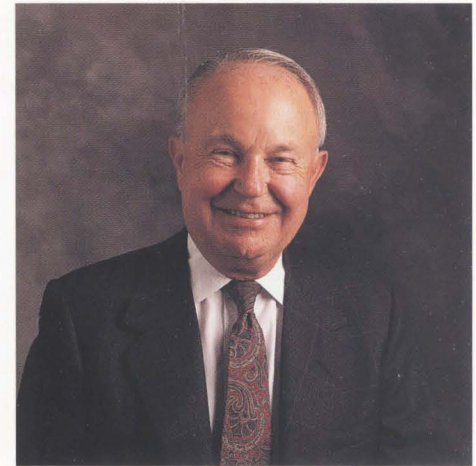
William K. Street President and Chief Executive Officer, The Ostrom Company



David R. Hinson Chairman and Chief Executive Officer, Midway Airlines



Harry L. Mullikin Chairman Emeritus, Westin Hotels and Resorts



James H. Wiborg Chairman, Univar Corporation, VWR Corporation

Officers and Management

Tod R. Hamachek

President and Chief Executive Officer

Franklin E. Olsen, Jr.

Vice President Employee Relations and
Corporate Secretary

Jeffrey T. Cook

Vice President Finance

Robert G. Widmaier

Vice President and Chief Innovation Officer

Edward T. Larkin

Controller

H. Thomas Reed

Vice President, PENWEST
President and General Manager,
Penford Products Co.

John F. Blanco

Vice President, PENWEST
President and General Manager,
Edward Mendell Co.

John M. Darcy

Vice President, PENWEST
President and General Manager,
PENWEST FOODS Co.

Committees, Headquarters and General Information

Executive Committee

James H. Wiborg, Chairman
Tod R. Hamachek
C. Calvert Knudsen
Curtis P. Lindley
N. Stewart Rogers

Audit Committee

Richard E. Engebrecht, Chairman
David R. Hinson
William K. Street

Compensation and Benefits Committee

C. Calvert Knudsen, Chairman
Harry Mullikin
N. Stewart Rogers
James H. Wiborg

Nominating Committee

Harry Mullikin, Chairman
William K. Street
James H. Wiborg

PENWEST Corporate Headquarters

777-108th Avenue N.E., Suite 2390
Bellevue, WA 98004
(206) 462-6000

Penford Products Co.

Headquarters
1001 First Street Southwest
Cedar Rapids, IA 52404

1088 West Sunnyside Road
Idaho Falls, ID 83402

Edward Mendell Co.

Headquarters, 2981 Route 22
Patterson, NY 12563

Lonsdale House, 7-11 High Street, Reigate,
Surrey TH2 9AA, U.K.

Maitotie 4, 15560 Nastola, Finland

PENWEST FOODS Co.

Headquarters
1001 First Street Southwest
Cedar Rapids, IA 52404

216 First Street, Richland, WA 99352

Pacific Cogeneration, Inc.

777-108th Avenue N.E., Suite 2390
Bellevue, WA 98004

Annual Meeting

10:30 a.m., Tuesday, February 11, 1992,
12th Floor Auditorium, Security Pacific
Tower, Fifth Avenue and University Street,
Seattle, WA

Form 10-K

The company files an annual report with the
Securities and Exchange Commission on
Form 10-K, pursuant to the Securities and
Exchange Act of 1934. Shareholders may
obtain a copy of this report without charge
by written request to our headquarters
address.

Legal Counsel

Preston Thorgrimson Shidler Gates & Ellis
5400 Columbia Center, 701 Fifth Avenue
Seattle, WA 98104

Auditors

Ernst & Young
999 Third Avenue, Suite 3500
Seattle, WA 98104

Investor Relations Counsel

Corporate Communications, Inc.
2125 Fifth Avenue, Seattle, WA 98121
(206) 728-1778

Kekst and Co., Incorporated

437 Madison Avenue
New York, New York 10022
(212) 593-2655

Transfer Agent and Registrar

First Interstate Bank of Washington, N.A.
c/o First Interstate Bank
26610 West Agoura Road
Calabasas, CA 91302

Shareholder Information

First Interstate Bank
Shareholder Services
(800) 522-6645

Stock Price Data

Traded National Over-The-Counter
NASDAQ Symbol: PENW

	Market Price	
	High	Low
1990/91		
Quarter Ended Nov. 30	28.00	20.00
Quarter Ended Feb. 28	32.50	20.50
Quarter Ended May 31	35.50	29.50
Quarter Ended Aug. 31	32.75	24.00

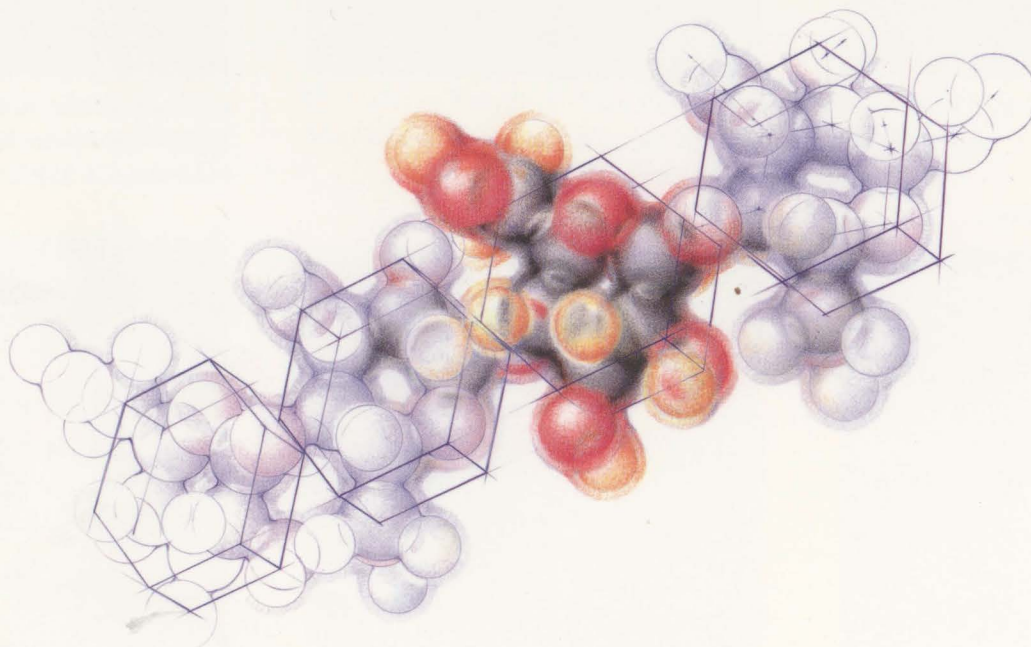
1989/90

Quarter Ended Nov. 30	17.00	15.83
Quarter Ended Feb. 28	22.50	16.67
Quarter Ended May 31	30.25	22.00
Quarter Ended Aug. 31	35.13	22.50

1988/89

Quarter Ended Nov. 30	13.83	11.67
Quarter Ended Feb. 28	14.75	11.83
Quarter Ended May 31	17.00	13.92
Quarter Ended Aug. 31	16.42	15.50

The number of common shareholders of
record as of November 15, 1991, was 1,790.
See Note C to Consolidated Financial
Statements for information regarding restric-
tions on dividends.



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Bellevue, WA 98004-5193