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1993 ANNUAL REPORT



PENWEST

THE COMPANY

PENWEST

DEVELOPS, MANUFACTURES AND MARKETS SPECIALTY CARBOHYDRATE-BASED CHEMICALS FOR THE PAPER AND TEXTILE INDUSTRIES. THE COMPANY ALSO PRODUCES AND MARKETS SPECIALTY POTATO STARCH AND DEXTROSE-BASED FOOD INGREDIENTS, AGRICULTURAL NUTRITION SUPPLEMENTS AND PHARMACEUTICAL EXCIPIENTS (THE NON-ACTIVE INGREDIENTS IN TABLETS AND CAPSULES). → PENWEST'S CORE COMPETENCE IS CARBOHYDRATE CHEMISTRY. THIS BASIC CHEMISTRY IS APPLIED TO FOUR CARBOHYDRATE GROUPS THROUGH SIX DISTINCT TECHNOLOGIES. → THE COMPANY'S OPERATING UNITS INCLUDE: → PENFORD PRODUCTS CO. BASED IN CEDAR RAPIDS, IOWA, SERVING THE PAPER AND TEXTILE INDUSTRIES. → MENDELL, BASED IN PATTERSON, NEW YORK, SERVING THE PHARMACEUTICAL, VITAMIN AND NUTRITIONAL INDUSTRIES. → AND PENWEST FOODS CO. OF ENGLEWOOD, COLORADO, SERVING FOOD PRODUCERS THROUGHOUT NORTH AMERICA.

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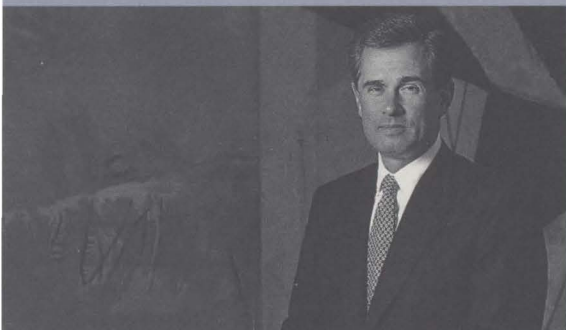
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THOUSANDS OF DOLLARS EXCEPT PER SHARE DATA
YEAR ENDED AUGUST 31

	1993	1992 ¹	1991 ²	1990	1989
OPERATING DATA:					
Net sales	\$135,517	\$125,952	\$110,910	\$91,998	\$79,826
Income from operations	6,315	7,505	8,813	7,950	5,562
Earnings per share from operations	\$ 0.88	\$ 1.01	\$ 1.17	\$ 1.06	\$ 0.68
Dividends declared per share	\$ 0.20	\$ 0.15			
Average shares outstanding	7,175,855	7,461,439	7,558,910	7,514,637	8,163,857
Effective tax rate	17.3%	25.9%	29.6%	24.9%	29.6%
BALANCE SHEET DATA:					
Cash and short-term investments	\$ 11,935	\$ 18,408	\$ 28,815	\$30,993	\$38,146
Long-term debt	46,998	30,877	31,550	23,050	23,650
Shareholders' equity	62,986	61,582	60,120	51,103	49,637
Capital expenditures	31,266	19,450	14,006	13,537	7,591
Current assets	41,543	44,117	51,110	47,671	52,957
Current liabilities	20,082	15,282	16,698	15,419	12,355
Working capital	21,461	28,835	34,412	32,252	40,602
Total assets	156,204	130,641	120,488	101,784	95,340
Total liabilities	93,218	69,059	60,368	50,681	45,703

1 DURING FISCAL YEAR 1992, THE COMPANY ADOPTED FASB STATEMENT NO. 106 "EMPLOYER'S ACCOUNTING FOR POST-RETIREMENT BENEFITS OTHER THAN PENSIONS." THIS CHANGE INCREASED THE ANNUAL PRE-TAX POST-RETIREMENT BENEFIT EXPENSE BY \$800,000 AND DECREASED EQUITY BY \$5,900,000 (NET OF TAX). DURING FISCAL YEAR 1992, THE COMPANY ADOPTED FASB STATEMENT NO. 109 "ACCOUNTING FOR INCOME TAXES." THIS CHANGE RESULTED IN A REDUCTION OF DEFERRED TAXES AND AN INCREASE IN EQUITY OF \$1,560,000.

2 DURING FISCAL YEAR 1991, THE COMPANY PURCHASED THE NET ASSETS OF EDWARD MENDELL CO., INC. FOR \$8,090,000. RESULTING OPERATIONS FOR SIX MONTHS HAVE BEEN INCLUDED IN THE CONSOLIDATED FINANCIAL DATA.



A CHALLENGING YEAR FOR OPERATIONS

Fiscal 1993 was a difficult year operationally, but strategically a year full of accomplishments. Our earnings took a beating during the second half from five months of the worst Midwest flooding in this century. The paper industry, our major customer, suffered its fourth year of severe recession.

We earned less than in 1992 — \$6.3 million, or 88 cents per share, compared with \$7.5 million and \$1.01 per share (before cumulative accounting changes). Most of the difference was from the direct and indirect effects of the flood. It would have been worse if our employees had not shown extraordinary ingenuity and energy in fighting the flood.

STRATEGIC DEVELOPMENTS

Despite the difficult operating year, PENWEST made major strides towards realizing its vision of becoming the preeminent global marketer of carbohydrate-based ingredients through innovative technologies in attractive markets. During several years of weak economic conditions for our major customer base, the paper industry, we have continued to invest for long-term results. Highlights of those results during 1993 are:

- A major, multi-year, \$84 million capital expansion program — which included two of our three divisions — was concluded.
- Our research and development capability took a big step toward realizing the strategic vision we first drafted three years ago.
- A key acquisition — Mendell — achieved record sales and earnings.

- An important new technology — starch copolymers — began to penetrate the marketplace and show profitability.
- Our core business had record sales and we increased our market share in that business.
- Penwest Foods, a two-year-old ingredients division, showed strong volume increases and an ambitious plan for future growth.
- Total revenues were the highest ever, \$135.5 million, up from \$126 million.

IMPACT OF MIDWEST WEATHER

The greatest impact on earnings was something we could not anticipate or plan for: a disastrous series of storms and floods that continued for five months, from April through August, in PENWEST's third and fourth quarters.

It was a continuing struggle to maintain production and bring a major new plant on line while reinforcing dikes that were repeatedly threatened by the flooding Cedar River.

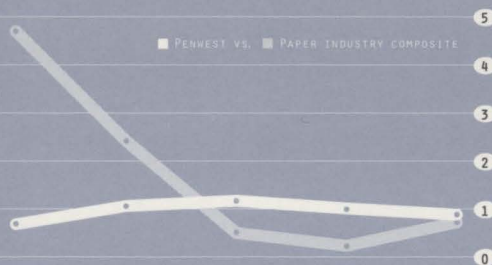
In addition to the operational difficulties, the Midwest transportation system simply ground to a halt. Barges on the Mississippi stopped operating. Railroad cars containing our products left the plant but couldn't get back. With some bridges and roads out, truck traffic was paralyzed by gridlock. These delays did try our customers' patience. We thank them for their understanding and forbearance.

The floods also took a toll on the corn harvest. The corn crop is off by more than 30 percent and the quality of the crop is below that of recent years. As we closed the first quarter of fiscal 1994, corn prices were up sharply, increasing the cost of our most basic raw material.

CONTINUING PAPER INDUSTRY RECESSION

We also saw the continuation of the worst paper industry recession in 40 years. Industry composite earnings per share for the largest paper companies fell from \$4.61 in 1988 to \$0.23 in 1992. Analyst estimates for the full 1993 calendar year are a composite of \$0.73 per share. In most cases, the improved earnings in 1993 can be attributed to lumber rather than paper. Against that backdrop, our earnings performance,

EARNINGS PER SHARE IN DOLLARS / 1989-1993



which you can see in the graph, is relatively strong. Although we have not suffered from erratic swings associated with paper industry cycles, we are not completely immune from the effects of the recession on our major customers.

The recession aside, the major difference between what we earned this year and what we earned last year can be attributed to the effects of the flood, higher depreciation charges associated with new production facilities, greater net interest expense and a higher investment in research and development.

The underlying demand for our core products remained strong throughout the year. In the first fiscal quarter of 1994 volume grew at a greater rate than our historical five-year average.

Later in this report we will discuss each of our operating divisions in greater detail, but I'd like to briefly touch on the 1993 fiscal year highlights.

OPERATING DIVISION HIGHLIGHTS

PENWEST's core business is Penford Products Co., a leading provider of specialty chemical starch products to papermakers and textile manufacturers.

Penford had a good year until April when the rains started, and actually finished the year with record volume. A 33 percent increase in capacity came on line in May, helping to solidify market share gains made throughout the year. Penford Gums®, the core product line, grew at a very strong rate while overall paper industry volume gained only modestly.

Late in fiscal 1993 and early in the new fiscal year, we began to see growing acceptance of our starch copolymer family, which had its genesis almost four years ago as a single product line which shareholders will remember as PENGLOSS®. We have 14 starch

copolymer products in development, in trial or in commercial production. The most encouraging of these has been Pensize™, a product that replaces a synthetic polymer on the size press of a paper machine. It is used to apply pigment to enhance surface characteristics, runnability and cleanliness. We delivered our first commercial shipments of Pensize in the first half of 1993 and have been pleased with the response. By July the starch copolymer family of products was at a break-even level.

We're especially pleased with the performance of Mendell, the pharmaceutical excipients business which we acquired in fiscal 1991. Mendell posted records in volume, dollar sales and earnings, opened a major new production facility in August and completed the first year of successfully operating its own sales and distribution system in Germany.

The new plant produces microcrystalline cellulose (MCC), an excipient with high worldwide demand. The facility complements our MCC plant in Finland which has been operating at full capacity for the past three years. The Cedar Rapids plant is the only one in North America producing MCC exclusively for the pharmaceutical industry. At capacity, it has the potential to double current sales at Mendell.

We are very enthusiastic about the progress of TIMERx™, a controlled release technology originally developed by Mendell. During the year, two pharmaceutical companies completed successful TIMERx-based drug biostudies. Now they are proceeding with clinical trials. FDA approvals could be as early as 1996. To most effectively develop and commercialize this technology, we have created an independent project team reporting to me with the assistance of Dr. Robert Widmaier, PENWEST vice president and chief innovation officer.

Penwest Foods, our food ingredients business, showed strong across-the-board volume gains in its basic lines: specialty food potato starches, agricultural nutrition products and corn-based dextrose. We have been especially encouraged by prospects in the food potato starch segment, where we have little domestic-based competition. In the first quarter of fiscal 1994 the Board of Directors approved a modest capital investment to bring more capacity on line at our food-grade plant in Richland, Washington during the fiscal year.

INTEGRATED RESEARCH AND DEVELOPMENT

Strategically, we are especially pleased with the full integration of PENWEST's research and development capability into the management process. R & D at PENWEST is a customer service rather than a laboratory science, and in 1993 it became fully integrated into PENWEST's strategic planning process. By initiation of information sharing across division lines, the R & D capabilities of each business are more unified. Through focused technical groups, R & D at PENWEST is looking at, among other things, the fundamental characteristics of our core products in order to achieve a competitive advantage in the marketplace.

Strategically, from an R & D perspective, we are focusing on: incremental product and process improvements to hydroxyethylated starches, the core product; the starch copolymer family; the MCC business, which has great promise in its present form and with variations; the controlled release technology, TIMERx, which could be a major contributor to PENWEST earnings long-term; specialty food ingredient potato starches; and plant nutrition products like Fast Break® and variations of Fast Break.

GREAT YEAR FOR OUR PEOPLE

Finally, we had an outstanding "people" year. Our people developed new skills through a variety of training programs ranging from R & D management to environment and safety. We brought talented newcomers to our team, adding marketing depth to all three divisions and R & D strength to Mendell and Penwest Foods. You will see mini-profiles of some of our people, and their accomplishments, throughout this report.

While we're on the subject of PENWEST people, I think it's important for shareholders to know what a brilliant job our employees in Cedar Rapids did facing up to and turning back the rampages of nature. At 7 p.m. one Saturday night, with the Cedar River seven feet above flood stage, a portion of the wall holding back the river gave way and water began rushing onto the grounds, threatening the plant. For several frantic hours, Penford employees, aided by Linn County, the city of Cedar Rapids, an

independent contractor and a pair of bulldozers, fought to shore up the wall and forestall what could have been a disaster.

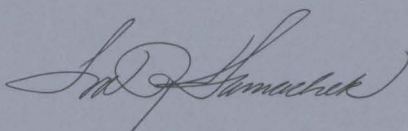
In the end, they were successful, not only that evening but for the next 20 weeks, as time and again they were challenged by a rising river, backed-up sewers, direct lightning strikes, hurricane-force winds, power outages and seemingly endless sheets of rain. Their heart and their courage were wonderful. We salute and thank each of them for their personal sacrifice and heroic effort.

OUTLOOK

We face the new year with cautious optimism. The paper industry seems to be showing signs of recovery in some segments. Customers' demand for our products is strong across-the-board. We believe, viewed from two or three years out, 1993 will prove to be a pivotal year in which major pieces of our Company's strategic platform for long-term growth came together.

In addition to the underlying strength of our traditional business, PENWEST offers some intriguing long-term leverage from recent capital investments and the potential from R & D: the MCC plant should double the size of Mendell in three to five years; at present demand levels (and they could change), we could be near the maximum run rate on our brand-new 33 percent expansion of Penford Gum capacity by the end of this fiscal year; if our starch copolymer family continues at break even, it will eliminate an annual depreciation drag of \$1 million, or 10 cents per share, on the bottom line.

We look forward to the new year with a great deal of eagerness and anticipation.



TOD R. HAMACHEK

President and

Chief Executive Officer

December 20, 1993

SPECIALTY STARCHES FOR PAPERMAKERS

COATINGS

SIZINGS

FORMING

APPLIED CARBOHYDRATE CHEMISTRY

MCC

DEXTROSE

PHARMACEUTICAL EXCIPIENTS

STARCHES

POTATO STARCHES

DEXTROSE

FOOD INGREDIENTS

PLANT SUPPLEMENTS

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INNOVATIVE TECHNOLOGY FROM
PENFORD PRODUCTS IS CHANGING THE
PAPERMAKING PROCESS. THIS SIZE
PRESS IS ONE OF A GROWING NUMBER
TO USE A NEW, STATE-OF-THE-ART
STARCH COPOLYMER TO REPLACE SYN-
THETIC POLYMERS. THE NEW PRODUCT
IS PENSIZ, WHICH RUNS CLEANER
AND OFFERS PAPERMAKERS NEW OP-
TIONS IN PAPER GRADES.



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PRINTING PAPER FLIES THROUGH THIS HEAT-SET WEB PRESS AT 17 FEET PER SECOND. SPECIALTY CHEMICAL STARCHES FROM PENFORD PRODUCTS HELP ELIMINATE INK BLISTER BY KEEPING THE SHEET POROUS AND "BREATHING," RAISING LINE SPEEDS AND IMPROVING QUALITY. HIGH INK GLOSS, GREATER SURFACE STRENGTH AND BETTER INK "MILEAGE" ARE SOME OF THE OTHER BENEFITS PRINTERS REALIZE FROM PENFORD STARCHES.



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M I C R O C R Y S T A L L I N E C E L L U L O S E

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QUALITY EXCIPIENTS FROM MENDELL
HELP MANUFACTURERS PRODUCE
PHARMACEUTICALS WITH EXCELLENT
BATCH-TO-BATCH CONSISTENCY. THIS
HIGH-SPEED TABLET PRESS PRO-
DUCE 700,000 UNITS PER HOUR USING
EMCOCEL[®], A MICROCRYSTALLINE
CELLULOSE. MENDELL OFFERS THE
INDUSTRY'S BROADEST PRODUCT AR-
RAY, INCLUDING BINDERS, FILLERS,
LUBRICANTS AND DISINTEGRANTS.



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F O O D G R A D E P O T A T O S T A R C H E S

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IN RESPONSE TO SPECIFIC CUSTOMER NEEDS, PENWEST FOODS DEVELOPS AND MARKETS SPECIALTY POTATO STARCH PRODUCTS THAT IMPROVE FLAVOR, TEXTURE AND SHELF-LIFE OF FOODS, AND ENHANCE THEIR "MACHINABILITY" IN PROCESS. THIS PLANT USES A SPECIAL TORTILLA STARCH THAT HELPS THE FOOD RETAIN MOISTURE AND REDUCES STICKINESS IN PRODUCTION.



PENFORD PRODUCTS CO.

STRONG GROWTH FOR PENFORD

Demand for Penford's products continues to grow at more than three times the rate of paper industry growth in general. Penford manufactured and sold 10 percent more specialty starch volume during the year than in the prior period, and volume gains continued into the first quarter.

In the past five years, the three paper sectors Penford serves grew by 15.3 percent, while Penford's core product, Penford Gums, increased volume by 56.6 percent.

For the decade ending in August, we invested \$75 million in production capacity to keep pace with demand. Major expansions came on line in 1988, 1991 and late 1993. The most recent expansion added 33 percent to overall capacity.

UNDERLYING TRENDS

There are two underlying paper industry trends fueling this contin-

uing high demand for Penford's specialty chemical starches.

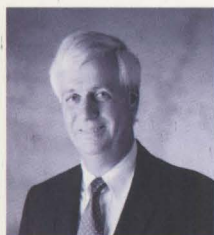
The first is the conversion of paper mills from acid- to alkaline-based papers. The alkaline process improves the quality of the paper and reduces costs. It also sharply increases the demand for starches. By some estimates, papermakers who use one pound of starch for acid-based papers at the paper-forming end are using as much as three pounds for the alkaline process. Overall, the alkaline process is estimated to use 15 to 25 percent more starch than acid-based papers, and most of these are of the highly modified type that Penford manufactures.

Penford is a supplier to manufacturers of three basic paper types: coated freesheet used in annual reports and high-quality magazines; uncoated freesheet papers like those in high-end books and office paper; and coated groundwood on which most mail-order catalogs are

printed. Almost all U.S.-produced coated freesheet papers are alkaline-based. We estimate that about two-thirds of uncoated freesheet papers have converted. Less than 5 percent of the manufacturers of coated groundwood have converted. So, even though paper growth by total volume may be modest, demand for starch is high and growing vigorously.

The second trend benefiting Penford is the conversion of paper mills from commodity "pearl" starches to our hydroxyethylated starches. This conversion potential remains very large. By our estimate, about 40 percent of the total starch market, or 1.2 billion pounds, is still commodity-starch-based. As papermakers are challenged to be more competitive in the quality and consistency of their finished products, we believe most of the commodity segment can be converted to specialty starch products.

We have used the terms "commodity" and "modified" starches to distinguish between starches that are sold exclusively on price, on the one hand, compared with starches that have been modified to achieve certain quantifiable characteristics on paper, on the other hand. One customer who recently converted to Penford Gums — bringing 20 million pounds of incremental business to Penford — wrote us a letter citing, from his own experience, the improvements he had



Senior Technical Sales Representative

THOMAS J. HURD *has earned PENWEST's*

Innovation Award for the past three years.

In 1993, he was honored for his work in

helping to develop Pensize. Previous awards recognized his ideas for recycling super sack bags, reducing costs, and increasing a customer's production volume by modifying their product.

noted after the conversion:

- Improved sheet strength
- Improved printing quality
- Reduced starch usage
- Reduction of other size press chemicals
- Improved starch cooking (more uniform viscosity)
- Cleaner size press operations
- Uniform moisture profile across the sheet
- Easier sheet drying
- Less fiber, more filler (less cost)
- No linting complaints from printer-customers

Growth in recycling also will stimulate starch demand, although the full impact of recycling on starch sales is some years down the road. Paper recycling is mandated in much of Europe, so as a percent of the total papers produced, recycled papers have a relatively high share of the total market in Europe. In North America, where fiber is still plentiful and relatively inexpensive, recycling will come more slowly, especially in printing and writing grades. Still, when it does come, it will present additional opportunities to Penford, and especially to our new starch copolymer lines.

PRINCIPAL PROCESS AREAS

Penford products are found mainly in three areas of the papermaking process.



RICHARD A. PELLEGRINI, *senior technical sales representative*, received PENWEST's 1993 Innovation Award for his efforts on the Pensize new product team. The rapid development and application of the new product led to new market opportunities for the Company.

Cationic corn and potato starches from Penford are used in the paper forming process. Here the pulp is little more than slurry, containing mostly water. Starches are added at this point to give the sheet internal strength.

After the paper forming stage, the sheet passes over a series of dryers and then to the size press. It is on the size press that the paper receives a surface treatment of starch — and it is in size press operations that Penford has its greatest market strength and most widely recognized expertise. Penford Gums (hydroxyethylated starches) and, in some mills, the new starch copolymer Pensize, are added to the sheet at this point. Sizing determines how much liquid a finished sheet will accept, making it suitable for specific printing and end-use applications. Pensize, a starch copolymer, replaces synthetic polymers on the size press to enhance print quality and improve the performance of the paper machine.

The third point in the papermaking process using Penford products is the coater. Penford has a significant share

of the coating market, mainly with its Penford Gums. The starch copolymer PENGLOSS was developed for the lightweight coated market. Coated papers are generally found in the finished products consumers are most familiar with: magazines, catalogs, brochures and advertising inserts. Penford's coating products help printers by helping create good image quality and on-press productivity.

OTHER SOURCES OF GROWTH

While the paper industry overall has grown only modestly in recent years (2.3 percent in 1992, 3.8 percent in 1993), Penford's growth has consistently been in double digits. Part of that growth has been fueled by the conversions mentioned earlier — from commodity starches to specialty starches, and from acid- to alkaline-based papers. Another factor in Penford's steadily growing volume is that two of the three major segments we serve, and 87 percent of our total volume, has been to the coated and uncoated freesheet sectors of the market. Those sectors, rela-

tively speaking, have been less negatively affected by the paper industry recession than other sectors such as coated groundwood or newsprint.

For the 12-month period ending with our fiscal year, the coated freesheet operating rate was 86 percent of total industry capacity, basically unchanged from the previous 12-months. The operating rate in uncoated freesheet, our key market, was 93 percent of capacity vs. 89 percent. In contrast, coated groundwood, which had been operating at 96 percent of capacity year-to-year, in recent months slipped as low as 84 percent.

Industry capacity utilization is important to Penford for two reasons. Every percentage point of gain means additional business for us. Every point of loss increases pressure on our customers' margins. The paper industry in general — in Europe and Japan as well as in North America — has too much production capacity for current demand levels. That

is a situation which is not likely to change soon.

Penford management believes we can continue to grow at a rate greater than the paper industry. Whether or not we can sustain double-digit growth remains to be seen, but most of the basic indicators are positive.

Within the next two years, for example, we believe two of North America's major papermakers will convert to the alkaline process, and that we will capture our share of the additional starch business. Printing standards will continue to rise and paper companies will continue to increase the quality of paper sizing and binders.

We believe we can continue to expand market share in specialized niches. For example, we have gained three share points in the paper forming segment of the industry in the past three years. We have almost a third of the cationic surface size market, a niche that will grow substantially in the next five years.

Penford's mission is to grow

globally. In recent months we have moved aggressively to expand our markets in Japan, Korea, Central and South America and Europe. About 10 percent of Penford's current volume is sold off shore, and the rate of growth is in excess of our domestic business.

Penford also has a very attractive R & D portfolio that includes a number of new products as well as improvements to our manufacturing processes. We will become more efficient as we also become more aggressive.

QUALITY PRODUCTS,
QUALITY SERVICE

Penford focuses a great deal of attention on customer service, on being a resource rather than a supplier to our customers. The division conducts monthly customer satisfaction surveys and is fully committed to exceeding customer expectations.

In May, Penford accepted Eastman Kodak's prestigious Silver Award as a "quality first" supplier.

In August, Penford received the Ecusta Supplier Excellence Award for 1993, receiving a rating of 97.5 of a possible 100 points. It is the highest rating of the three years Penford has received the award. Ecusta is a division of the P.H. Glatfelter Co.

Also in August, Penford was honored by Schoeller Technical Papers, Inc. as one of that



Penford Products honored EUGENE A. TUPPER
with the division's 1993 Business Award for sales of cationic potato starches. A senior sales representative, Tupper directed the sales

and technical efforts during paper mill alkaline conversions in 1991. His bilingual skills have helped expand Penford's business in Mexico and South America.

company's top five suppliers. Penford earned a rating of 97.4 percent.

In July, Penford became the first U.S. industrial starch company to be certified under ISO 9002, an international quality standard. Because of its wide recognition, ISO certification improves Penford's business prospects in international markets. An increasing number of worldwide manufacturers are turning to suppliers who meet these standards.

Our people are going to be better trained technically than our competitors. Technical expertise and quality products, rather than price, will continue as the Penford promise to customers.

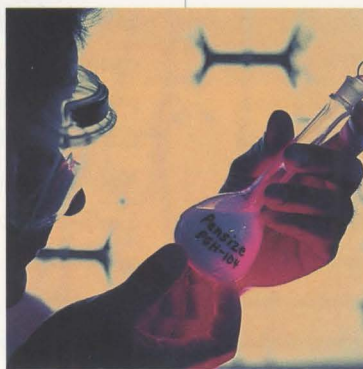
THE STARCH COPOLYMER FAMILY

Starch copolymers, a Penford innovation launched nearly four years ago as a single product line called PENGLOSS, advanced technically and as a commercially successful product line. Copolymers blend the characteristics of starch and various latices from a purely starch base. They are a technological breakthrough in our industry.

Today Penford has 14 starch copolymer products in varying stages of development, trial and commercial application: seven projects for paper coating binders; three as textile sizing agents; two as binders for coated board;

and two, called Pensize, as size press binders.

Pensize, in particular, has been well received in the commercial market. Used for size-press applications in paper mills, Pensize replaces synthetic polymers, currently a 20-million



pound market. It is a small but meaningful market for us, because synthetic polymers are difficult to handle on a size press. In our view, these difficulties have limited the size of this sector of the market, which we believe can be expanded.

Pensize improves the runnability of paper in the size press. The press runs cleaner than with synthetics and there is no need for shutting down and cleaning paper machines, as papermakers must do when some synthetics are part of the formulation. One mill uses Pensize because it enables them to recycle their paper mill waste, which can't be done with some synthetic binders. Another customer uses Pensize to develop a specialty paper grade that otherwise would have been impossible. In addition to commercial production sales, Penford has trials of Pensize underway at a number of paper mills in North America and Europe.

Also in commercial development is a copolymer product that

replaces soy protein in coatings used on beverage and folding cartons. Protein, for these applications, is a 20-million pound

market. Protein is difficult to handle and use. Our starch copolymer may replace protein, meeting quality standards at less cost.

Starch copolymer products for the textile industry are in the first phase of commercialization. We have developed some strong performance characteristics with economic advantages over competitive products. We're getting a better understanding of how the product performs in a variety of fabrics, fiber blends, weaving tests and in desizing.

PENGLOSS, which was the first of the starch copolymer family, is used in paper coating. In its earliest incarnation there was a perceived surface strength issue which we have now resolved at the R&D level.

In the final two months of the fiscal year, and in the first quarter of the new year, starch copolymer technology was at break-even. Penford is encouraged by repeat sales and a growing market share. When these products begin to sell in greater volumes, PENWEST expects to see some very attractive bottom-line contributions from this exciting new technology.

M E N D E L L

RECORD PERFORMANCE FOR MENDELL

Mendell, PENWEST's pharmaceutical excipients division, logged record sales, volume and profits, and opened a new plant that will play a pivotal role in the division's future growth.

Volume increased 12 percent for the year compared with a pharmaceutical/nutritional industry growth rate estimated at 4 to 5 percent. Mendell's growth in volume has consistently been three times the industry average, even with limitations on its microcrystalline cellulose (MCC) production capacity. With a new plant on line, Mendell expects an accelerated rate of growth.

Mendell is a world leader in developing innovative excipients, the non-active ingredients in tablet and capsule formulations, over-the-counter drugs and vitamins. Excipients have been the division's exclusive focus since 1946.

The Company offers the industry's broadest product

array, ranging from the world's first superdisintegrant, Explo-tab®, to the world's first directly compressible dicalcium phosphate, Emcompress®. In addition to its product leadership, Mendell believes it can achieve a major qualitative objective: to be rated by customers as the best provider of excipient products and services.

MAJOR NEW PLANT OPENS

The Company's prospects were substantially bolstered during the year with the successful opening of the new MCC plant in Cedar Rapids in August. The plant, which complements an existing plant in Finland, is the only one in North America providing MCC exclusively to the pharmaceutical industry. As we go to press, the plant has been shipping MCC products to

customers in steady but increasing quantities. The plant was brought on line by a team led by Plant Manager William J. Girresch (inset photo).

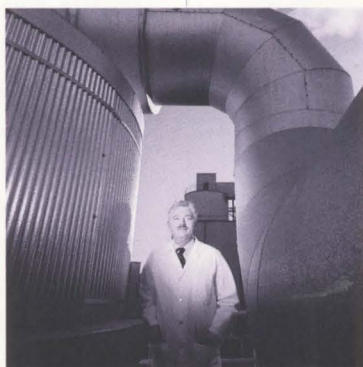
MCC — marketed by Mendell as Emcocel — is one of the industry's most widely accepted excipients. It provides the high

binding capability, tablet hardness, and disintegration and dissolution qualities of the world standard for modern formulations. With the

new production capacity, Mendell also has committed greater R & D resources to MCC. The Company's goal is to be the world leader in understanding this technology and in developing new MCC-based products to serve customer needs.

TIMERx DEVELOPMENTS

TIMERx, a new controlled release technology developed by Mendell, took an important step toward the marketplace. To most effectively develop and commercialize the technology, it is being managed as an independent project reporting to senior PENWEST management. Two customers completed successful TIMERx-based drug biostudies and are now proceeding with



DR. ANAND BAICHWAL is vice president of technology for TIMERx. Baichwal, who holds a Ph.D. in industrial pharmacy, is a co-inventor and developer of the TIMERx

controlled release system. His efforts significantly increased the marketability of this technology.

clinical trials. FDA approvals could come as early as 1996 for current customers. With new customers it could be the end of the decade before products using TIMERx as the delivery system reach the market.

In addition to its benefits to patients and pharmaceutical manufacturers, TIMERx offers the possibility of renewed patent protection for drugs now going off patent. Of the 30 largest-selling drugs in the U.S., 14 will be off patent by the end of 1996. That will leave about \$10 billion in annual sales vulnerable to generic competition.

We estimate the current market for controlled release systems at \$525 million and project growth at about 25 percent per year. That would put the 1996 market at \$1 billion and about \$1.3 billion in the following year.

Controlled release technology offers a number of advantages to pharmaceutical manufacturers, health care professionals and consumers who take orally-administered medicines. Controlled release tablets, which typically are taken once or twice a day instead of three or four times a day, will result in better patient compliance, a more precise administration of the active type of ingredients in a drug to the bloodstream and fewer side effects. This technology represents an advance in drug delivery systems, promising some of



LISA SLONE'S *excellent work as manager of the customer service department for Mendell helped earn three customer service awards, including the prized SmithKline Beecham "Quality Award" in that customer's vendor certification program.*

the same efficiencies which have accompanied automation in other industries. It adds value to pharmaceutical customers because dosage forms can be made on existing manufacturing equipment.

TIMERx and the production process by which it is made are both patented. The technology itself is elegantly simple, based on a hydrophilic matrix system which allows for a slowly eroding core.

GOOD GROWTH IN CORE BUSINESS

While MCC and TIMERx offer the most attractive long-term returns, Mendell also has six other excipient lines that have been widely accepted by major pharmaceutical, over-the-counter, generic and nutritional companies in North America and Europe. In the aggregate, these lines grow at about 5 percent a year, providing a strong base from which Mendell can leverage exceptional long-term growth.

Emcocel and three other high-volume lines are industry

standards. The three include Explotab, a sodium starch glycolate, one of the most widely used disintegrants in the world; Emcompress, a dibasic calcium phosphate compatible with a broad range of active drug compounds, including vitamins, minerals and other nutritional supplements; and Emdex®, a dextrate ideal for effervescent and chewable formulations, especially for chewable antacids and pediatric applications.

Other lines include Pruv®, a sodium stearyl fumarate lubricant; Lubritab®, a natural lubricant based on high purity cottonseed oil, also used as an auxiliary binder and as a matrix for sustained release; and Compactrol®, a calcium sulfate used as a high-quality filler with excellent flow characteristics.

These products provide bulk for concentrated medicines, aid in manufacturing, help maintain the integrity of product shape and provide disintegration properties for the release of drugs within the body. They are suitable for any production process used to make solid dosage forms.

In addition to high-quality products, Mendell offers technical service capabilities from laboratories in Europe and North America. Scientists in these labs help customers develop formulations for specific excipient/drug applications. These scientists also are available for customer in-plant consultations and troubleshooting.

CORE COMPETENCE

Mendell's core competence lies in cellulose, starches and sugars. Mendell's own technical capabilities are supplemented by those of PENWEST which is among America's leaders in innovative applications of carbohydrate chemistry.

Research and development at Mendell, as at PENWEST, is a customer service geared to solving problems and developing new, value-added products for customers. Mendell currently has five R & D projects underway with internal scientists as well as with outside resources.

Mendell is committed to offering products of exceptional consistency and quality. The Company imposes its own, rigid standards of quality and performance in addition to meeting pharmacopoeial standards of the U.S., Europe, Britain and Japan. Comprehensive quality control measures at its own production facilities, as well as through field service laboratories in North America and Europe, ensure that every batch meets objectively measured levels of excellence.

In addition to assuring quality and consistency, Mendell scientists work with customers to make sure its products are suitable to the physical properties of a specific formulation — in other words, that the product achieves the desired effect every time. Tests determine, among other things, that disintegration properties are consistent batch to batch, that particle size is appropriate for flowability, that compression profiles are within specifications for manufacture, or that a material has a precise

and predictable degree of swelling. The Mendell name and reputation provide customers with a high degree of confidence that pharmaceuticals will perform predictably in the body.

Mendell's commitment to quality was recognized by SmithKline Beecham Pharmaceutical which conferred its prestigious Quality Award upon the division for the third straight year. Mendell is the only supplier to have earned the award for three consecutive years.

HEALTH CARE REFORM

Worldwide, concern about health care and health care costs reached a peak in 1993, and some of the concern focused on the cost and availability of prescription medicines. While these concerns are likely to continue, Mendell expects the effects on the Company, if any, to be positive. Certainly the pharmaceutical industry is facing change. But Mendell's basic appeals — especially with respect to controlled release technology — are consistent with the greater efficiencies and cost containment measures that almost certainly will emerge as part of the solution.



MARIE GARNICH, *Mendell's product manager — worldwide, is an experienced pharmacist who also holds an M.B.A. Her leadership has increased the sales force's credibility and set*

industry-wide standards for sales people. As a product manager, she has raised Mendell's visibility and expanded participation in the division's strategic plan.

PENWEST
FOODS CO.

Penwest Foods Co. (PFC) is the Company's growing food ingredients business. PFC is a start-up company and the smallest of PENWEST's three operating units. PFC serves three niche markets with value-added specialty products including potato starches, growth supplements for mushrooms and dextrose products.

The division had an eventful year: it built a stronger infrastructure, both in people and facilities, doubled volume in the potato starch business, increased dextrose volume by 10 percent, joined the leaders in the mushroom nutrients industry, developed new, more competitive product lines, and increased production capacity.

MAIN FOCUS

Food-grade modified potato starches are the division's principal focus. Penwest Foods is the leading U.S. producer of these

starches, although the Company faces formidable competition from European producers.

Historically, U.S. manufacturers of food-grade potato



Sales Representative JULIE M. INMAN serves food-industry companies throughout the Western United States. She is a part of the Penwest Foods team creating innovative solutions for customers' product and manufacturing needs. Her close working relationships with customers help the division identify areas for new products and new product applications.

starches have abandoned the domestic market in favor of lower cost and more readily available corn starches.

Recently, however, the potato starch market has grown at a 35 percent compounded growth rate as food companies rediscover that potato starch blandness and clarity are preferred in many applications.

Penwest Foods' proprietary products, for example, help produce smoother gravies, softer tortillas, crisper french fries,

and a significant share of the total market.

STRONG R & D

The Company's growth strategy is tied to an aggressive investment in research and development. Currently there are 14 R & D projects underway, most keyed to potato starches. Wherever possible, PFC seeks to be a partner to customers rather than just a supplier. The results of one such partnership could have an important impact on the division's overall performance in the new fiscal year.

GAINS FOR
FAST BREAK

Penwest Foods' agricultural nutrients business enjoyed an excellent year, with volume up 20 percent in a market that grew only modestly overall. PFC competes in this market with Fast Break, a high-performance corn-based



moister cookies and crunchier breakfast cereals.

PFC believes it can be a leader in potato starch technology and that it can secure and de-



DR. JOHN FANNON, whose Ph.D. is in food chemistry, is a Penwest Foods research chemist focusing on problem-solving for customers and developing

new applications for the food industry. When a sales representative indicates a customer concern, Fannon's experience in starch-granule research often enables him to find a solution with a new product or by modifying an existing product.

protein product with a very attractive payback to growers. Fast Break — a timed-release protein that accelerates the growth cycle of commercially grown mushrooms — is one of the three leading brands in a competitive North American marketplace. It has been successful because it is a recognized brand with a reputation for innovation. It is produced through a consistent and predictable manufacturing process and its corn-gluten-meal based formula provides advantages in sourcing and performance.

Fast Break broadened its customer base, solidified its technical staff and launched an aggressive development program for long-term growth. The continuing success of this product leads PFC to believe that it might be expanded into a broader agricultural products capability.

Fast Break currently is sold domestically. In the new fiscal year, the brand will be rolled out into international markets. PFC believes this product line,

along with others in development, holds very attractive volume and earnings growth possibilities in the next five years with only minimal capital investments.

CORN DEXTROSE

The corn dextrose business was challenging in fiscal 1993. Penwest Foods participates in this highly competitive niche with CarriDex®, a bulking and fast-flow agent, and Cantab®, an established compactible dextrose product used in confections.

These specialty corn sugars are found in a variety of consumer products including diet meals, low-calorie sweeteners, cured meat, soft candies and powdered drink mixes. PFC has an important share of the specialty dextrose segment.

Volume was up for the year, underscoring strong customer demand, but market prices were down, straining gross margins. A priority for the new fiscal year is to increase the contribution

of the dextrose business to overall profitability.

NEW HOME FOR PFC

Penwest Foods outgrew its old facilities in Cedar Rapids and moved to suburban Denver. The new headquarters includes a state-of-the-art research lab along with an expanded sales and marketing capability. The division attracted a number of talented new people in marketing, finance and technology to supplement an excellent staff already aboard. The R & D staff includes five Ph.D. scientists. Their expertise includes starch, cereal, synthetic and organic chemistry, and molecular biology.

The division grew in more than volume and sales dollars in 1993. It broadened its business base, strengthened its sales force with new people and better training, and increased its ability as a technical resource to its customers. PFC has more depth and a greater capacity for innovation as it prepares for continuing growth in the years ahead.

COMPARISON OF FISCAL 1993
TO 1992 RESULTS OF OPERATIONS

Sales increased \$9.6 million, or 7.6%, during fiscal 1993 as a result of volume increases made possible by additional capacity and increased demand for specialty ethylated starches. Production of ethylated starches was at capacity through the end of the third quarter of fiscal 1993 until new capacity came on line early in the fourth quarter. Starch copolymers accounted for less than 2% of sales in fiscal 1993 and were selling at a break-even level during the last two months of fiscal 1993. Sales increased for Penwest Foods Co. (PFC), however PFC continued to record net losses in fiscal 1993, in part due to investment in the infrastructure for future growth. Mendell sales improved during the year due to higher sales volumes across all product lines.

Gross margins were 26.4% for fiscal 1993 compared to 26.8% in fiscal 1992. Gross margins were primarily impacted by the flooding in the Midwest, during the third and fourth quarters of fiscal 1993. The floods and related weather caused direct damage to the Company's facility in Cedar Rapids as well as extensive disruption of operations and transportation.

Operating expenses increased \$3,283,000 or 14.1% during fiscal 1993, primarily due to increased research and development expenditures, non-recurring costs of relocating PFC to Englewood, Colorado, and additional operating costs associated with establishing PFC as a separate operating entity.

Research and development expenses increased \$2.0 million, or 54% in fiscal 1993 due to a planned effort to increase investment in research and development throughout the Company.

The effective tax rate was 17.3% in fiscal 1993 compared to 25.9% in fiscal 1992. The effective tax rate for 1993 was less than the statutory rate due to the completion of several capital projects over the last two years, which generated significant tax-based depreciation deductions putting the Company in an alternative minimum tax position. The tax rate is also affected by tax advantaged investment income and tax refunds received by the Company.

PENWEST's core business remains strong in early fiscal 1994. Demand for the Company's core business, specialty paper chemical products, continues to grow despite the weak economic conditions in the paper industry. For most of fiscal 1993 the Company was capacity-constrained, however, late in the third quarter a 33% plant expansion was completed at Penford. Successful early utilization of this capacity will partly depend on the ability of the paper industry to achieve and sustain an improvement in operating conditions during 1994. The starch copolymer family of products has continued to expand into various phases of the papermaking process and textile applications. Late in fiscal 1993 the starch copolymer products achieved a break-even level. PENWEST's pharmaceutical excipient business anticipates higher sales volume with the completion of the new microcrystalline cellulose plant in Cedar Rapids in August. Penwest Foods Co. anticipates an increase in the potato starch business and the agricultural nutrients business.

COMPARISON OF FISCAL 1992
TO 1991 RESULTS OF OPERATIONS

Sales increased \$15.0 million, or 13.5% during fiscal 1992 as compared to fiscal 1991 as a result of new capacity in midyear for specialty hydroxyethylated starches and a full year of sales of pharmaceutical excipient products from the March 1991 acquisition of Mendell. Production of ethylated starches was nearly at capacity at the end of fiscal 1992. Starch copolymers made a very small contribution to sales in fiscal 1992. The severe paper industry recession and initial marketing strategies slowed market entry for starch copolymers, primarily PENGLOSS. The foods product line contribution improved compared with 1991 supported by stronger volumes in food grade corn sugar products. Mendell sales improved as compared to the sales from March 1991 to August 1991 annualized, due to higher sales volumes across all product lines.

Gross margins were 26.8% for fiscal 1992 compared to 29% in fiscal 1991. Margins were down generally during the second half of the fiscal year due to the impact of the adoption of FAS 106 "Employer's

Accounting for Post-Retirement Benefits Other Than Pensions," an increase in net corn costs, lower sales prices due to market factors and a change in the product mix.

Operating expenses increased \$2.4 million, or 14.3%, during fiscal 1992, primarily due to a full year of Mendell operations.

Research and development expense and other increased \$1.2 million, or 50%, during fiscal 1992. In part, this was due to a full year of Mendell expenses and a concerted effort to increase investment in research and development throughout the Company, both in real dollars and in the management process.

The effective tax rate was 25.9% in fiscal 1992 compared to 29.6% during fiscal 1991. The effective tax rate for both years was less than the statutory rate because of tax-advantaged investment income and the reversal of deferred taxes, which were partially offset by the effect of state tax expense. The effective rate decreased in fiscal 1992 compared to fiscal 1991 due to a lower level of operating earnings taxed at the statutory rate, tax-advantaged investment income and a decrease in state tax expense.

LIQUIDITY AND CAPITAL RESOURCES

PENWEST maintains a highly liquid position with cash and short-term investments accounting for 7.6% of total assets at August 31, 1993. In addition, the Company has a three year, \$15 million revolving credit agreement. At fiscal year-end there were no outstanding borrowings under this agreement. During the first quarter of fiscal 1993, the Company received the funding of a \$20 million, 7.93% Senior Note through a private placement. The proceeds were primarily used to fund capital expenditures.

Operating cash flow was \$17.5 million, \$16.7 million and \$21.2 million in fiscal 1993, 1992 and 1991, respectively. The increase in fiscal 1993 was due to working capital decreases partially offset by lower earnings from operations.

The acquisition of Mendell was completed during March 1991. The acquisition was funded from cash and a temporary borrowing under uncommitted lines of credit.

Capital expenditures increased to \$31.2 million in fiscal 1993 from \$19.5 million in fiscal 1992 and \$14.0 million in fiscal 1991. Expenditures have been funded from operations, cash, the private placement of debt and, when necessary, temporary borrowings under the committed and uncommitted lines. The largest projects were the corn grind and starch finishing capacity expansions, both of which were completed in fiscal 1993, and the microcrystalline cellulose (MCC) plant for Mendell, which was completed during the last quarter of fiscal 1993. With the new MCC plant, PENWEST is positioned to manage the production of the Finland and Cedar Rapids plants to meet the growing demand for MCC in Europe and North America.

Capital expenditures in fiscal 1994 will decrease significantly as several large capital projects were completed in fiscal 1993. The Company expects to fund these capital expenditures from operations and cash resources.

The Company commenced paying a quarterly cash dividend of \$0.05 per share with the quarter ended February 28, 1992 and has paid such dividend each quarter thereafter. The Board of Directors reviews the dividend policy on a periodic basis.

In the third quarter of fiscal 1992, the Company adopted FASB Statement No. 106 "Employers' Accounting for Post-Retirement Benefits Other Than Pensions," changing to the accrual method of accounting for post-retirement health care and life insurance benefits. Prior to September 1, 1991, post-retirement benefits expense was recognized when claims were paid. The impact of adopting FAS 106 was to increase the other post-retirement benefits liability by \$9,010,000 and establish a corresponding deferred tax asset of \$3,063,000 (net of \$0.80 per share) at September 1, 1991.

In the third quarter of fiscal 1992, the Company adopted FASB Statement No. 109 "Accounting for Income Taxes," changing to the liability method of accounting for deferred income taxes effective September 1, 1991. The Company restated the fiscal 1992 first quarter income statement to record a benefit of \$1,560,000 (\$0.21 per share) as the cumulative effect of this accounting change at that date.

THOUSANDS OF DOLLARS / AUGUST 31	1993	1992
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 5,477	\$ 7,729
Short-term investments	6,458	10,679
Trade accounts receivable	16,005	13,064
Inventories	10,214	9,847
Prepaid expenses and other	3,389	2,798
Total current assets	41,543	44,117
PROPERTY, PLANT AND EQUIPMENT:		
Land	2,430	2,205
Plant and equipment	153,939	115,996
Construction in progress	2,642	9,544
Less accumulated depreciation	(62,761)	(54,273)
Net property, plant and equipment	96,250	73,472
Deferred income tax	5,832	3,301
Other assets	12,579	9,751
	<u>\$156,204</u>	<u>\$130,641</u>
LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$ 9,469	\$ 7,714
Current portion of long-term debt	3,880	672
Accrued liabilities	6,733	6,896
Total current liabilities	20,082	15,282
Long-term debt	46,998	30,877
Other post-retirement benefits	10,305	9,710
Deferred income taxes and other	15,833	13,190
SHAREHOLDERS' EQUITY:		
Common stock, par value \$1.00 per share, authorized 29,000,000 shares, issued 8,563,477 shares in 1993 and 8,540,474 in 1992	8,563	8,540
Additional paid-in capital	12,403	12,332
Retained earnings	74,375	68,994
Treasury stock, at cost, 1,702,552 shares in 1993 and 1,457,942 shares in 1992	(28,050)	(22,965)
Note receivable from PENWEST Savings and Stock Ownership Plan	(4,305)	(5,319)
Total shareholders' equity	<u>62,986</u>	<u>61,582</u>
	<u>\$156,204</u>	<u>\$130,641</u>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE STATEMENTS.

THOUSANDS OF DOLLARS EXCEPT PER SHARE DATA / YEAR ENDED AUGUST 31	1993	1992	1991
Sales	\$135,517	\$125,952	\$110,910
Cost of sales	99,785	92,147	78,722
Gross margin	35,732	33,805	32,188
Operating expenses and other	26,622	23,339	19,673
Income from operations	9,110	10,466	12,515
Investment income	1,016	1,915	2,530
Interest expense	(2,489)	(2,252)	(2,528)
Income before income taxes and cumulative accounting changes	7,637	10,129	12,517
Income taxes	1,322	2,624	3,704
Cumulative accounting changes, net of income taxes		(4,387)	
Net income	<u>\$ 6,315</u>	<u>\$ 3,118</u>	<u>\$ 8,813</u>
WEIGHTED AVERAGE COMMON SHARES AND EQUIVALENTS OUTSTANDING	<u>7,175,855</u>	<u>7,461,439</u>	<u>7,558,910</u>
EARNINGS PER SHARE:			
Operations	\$ 0.88	\$ 1.01	\$ 1.17
Cumulative accounting changes		(0.59)	
	<u>\$ 0.88</u>	<u>\$ 0.42</u>	<u>\$ 1.17</u>
Dividends declared per share	<u>\$ 0.20</u>	<u>\$ 0.15</u>	

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE STATEMENTS.

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992	1991
OPERATING ACTIVITIES:			
Net income	\$ 6,315	\$ 3,118	\$ 8,813
Adjustments to reconcile net income to net cash from operating activities			
Depreciation and amortization	9,414	8,013	6,999
Deferred income taxes	182	682	(1,273)
Foreign currency translation	(361)	(96)	
Change in assets and liabilities			
Receivables	(2,941)	(1,243)	(34)
Inventories	(367)	(2,539)	354
Accounts payable and other	5,232	4,404	6,338
Cumulative accounting changes		4,387	
Net cash from operating activities	17,474	16,726	21,197
INVESTING ACTIVITIES:			
Additions to plant and equipment	(31,266)	(19,450)	(14,006)
Business acquisition			(8,090)
Other	(815)	(161)	45
Net cash used by investing activities	(32,081)	(19,611)	(22,051)
FINANCING ACTIVITIES:			
Proceeds from unsecured term agreement		325	22,000
Payments on unsecured line of credit		(325)	(17,500)
Proceeds from long-term debt	20,000		4,300
Payments on long-term debt	(673)	(300)	(4,600)
Purchase of treasury stock	(5,085)	(1,245)	(120)
Purchase of life insurance for officers' benefit plans	(1,343)	(1,343)	(1,342)
Payment of dividends	(1,394)	(708)	
Other	850	305	11
Net cash from (used by) financing activities	12,355	(3,291)	2,749
Net increase (decrease) in cash	(2,252)	(6,176)	1,895
Cash and cash equivalents at beginning of year	7,729	13,905	12,010
Cash and cash equivalents at end of year	\$ 5,477	\$ 7,729	\$ 13,905
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION			
Cash paid during the year for:			
Interest (net of capitalized interest)	\$ 1,974	\$ 1,897	\$ 2,266
Income taxes	3,005	2,345	1,306

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE STATEMENTS.

THOUSANDS OF DOLLARS	COMMON STOCK	ADDITIONAL PAID-IN CAPITAL	RETAINED EARNINGS	TREASURY STOCK	NOTE RECEIVABLE FROM PENWEST SAVINGS & STOCK OWNER- SHIP PLAN	TOTAL SHARE- HOLDERS' EQUITY
Balance, September 1, 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
Balance, August 31, 1991	8,501	12,055	67,109	(21,720)	(5,825)	60,120
Net income			3,118			3,118
Exercise of stock options	39	277				316
Purchase of treasury stock				(1,245)		(1,245)
Savings and Stock Ownership Plan activity					506	506
Pension plan minimum liability			(171)			(171)
Dividends declared			(1,062)			(1,062)
Balance, August 31, 1992	8,540	12,332	68,994	(22,965)	(5,319)	61,582
Net income			6,315			6,315
Exercise of stock options	23	71				94
Purchase of treasury stock				(5,085)		(5,085)
Savings and Stock Ownership Plan activity					1,014	1,014
Pension plan minimum liability			450			450
Dividends declared			(1,384)			(1,384)
Balance, August 31, 1993	<u>\$8,563</u>	<u>\$12,403</u>	<u>\$74,375</u>	<u>\$(28,050)</u>	<u>\$(4,305)</u>	<u>\$62,986</u>

THE ACCOMPANYING NOTES ARE AN INTEGRAL PART OF THESE 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 AND CASH EQUIVALENTS Cash equivalents consist of money market funds, short-term deposits and commercial paper. 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 represents the net amounts available to the disbursing accounts. Uncleared checks in excess of cash balances of \$1,820,476 are netted against cash at August 31, 1993.

INVESTMENTS Investments are carried at cost and consist of preferred stock mutual funds. 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. Interest of \$985,000, \$446,000, and \$256,000 was capitalized in 1993, 1992, and 1991, respectively.

INCOME TAXES Deferred income taxes are provided on temporary differences between financial and income tax reporting methods. In the third quarter 1992, the Company adopted FASB Statement No. 109, "Accounting for Income Taxes," changing to the liability method of accounting for deferred income taxes effective September 1, 1991.

REVENUE RECOGNITION Sales revenue is recorded upon shipment of product.

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 chemically modified carbohydrate-based specialty chemicals. No single customer accounts for more than 10% of sales.

RESEARCH AND DEVELOPMENT Research and development costs of \$5,662,000, \$3,672,000, and \$2,972,000 in 1993, 1992, and 1991, respectively, were charged to expense as incurred.

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

NOTE B INVENTORIES

Inventories 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.

NOTE B INVENTORIES (CONTINUED)

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.

THOUSANDS OF DOLLARS / AUGUST 31	1993	1992
Raw materials, supplies and other	\$ 3,980	\$ 4,248
Work in progress	450	526
Finished goods	5,784	5,073
Total inventories	<u>\$10,214</u>	<u>\$ 9,847</u>

NOTE C DEBT

THOUSANDS OF DOLLARS / AUGUST 31	1993	1992
Unsecured term agreement with principal payments beginning in 1993 with final maturity in 2000	\$22,000	\$22,000
Private placement, 7.93% interest rate, semi-annual interest-only payments with principal payments beginning in 1996 with final maturity in 2005	20,000	
9.55% unsecured note, due in quarterly installments through 2000	4,900	5,249
8.49% note, quarterly principal and interest payments with final maturity in October 1997	3,978	4,300
	50,878	31,549
Less current portion	3,880	672
Net long-term debt	<u>\$46,998</u>	<u>\$30,877</u>

Maturities of long-term debt for the fiscal years ending August 31, 1994 through 1998 are as follows (thousands of dollars):

1994	\$3,880
1995	4,100
1996	7,127
1997	7,127
1998	7,127

The Company has an unsecured 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, 1993 the interest rate was approximately 4.1%.

To offset the effect of future interest rate fluctuations on borrowings under the unsecured 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, fix interest rates at approximately 9%.

During the first quarter 1993, PENWEST received the funding of a \$20 million, 7.93% Senior Note through a private placement.

The Company has an unsecured revolving line of credit of \$15 million with four banks which expires on April 15, 1996. Borrowing rates available to the Company under the revolver are at prime rate or less depending on the selection

NOTE C DEBT (CONTINUED)

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. At year-end, there were no outstanding borrowings under this agreement.

The unsecured term agreement, the private placement, and the unsecured revolving line of credit include, among other terms, various limitations on long-term indebtedness, minimum net worth and working capital ratios, and restrictions of PENWEST's ability to purchase or redeem its own stock.

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

The Company has hedged the interest rate risk on \$8.9 million 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 hedged portion of its long-term debt of approximately 9.5%

NOTE D LEASES

Certain of the Company's property, plant and equipment is leased under operating leases ranging from one to five years with renewal options.

Rental expense under operating leases was \$2,066,000, \$2,092,000, and \$1,566,000 for fiscal years ended August 31, 1993, August 31, 1992, and August 31, 1991, respectively.

Future lease payments as of August 31, 1993 for non-cancellable operating leases having initial lease terms of more than one year are as follows:

THOUSANDS OF DOLLARS / YEARS ENDING AUGUST 31	OPERATING LEASES
1994	\$ 3,403
1995	2,839
1996	1,994
1997	1,306
1998	622
Total minimum payments	<u>\$10,164</u>

NOTE E 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, 1993 are as follows:

	1993	1992	1991	1993 OPTION PRICE RANGE
Outstanding at beginning of year	596,762	707,007	713,707	\$ 2.08 - 27.50
Granted	27,000	67,500		18.25 - 21.00
Exercised	(23,003)	(39,147)	(6,700)	3.38 - 16.59
Cancelled	(9,950)	(138,598)		3.38 - 24.25
Outstanding at end of year	<u>590,809</u>	<u>596,762</u>	<u>707,007</u>	\$ 3.38 - 27.50
Exercisable at end of year	<u>184,259</u>	<u>94,762</u>	<u>116,164</u>	\$ 2.08 - 27.50

At August 31, 1993, 62,232 stock appreciation rights (SARs) were outstanding to certain officers under related stock option grants. The SARs were granted in December 1986 at the market price of PENWEST stock and are fully vested

NOTE E STOCK OPTIONS (CONTINUED)

as of August 31, 1992. As a result of appreciation (depreciation) of PENWEST stock and vesting of the SARs, expense was charged (credited) for (\$303,000), (\$90,000), and \$342,000 in 1993, 1992, and 1991 respectively.

NOTE F INCOME TAXES

Income tax expense consists of the following:

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992	1991
CURRENT			
Federal	\$(1,731)	\$1,953	\$ 4,611
Foreign	213	(196)	99
State	(51)	185	267
	<u>(1,569)</u>	<u>1,942</u>	<u>4,977</u>
DEFERRED			
Federal	2,808	618	(1,266)
State	83	64	(7)
	<u>2,891</u>	<u>682</u>	<u>(1,273)</u>
Total provision	<u>\$ 1,322</u>	<u>\$2,624</u>	<u>\$ 3,704</u>

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

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992	1991
Depreciation	\$2,557	\$ 750	\$(1,081)
Post retirement benefits	(267)	(238)	
Other	601	170	(192)
Total deferred provision	<u>\$2,891</u>	<u>\$ 682</u>	<u>\$(1,273)</u>

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

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992	1991
Statutory rate	34%	34%	34%
Statutory tax	\$2,597	\$3,444	\$4,256
Impact of alternative minimum taxes	(1,069)		
State income taxes, net of federal tax benefit		122	176
Temporary differences reversing at non-originating rate			(447)
Tax advantaged investment income		(401)	(583)
Difference in effective tax rate for foreign income			19
Other	(206)	(541)	283
Total provision	<u>\$1,322</u>	<u>\$2,624</u>	<u>\$3,704</u>

The Company has net operating loss carryforwards of approximately \$1.8 million available to offset future taxable income through 2008, and alternative minimum tax credit carryforwards of \$1.8 million with no expiration.

Deferred tax assets consist primarily of amounts related to post-retirement benefits and other employee compensation items. Deferred tax liabilities are primarily related to accelerated depreciation and prefunded pension contributions.

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 of 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.

Assumptions used in the measurement of the projected benefit obligation in 1993 and 1992 included a discount rate of 7.5% and 7.75%, respectively, and a rate of increase in compensation levels of 6% for the salaried employees. The assumption used in determining the net periodic pension cost included an expected long-term rate of return on plan assets of 8%.

Net periodic pension expense consisted of the following:

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992	1991
Service cost of benefits earned during the year	\$ 545	\$ 436	\$ 246
Interest cost on projected benefit obligation	1,245	1,189	1,028
Actual gain on plan assets	(2,449)	(987)	(2,267)
Net amortization and deferral	1,676	197	1,607
Net pension expense	<u>\$ 1,017</u>	<u>\$ 835</u>	<u>\$ 614</u>

The following table sets forth the funded status of both pension plans as of August 31, 1993 and 1992:

THOUSANDS OF DOLLARS / AUGUST 31	1993	1992
Actuarial present value of projected obligation, based on service to date and current salary levels:		
Vested	\$15,384	\$14,556
Nonvested	396	377
Accumulated benefit obligation	15,780	14,933
Effect of projected salary increases	1,919	1,689
Projected benefit obligation	17,699	16,622
Plan assets at fair market value	15,922	13,100
Projected benefit obligation greater than plan assets	(1,777)	(3,522)
Unrecognized actuarial net loss	1,391	1,971
Balance of unrecognized net obligation at transition being amortized over 15 years	920	1,519
Unrecognized prior service cost	621	670
Adjustment to record minimum liability	(1,860)	(2,471)
Net pension liability	<u>\$ (705)</u>	<u>\$ (1,833)</u>

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.

NOTE G PENSION AND OTHER EMPLOYEE BENEFITS (CONTINUED)

PENWEST SAVINGS AND STOCK OWNERSHIP AND PROFIT SHARING PLAN The Company has a savings investment plan. The savings component, available to all employees, matches 75% of the employee's contribution up to 6% of the employee's pay. The match is made in PENWEST common stock. The Plan held 215,913 unallocated shares of PENWEST common stock as of August 31, 1993, including shares earned but not yet allocated. During 1993, approximately 59,066 shares of stock were earned by Plan participants. The savings component expense of the Plan was \$519,000, \$318,000, and \$305,000 for the fiscal years 1993, 1992, and 1991, 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 gain sharing programs. The profit sharing expense, which reflects the cost basis of stock released by the Plan to participants, was \$420,000, \$424,000, and \$229,000 for the fiscal years 1993, 1992 and 1991, respectively.

The Plan acquired the PENWEST common stock by issuing a note to the Company. The note is reflected as a reduction of shareholders' equity and 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 FASB Statement No. 87, "Employers' Accounting for Pensions." For 1993, 1992, and 1991, the net pension expense accrued for the SERP was \$283,000, \$348,000, and \$252,000, respectively.

HEALTH CARE AND LIFE INSURANCE BENEFITS The Company offers health care and life insurance benefits to most active employees. Costs incurred to provide these benefits are charged to expense when paid. Health care and life insurance expense was \$2,297,000, \$1,469,000, and \$1,350,000 in 1993, 1992, and 1991, respectively.

NOTE H OTHER POST-RETIREMENT BENEFITS

PENWEST maintains two post-retirement benefit plans that cover substantially all salaried and hourly retirees.

Benefits under the plan for hourly employees include medical coverage, prescription drug coverage and, to a certain grandfathered group, life insurance. Hourly participants contribute to the cost of the benefits based on a pension credit formula.

Benefits under the plan for salaried employees includes medical coverage and vision coverage. Salaried participants contribute, for the most part, 100% of the premiums.

Presently, the Company funds the current benefits on a cash basis.

In the third quarter 1992, the Company adopted FASB Statement No. 106, "Employers' Accounting for Post-Retirement Benefits Other Than Pensions," changing to the accrual method of accounting for these benefits effective September 1, 1991. Prior to 1991, post-retirement benefit expense was recognized when claims were paid.

Post-retirement benefit expense was \$1,088,000, \$1,100,000, and \$300,000 for the twelve months ended August 31, 1993, 1992 and 1991, respectively.

NOTE H OTHER POST-RETIREMENT BENEFITS (CONTINUED)

The following table sets forth the plan's funded status:

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31	1993	1992
ACCUMULATED POST-RETIREMENT BENEFIT OBLIGATION		
Retirees	\$ 5,160	\$5,837
Fully eligible active plan participants	502	1,397
Other active plan participants	2,810	2,476
	8,472	9,710
Plan assets at fair value		
Accumulated post-retirement benefit obligation		
in excess of plan assets	8,472	9,710
Unrecognized net gain	1,833	
Accrued post-retirement benefit obligation	<u>\$10,305</u>	<u>\$9,710</u>

Net periodic post-retirement benefit costs include the following components:

THOUSANDS OF DOLLARS / YEAR ENDED AUGUST 31.	1993	1992
Service cost — benefits earned during the period	\$ 288	\$ 300
Interest cost on accumulated post-retirement benefit obligations	800	800
	<u>\$1,088</u>	<u>\$1,100</u>

Future benefit costs were estimated assuming medical costs would increase at a 17% annual rate for fiscal 1992 and 1993, then beginning in fiscal 1994, decreasing to an annual rate of 6.5% ratably over the next eight years and then remaining at a 6.5% annual rate thereafter. A 1% increase in this annual trend rate would have increased the accumulated post-retirement benefit obligation at August 31, 1993, by \$1.2 million, with an increase of \$250,000 in the annual 1993 post-retirement benefit expense. The weighted average discount rate used to estimate the accumulated post-retirement obligation was 8.14%.

NOTE I 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 common stock at \$44.00 per share. The Rights will become exercisable if a purchaser acquires 20% of PENWEST's common stock or makes an offer to acquire common stock. In the event that a purchaser acquires 20% 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% 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 \$0.01 per Right, and they expire in June 1998.

NOTE J 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 were less than 10% of total sales. Mendell's results have been included in the consolidated statements since date of acquisition.

NOTE K QUARTERLY FINANCIAL DATA (UNAUDITED)

1992/93

THOUSANDS OF DOLLARS EXCEPT EARNINGS PER SHARE DATA	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER	TOTAL
Sales	\$33,512	\$31,821	\$34,501	\$35,683	\$135,517
Gross margin	9,527	8,630	9,285	8,290	35,732
Income from operations	2,932	2,624	2,320	1,234	9,110
Net income	1,872	1,647	1,385	1,411	6,315
Earnings per common share	\$ 0.26	\$ 0.23	\$ 0.20	\$ 0.20	\$ 0.88
Dividends declared	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.20

1991/92

THOUSANDS OF DOLLARS EXCEPT EARNINGS PER SHARE DATA	FIRST QUARTER ^{1,2}	SECOND QUARTER ¹	THIRD QUARTER	FOURTH QUARTER	TOTAL
	(restated)	(restated)			
Sales	\$29,349	\$31,524	\$31,652	\$33,427	\$125,952
Gross margin	8,208	8,907	8,163	8,527	33,805
Income from operations	2,526	2,778	2,327	2,835	10,466
Cumulative accounting changes	(4,387)				(4,387)
Net income (loss)	(2,480)	2,046	1,644	1,908	3,118
Earnings per common share before cumulative accounting changes	\$ 0.26	\$ 0.27	\$ 0.22	\$ 0.26	\$ 1.01
Cumulative accounting changes	(0.59)				(0.59)
Earnings per share	(0.33)	0.27	0.22	0.26	0.42
Dividends declared		\$ 0.05	\$ 0.05	\$ 0.05	\$ 0.15

1 FIRST AND SECOND QUARTERS WERE RESTATED TO REFLECT THE ADDITIONAL EXPENSE RELATED TO THE ADOPTION OF FASB No. 106 OF APPROXIMATELY \$200 PER QUARTER (\$130 AFTER TAXES OR APPROXIMATELY \$0.02 PER SHARE, PER QUARTER).

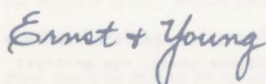
2 RESTATED TO REFLECT THE CUMULATIVE EFFECT OF THE ADOPTION OF FASB No. 106 AND FASB No. 109 OF APPROXIMATELY \$4,387 (\$0.59 PER SHARE).

Board of Directors and Shareholders
Penwest, Ltd.

We have audited the accompanying consolidated balance sheets of PENWEST, LTD. as of August 31, 1993 and 1992, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended August 31, 1993. 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 aspects, the consolidated financial position of PENWEST, LTD. at August 31, 1993 and 1992, and the consolidated results of its operations and its cash flows for each of the three years in the period ended August 31, 1993 in conformity with generally accepted accounting principles.



ERNST & YOUNG

Seattle, Washington

October 18, 1993

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 fulfill 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 acknowledgment 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 to the extent necessary to support their audit.

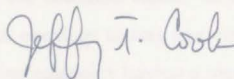
The Audit and Environmental, Health and Safety Committee of the Board of Directors, which is composed solely of outside directors, meets periodically with management and with the independent auditors to review the quality of financial reporting, the operation and development of the internal control systems,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

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



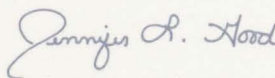
TOD R. HAMACHEK

President and Chief Executive Officer



JEFFREY T. COOK

Vice President, Finance and Chief Financial Officer



JENNIFER L. GOOD

Corporate Controller

RICHARD E. ENGBRECHT

Engbrecht brings more than 40 years experience in the distribution business with the family of Univar companies to PENWEST's board of directors. Currently, he is chairman of Momentum Corporation.

Previously, Engbrecht served as president and chief executive officer of VWR Corporation and Momentum and president and chief operating officer of Univar Corporation. He began his career with Univar after earning a B.S. from Fresno State University. He also serves as a director of Eldec Corporation, Univar Corporation and VWR Corporation.

TOD R. HAMACHEK

Hamachek became PENWEST's president, chief operating officer and a director following the Company's 1984 spin-off from Univar Corporation. He was elected chief executive officer in 1985.

Hamachek is a director of Northwest National Gas Company, DEKALB Genetics Corporation and The Blethen Corporation. He is a trustee of Virginia Mason Hospital, the Seattle Foundation, The Washington Roundtable, Lakeside School and Pacific Science Center.

He also chairs the advisory board of the University of Washington Graduate School of Business and serves as vice president of the Washington Pulp and Paper Foundation. Hamachek holds an M.B.A. from the Harvard Business School and a B.A. from Williams College.

C. CALVERT KNUDSEN

Joining MacMillan Bloedel in 1976, Knudsen was president and chief executive officer, chairman and chief executive officer, and vice chairman of the board, prior to retiring in 1990. Previously, he was senior vice president, corporate growth, for Weyerhaeuser Company.

Knudsen is a director of Cascade Corporation, Portland General Corporation, SAFECO Corporation, MacMillan Bloedel Limited, MacDonald Dettwiler & Associates, West Fraser Timber Co. Ltd., Seafirst Bank, Space Needle Corporation and a director emeritus of the Canadian Imperial Bank of Commerce.

HARRY MULLIKIN

Mullikin's position as chairman emeritus and senior advisor for Westin Hotels & Resorts follows a long career with Westin that saw the company grow to 64 hotels worldwide.

Mullikin is a director of UAL Corporation, Seattle-First National Bank, and Seafirst Corporation. A Washington State University graduate, he heads the Washington State University Foundation. He also chairs the board of directors of Virginia Mason Medical Center.

SALLY G. NARODICK

Narodick is chairman and chief executive officer of Edmark Corporation. Before joining Edmark in 1989, she was a partner of Narodick, Ross & Associates, a financial and marketing consulting firm. Previously, Narodick spent 15 years with Seafirst Corporation, as corporate controller and as a senior vice president and district manager for business banking in King County, Washington.

A graduate of Boston University, Narodick earned a Master of Arts in Teaching from Columbia University and an M.B.A. from New York University. She is a founder and director of Pacific Northwest Bank and also is a director of Washington Energy Corporation. A past chair of the Seattle Chamber of Commerce, Narodick also is active in education. She is a director of Lakeside School, was a member of Governor Booth Gardner's Council on Education Reform and Funding in Washington state, and serves on The Washington Roundtable.

WILLIAM G. PARZYBOK

Parzybok is chairman of the board and chief executive officer of Fluke Corporation. He joined Fluke in early 1991 and was elected chairman of the board of directors later in the year.

He began his career with Hewlett-Packard in 1968, spending 16 years in various positions in its instrument business. Parzybok also held management positions in the company's computer business, with responsibilities for divisions in six states, Germany, Japan and Canada.

Parzybok received a B.S. in electrical engineering and an M.S. in business management from Colorado State University. He currently serves on the University of Colorado's Engineering Development Council and the Univer-

sity of Washington's College of Engineering Visiting Committee. A trustee of The Washington Roundtable, Parzybok also is active in the Pacific Science Center as a foundation associate and as a member of its Science Council.

N. STEWART ROGERS

Chairman of the board of PENWEST, Rogers served as senior vice president of Univar Corporation until retiring in 1991.

Rogers is a director of Univar Corporation, Fluke Corporation, VWR Corporation, U.S. Bancorp, Olympic Steamship Company and The Port Blakely Company. He also serves as a trustee of the Seattle Opera Association, the National Institute for Music Theater and United Way of King County. He is a graduate of Stanford University, with a degree in history.

WILLIAM K. STREET

Since 1965, Street has directed The Ostrom Company as president and general manager. Earlier in his career, he was vice president and general manager of Physio-Control Corporation and general manager of Elkhorn Ranch, Ltd.

Street is a director of Univar Corporation and Momentum Corporation. He also is a director of the American Mushroom Institute and serves as president of the Tacoma Art Museum. A University of Washington graduate, Street is a member of the advisory committee for the university's Tacoma branch campus.

JAMES H. WIBORG

Wiborg is chairman of Univar Corporation and of VWR Corporation. He began his Univar career in 1960 with one of its predecessors, United Pacific Corporation. Prior to joining United Pacific, he headed Wiborg Manufacturing and Western Plastics Corporation.

Wiborg holds a B.A. in industrial management from the University of Washington. He is a director of VWR Corporation, Momentum Corporation, PACCAR, Inc. and Univar Corporation. Additionally, he serves on the boards of directors of Matthew G. Norton Company, Firs Management Corporation, Northwest Building Corporation, Brandrud Furniture Corporation, Gensco, Inc. and as a trustee of the University of Puget Sound.

OFFICERS

TOD R. HAMACHEK

President and
Chief Executive Officer

JEFFREY T. COOK

Vice President, Finance
and Chief Financial Officer

FRANKLIN E. OLSEN, JR.

Vice President, Employee Relations
and Corporate Secretary

ROBERT G. WIDMAIER

Vice President and
Chief Innovation Officer

JENNIFER L. GOOD

Corporate Controller

H. THOMAS REED

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

JOHN V. TALLEY, JR.

President and General Manager
Mendell

JOHN M. DARCY

Vice President, PENWEST
President and General Manager
Penwest Foods Co.

BOARD COMMITTEES

EXECUTIVE COMMITTEE

James H. Wiborg, Chairman
Tod R. Hamachek
C. Calvert Knudsen
N. Stewart RogersAUDIT AND ENVIRONMENTAL,
HEALTH AND SAFETY
COMMITTEERichard E. Engebrecht, Chairman
Sally G. Narodick
William K. Street, Jr.
James H. Wiborg

COMPENSATION COMMITTEE

Harry Mullikin, Chairman
William G. Parzybok
N. Stewart Rogers
James H. WiborgPENSION AND BENEFITS
COMMITTEEC. Calvert Knudsen, Chairman
Richard E. Engebrecht
Harry Mullikin
William G. Parzybok

NOMINATING COMMITTEE

William K. Street, Chairman
Sally G. Narodick
N. Stewart RogersHEADQUARTERS AND
GENERAL INFORMATIONPENWEST CORPORATE
HEADQUARTERS777-108th Avenue N.E.
Suite 2390
Bellevue, WA 98004-5193
(206) 462-6000PENFORD PRODUCTS CO.
HEADQUARTERS1001 First Street S.W.
Cedar Rapids, IA 524041088 West Sunnyside Road
Idaho Falls, ID 83402

MENDELL HEADQUARTERS

2981 Route 22
Patterson, NY 125631001 First Street S.W.
Cedar Rapids, IA 52404Church House
48, Church Street
Reigate, Surrey RH2 0SN, UKMaitotie 4, 15560 Nastola
FinlandRöpckes Mühle 2
W-2082 Uetersen
GermanyPENWEST FOODS CO.
HEADQUARTERS11011 East Peakview Avenue
Englewood, CO 801111001 First Street S.W.
Cedar Rapids, IA 52404216 First Street
Richland, WA 99352

PACIFIC COGENERATION, INC.

777-108th Avenue N.E.
Suite 2390
Bellevue, WA 98004-5193

ANNUAL MEETING

10:30 a.m., February 8, 1994
Meydenbauer Center
11100 N.E. 6th Street
Bellevue, WA 98004

FORM 10-K

The Company files an annual report
with the SEC on Form 10-K, pursuant
to the Securities Exchange Act of 1934.
Shareholders may obtain a copy of this
report without charge by written re-
quest to our headquarters' address.

LEGAL COUNSEL

Bogle & Gates
Two Union Square
601 Union Street
Seattle, WA 98101-2346

AUDITORS

Ernst & Young
999 Third Avenue, Suite 3500
Seattle, WA 98104INVESTOR RELATIONS
COUNSELCorporate Communications, Inc.
2125 Fifth Avenue
Seattle, WA 98121
(206) 728-1778

Kekst & Co., Incorporated

437 Madison Avenue
New York, NY 10022
(212) 593-2655TRANSFER AGENT AND
REGISTRARFirst Interstate of Bank of WA, N.A.
c/o First Interstate Bank
26610 West Agoura Road
Calabasas, CA 91302SHAREHOLDER
INFORMATION
First Interstate Bank
Shareholder Services
(800) 522-6645

STOCK PRICE DATA

The common stock of PENWEST
trades in the over-the-counter market
under the NASDAQ symbol PENW.
Presented below are quarterly closing
stock price ranges for PENWEST.

	MARKET PRICE	
	HIGH	LOW
1992/1993 QUARTER		
Ended 11/30	\$22.25	\$16.75
Ended 2/28	23.25	17.75
Ended 5/31	20.25	17.88
Ended 8/31	20.00	17.25
1991/1992 QUARTER		
Ended 11/30	\$25.50	\$22.63
Ended 2/28	34.50	22.75
Ended 5/31	36.25	26.00
Ended 8/31	28.00	23.25

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THE 1993 PENWEST ANNUAL REPORT USES A VARIETY OF PAPERS MANUFACTURED WITH PENFORD PRODUCTS. IMAGES WERE SCANNED ON A SCITEX PRISMA SYSTEM. THE REPORT WAS PRINTED ON HEIDELBERG SIX COLOR SPEEDMASTER 28 X 40 SHEETFEED PRESSES. SPECIFIC TECHNIQUES ARE OUTLINED BELOW.

COVER / ENGRAVED IN TWO COLORS, BLIND DEBOSS AND HAND-TIPPED PLATE REPRODUCED ON 100# WHITE GLOSS BOOK WITH A DRY-TRAP MATTE VARNISH OVER FOUR COLOR PROCESS IMAGES SCANNED FROM CROSS-PROCESSED COLOR TRANSPARENCY.

LETTER / REPRODUCED ON 80# UNCOATED WHITE BOOK WITH FOUR MATCHED COLORS AND OVERALL MATTE VARNISH. THE PORTRAIT IS REPRODUCED AS A 150 LINE DOUBLE BLACK DUOTONE SCANNED FROM B/W PRINT.

PHOTO ESSAY / REPRODUCED ON 100# WHITE GLOSS BOOK WITH FOUR PROCESS COLORS, A DENSE BLACK AND SPOT METALLIC WITH MATTE AND GLOSS VARNISHES, FLOOD AND DOT-TO-DOT, APPLIED AS A DRY TRAP. IMAGES ARE REPRODUCED AS 175 LINE FOUR COLOR PROCESS QUADTONES FROM B/W PRINTS, OR AS 175 LINE CONVENTIONAL FOUR COLOR SCANS FROM COLOR TRANSPARENCY.

NARRATIVE / REPRODUCED ON 100# WHITE DULL BOOK WITH FOUR PROCESS COLORS, TWO MATCHED COLORS AND FLOOD MATTE VARNISH APPLIED AS A DRY TRAP. PORTRAITS ARE REPRODUCED AS 175 LINE PROCESS COLOR TRITONES FROM B/W PRINTS. FULL COLOR IMAGES ARE SCANNED FROM CROSS-PROCESSED COLOR TRANSPARENCIES.

FINANCIALS / REPRODUCED ON 80# UNCOATED WHITE BOOK WITH THREE MATCHED COLORS. SOLID BLACK FLOOD INCLUDES DENSE BLACK WITH BLACK UNDERPRINTER AND FLOOD MATTE VARNISH.

PAGE COMPOSITION / PAGES WERE PRODUCED ELECTRONICALLY AND TRANSMITTED TO PRINTER VIA SYQUEST. SOFTWARE INCLUDED PAGEMAKER 4.2 AND FREEHAND. SCANS WERE CONVENTIONALLY PRODUCED AND STRIPPED.

TYPOGRAPHY / THE TYPOGRAPHIC MENU IS BASED ON TWO CONTRASTING STYLES; BODONI, A FONT DESIGNED BY GIAMBATTISTA BODONI IN THE EIGHTEENTH CENTURY, AND ORATOR, A FONT CREATED FOR COMPUTER ENVIRONMENTS.

DESIGN / LEIMER CROSS DESIGN, SEATTLE

PHOTOGRAPHY / JEFF CORWIN, SEATTLE

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