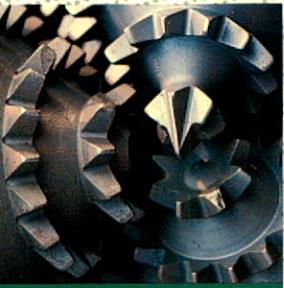


COLUMBIA GAS System



Exploration



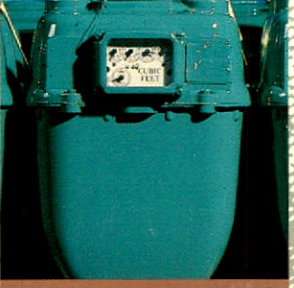
Production



Transmission

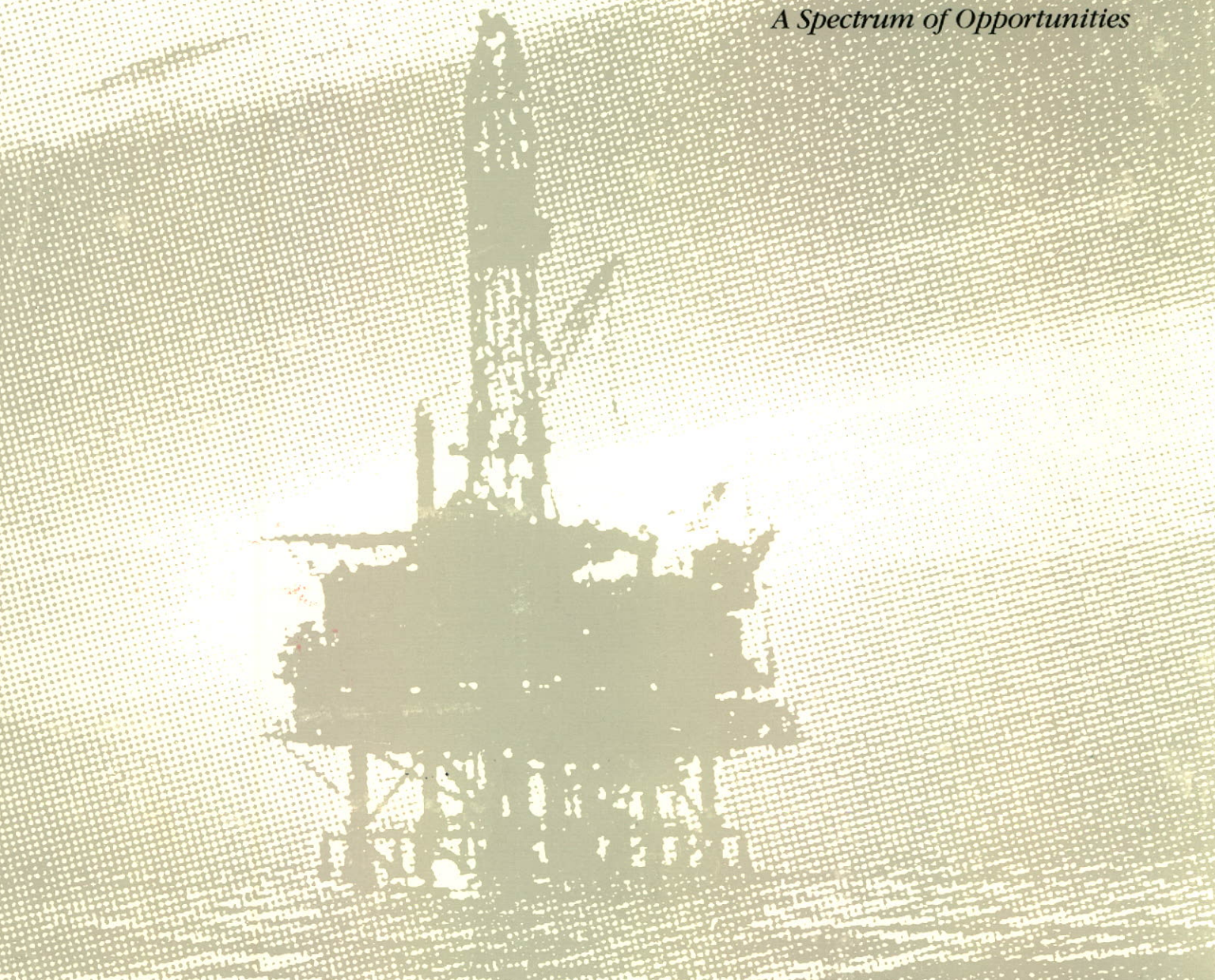


Underground Storage



Distribution

A Spectrum of Opportunities



Our mission

The Columbia Gas System, through its subsidiaries, is active in pursuing opportunities in all segments of the natural gas industry and in related resource development.

Exemplified by Columbia's three-star symbol, these separately managed companies work to benefit: System stockholders—through competitive return on their investment; customers—through efficient, safe, reliable service; and employees—through challenging and rewarding careers.

About the cover

Industry scenes depicted on the cover represent key Columbia operations conducted in pursuit of the corporate mission to seek opportunities in all segments of the natural gas industry.

"A day in the life of Columbia"

The financial and operating results detailed in this report are the total of many individual efforts of Columbia people working to carry out the corporate mission. Just a few of these people and their jobs are shown in the photographs in this report. They represent a typical day in the life of the Columbia Gas System.



Contents

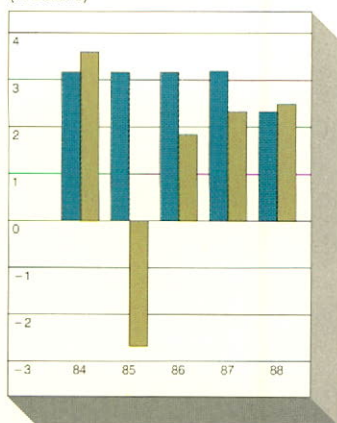
Letter to Stockholders	2
System Profile	6
Columbia: The Years Ahead	8
Transmission Operations	14
Distribution Operations	20
Oil and Gas Operations	24
Other Operations	27
Consolidated Earnings Review	29
Financial Section	34
Stockholder Information	59
Directors and Officers	60
Glossary	Inside Back Cover

Highlights

The Columbia Gas System, Inc. and Subsidiaries

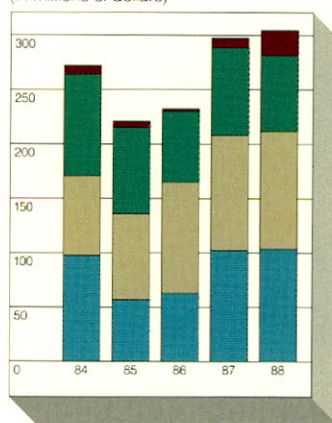
	1988	1987	1986
Income Statement Data (\$ in millions)			
Operating Revenues	3,128.9	2,834.9	3,396.1
Operating Income	316.9	326.5	364.6
Net Income	119.0	111.3	86.8
Earnings (Loss)			
Before Extraordinary Charges:			
Gas Transmission	38.1	39.2	19.4
Gas Distribution	63.1	39.3	75.1
Oil and Gas	8.7	9.0	(6.5)
Other	1.2	13.0	(0.1)
Total	111.1	100.5	87.9
Per Share Data (\$)			
Earnings Before Extraordinary Charges	2.46	2.30	2.12
Earnings on Common Stock	2.46	2.30	1.82
Dividends	2.295	3.18	3.18
Book Value	34.18	34.08	34.06
Market Price:			
High	44 ³ / ₄	56 ¹ / ₂	46
Low	26 ⁷ / ₈	35 ¹ / ₂	34 ³ / ₄
Close	34 ¹ / ₂	40 ¹ / ₄	45 ¹ / ₄
Common Stock Data			
Average Shares Outstanding (000)	45,190	43,763	41,436
Average Daily Shares Traded (000)	191	124	105
Operating Statistics (billion cubic feet)			
Gas Sales	551.3	511.0	606.5
Transportation Volumes	779.4	745.8	541.5
Total Throughput	1,330.7	1,256.8	1,148.0
Balance Sheet and Other Data (\$ in millions)			
Capital Expenditures	307.9	298.8	232.3
Total Assets	5,641.0	5,440.9	5,590.2
Total Capitalization	2,891.0	3,071.7	2,942.2

Earnings and Dividends
Per Share of Common Stock
(in dollars)



■ Dividends ■ Earnings

Summary of Capital Expenditures by Segment
(in millions of dollars)



■ Gas Transmission ■ Gas Distribution ■ Oil and Gas ■ Other



To the Stockholders



John H. Croom,
Chairman, President
and Chief Executive
Officer

Your company's long-term prospects are bright. We have substantive programs in place to overcome the problems discussed in the 1987 report, and, more importantly, are aggressively pursuing projects to enhance the value of your investment in Columbia Gas.

Columbia is on the move; 1988 was indeed a year of notable accomplishments:

- We signed an agreement with Shell Oil Company looking to reactivation of our liquefied natural gas terminal and formation of a joint marketing venture.
- We focused our oil and gas operations closer to our service area by selling the East Coast Canadian properties.
- We announced important new market expansions for both the transmission and distribution properties.
- We lowered supply costs for both the transmission and distribution operations.

While the bottom-line benefits of these actions will not be immediately evident, we are moving ahead.

I also count as progressive the action taken in April 1988 to bring the common stock dividend into balance with our near-term earnings outlook. We could not continue to maintain the prior dividend rate under the volatile condi-

tions prevailing in the natural gas business. By adjusting the rate, we maintained a sound financial base upon which all segments of the enterprise can work to realize future business opportunities.

I am not satisfied with the financial results summarized on page 1 and detailed elsewhere in the report. The per-share earnings of \$2.46 in 1988 are consistent, however, with the dividend level established in April and on a par with our earnings experience over the last several years. While our efforts to raise earnings to a level appropriate to the equity investment in the corporation are taking longer than expected, the 1988 numbers evidence a stable organization, one that is dealing realistically to resolve its problems and to capitalize on its opportunities.

This report to stockholders emphasizes the full range of business activities in the Columbia System and provides a summary view of our goals and strategies.

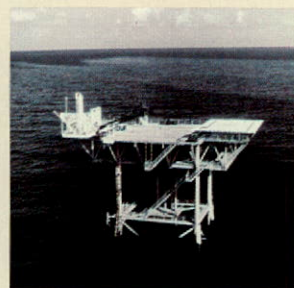
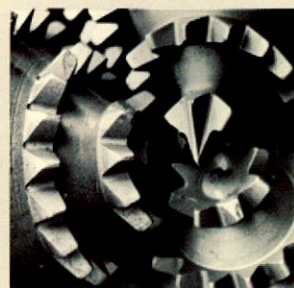
We are bullish on the ability of the natural gas business to meet the nation's energy needs and, as important, to help it deal with growing environmental problems. The potential contributions of natural gas are increasingly recognized by government leaders, as well as by plan-

ners in the private sector. Our mission is to capitalize on these new and expanding market openings for the benefit of the stockholders.

Success is not guaranteed. As an industry we face the fact that development of new supplies has lagged in this decade as a result of the price decline that followed the burst of reserve development at the end of the 70s. Prices have been too low to stimulate significant investments in exploration and development. We do not lack, however, for reserves awaiting development domestically and abroad. And the trend in both gas and oil prices is upward, providing comfort on the supply side and encouraging us in plans to expand our own exploration and production segment.

We have made significant progress in resolving the regulatory problems that have necessarily called for extensive discussion in prior reports to stockholders. While issues of cost recovery are still before the Federal Energy Regulatory Commission (FERC) and await settlement with customers of our transmission unit, these are moving steadily to resolution. Our focus is on the future, not the past.

We have initiated a major restructuring of operations in our transmission segment.



This program positions the transmission properties to achieve and maintain a financial performance that should be among pipeline industry leaders. We have outstanding transmission facilities and are confident we will restore the earnings contribution expected from that segment of the System.

Our distribution properties have been expanded by the acquisition of Lynchburg Gas Company in Virginia, solidifying our operations in that prosperous state. We plan to combine all retail operations in Virginia into one company—Commonwealth Gas Services, Inc. The management structure of all the distribution companies has been streamlined to improve their competitive capacity.

Looking to the future, we have set a 1989 capital budget that is approximately 55 percent above the 1988 capital outlays. The \$480 million budget provides for increased expenditures in all major segments of the System. The largest portion—\$215 million—is allocated to transmission facilities where new business construction will account for a large share of the outlays. Construction in support of new business

accounts for more than half the \$132 million allocated to the distribution segment. Expenditures in the oil and gas segment, which have been depressed by the low level of energy prices, will increase by about 70 percent to approximately \$121 million.

Longer range, we foresee that capital expenditures for the oil and gas segment will increase both in absolute amounts and as a portion of the total budget, expanding the relative asset size of this segment. Rising oil and gas prices are expected to improve substantially the profit from investment in exploration and production.

We continue to work closely with the legislative and administrative branches of government on matters affecting the progress of Columbia and the industry as a whole. Proposals in Congress concerning such matters as wellhead prices, atmospheric pollution, energy taxes, and energy supply are certain to be high on the legislative agenda. The energy policies of the new administration will have an influence on Columbia, and I have already written to President Bush to state our views. In the regulatory area, recent policies of the FERC have sought to encourage free-

market forces in the pipeline industry, but the traditional role of regulation is difficult to abandon. Many issues still await resolution. Columbia maintains a strong presence in Washington to express its position and respond to government concerns.

Competition in the gas business will continue to increase, as the industry undergoes structural and regulatory changes. Just as we are seeking to expand beyond traditional markets, other companies are trying to penetrate our historic service areas. This departure from traditional ways of doing business in a closely regulated industry challenges all components of the Columbia System. To be profitable, we must meet that competition. As we move into the decade of the 90s, I am confident that Columbia has the people and resources to do just that.



John H. Croom

John H. Croom
Chairman, President and
Chief Executive Officer

February 16, 1989



System Profile

The Columbia Gas System is one of the largest natural gas systems in the United States and is made up of a parent holding company and operating subsidiaries engaged in the production, purchase, storage, transmission and distribution of natural gas at wholesale and retail. The System is divided into the operating segments—oil and gas, transmission, distribution and other operations—described below.

The schematic chart depicts the various channels by which natural gas moves through the System from wellhead to burner tip.

Oil and gas

The System holds varying interests amounting to 3.4 million net acres throughout the United States and Canada. Domestic oil and gas operations are focused in the Appalachian and Michigan Basins, the Williston Basin, the Powder River Basin and the Gulf Coast areas of Texas and Louisiana. Domestic offshore holdings include varying interests in federal blocks, most of which are located in the West Cameron, Vermilion, Eugene Island and Ship Shoal areas.

Canadian oil and gas operations extend from the Arctic Islands and Northwest Territories through western mainland provinces.

Oil and Gas

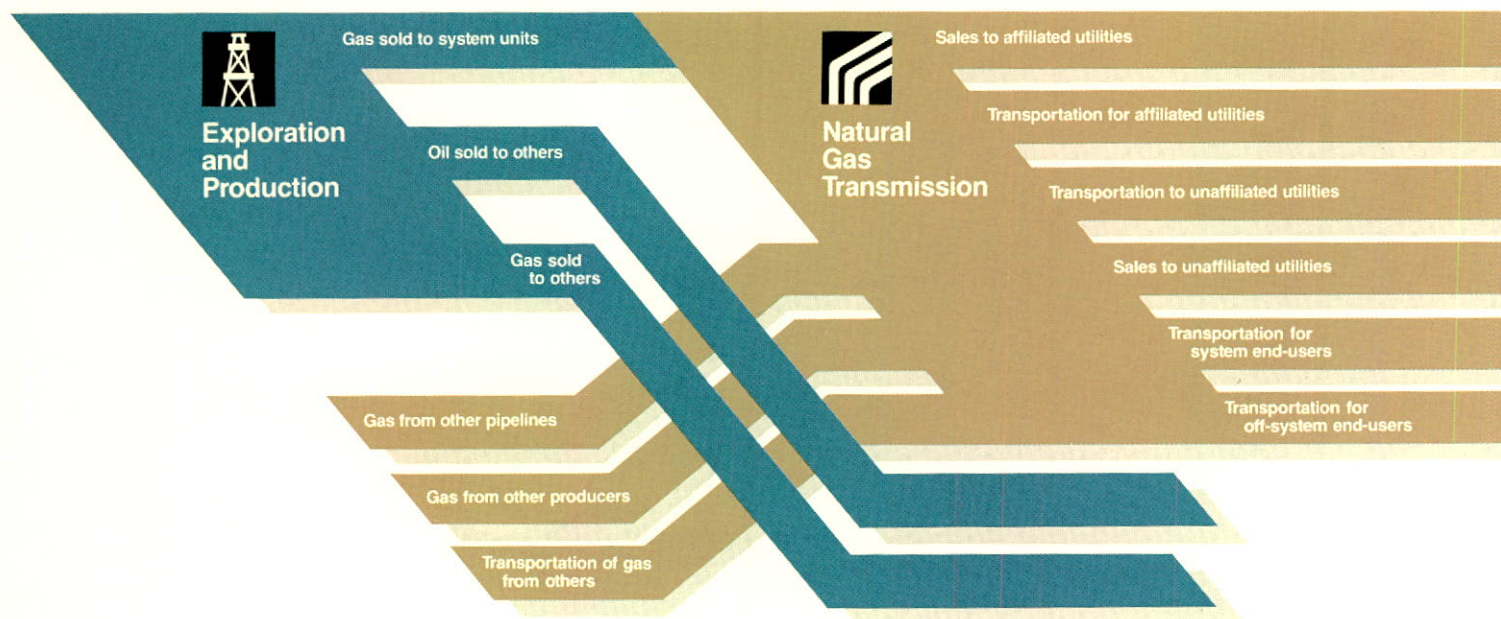
Net Acreage (000)		Net Gas Productive Wells	6,203
Developed	1,447	Net Oil Productive Wells	405
Undeveloped	2,005	Oil and Gas Production	
Proved Reserves		Natural Gas (Bcf)	75
Natural Gas (Bcf)	898	Oil (000 Bbls)	2,328
Oil (000 Bbls)	14,904	1988 Capital Expenditures (\$ in millions)	71

Gas transmission

Columbia Gas Transmission Corporation sells at wholesale and transports natural gas to affiliated and unaffiliated customers through its 18,800-mile pipeline network serving parts of eleven mid-Atlantic and Midwest states and the District of Columbia. Columbia Transmission also operates extensive storage facilities and is the System's principal purchaser of natural gas from producers in the Southwestern, Midcontinental and Appalachian areas. A major part of Columbia Transmission's southwest gas supply is delivered by Columbia Gulf Transmission through its 4,300-mile pipeline network stretching from offshore Louisiana to Kentucky. Gulf also transports gas for unaffiliated customers and has ownership interests in the Ozark Transmission System and Trailblazer Pipeline System. An intrastate pipeline network of nearly 600 miles in Virginia is operated by Commonwealth Gas Pipeline Corporation. Columbia LNG Corporation owns an idle liquefied natural gas plant in Cove Point, Maryland.

Gas Transmission

Total Throughput (Bcf)	1,221	Storage Capacity (Bcf)	698
Sales (Bcf)	369	1988 Capital Expenditures (\$ in millions)	103
Transportation (Bcf)	852		



Gas distribution

The corporation has seven distribution subsidiaries which provide natural gas service to more than 1.8 million residential, commercial and industrial customers in Ohio, Pennsylvania, Virginia, Maryland, New York, and Kentucky. In addition, these subsidiaries are actively involved in transporting gas for industrial and large commercial users who purchase gas from other sources. A distribution network of more than 29,000 miles of pipe reaches the principal communities of Columbus, Lorain, Parma, Springfield and Toledo, Ohio; New Castle, York and a part of Pittsburgh, Pennsylvania; Binghamton, New York; Cumberland and Hagerstown, Maryland; Staunton and Portsmouth, Virginia; and Ashland, Frankfort and Lexington, Kentucky.

Gas Distribution

Retail Customers		Total Throughput (Bcf)	469
Residential	1,665,135	1988 Capital Expenditures (\$ in millions)	110
Commercial	157,440		
Industrial and Other	2,358		
Total	1,824,933		

Other operations

The System has two subsidiaries that sell propane at wholesale and retail to more than 50,000 customers in Virginia, Ohio, Kentucky, and Pennsylvania.

System-owned coal reserves in the Appalachian area exceed 650 million tons. Some reserves are leased to others for development.

A new subsidiary, TriStar Ventures Corporation, has joined with an affiliate of a major electric utility in a partnership to construct and operate cogeneration plants throughout the United States.

The Columbia Gas System Service Corporation provides data processing, financial, accounting, legal, research, and other services for the parent company and other affiliates.

Other Operations

Coal Reserves (Million Tons)	650	Propane Customers	50,016
1988 Capital Expenditures (\$ in millions)	24	Gallons Sold (000)	73,268



**Natural
Gas
Distribution**

Sales of gas to residential and commercial customers

Sale of gas to industrial customers

Transportation of gas for end-users

Columbia: The Years Ahead

An interview with the CEO



As the Columbia Gas System moves toward the decade of the 90s, Chairman and CEO John Croom discusses where the corporation intends to go and how.

Question: What are Columbia's objectives as it looks at the next decade?

Croom: In our strategic planning, we have set as our first objective allocating the System's capital to activities most responsive to the long-term business opportunities we perceive. In the near term, our primary strategy is to restore the earnings of our largest operating subsidiary, Columbia Gas Transmission. Longer range, we seek higher profitability and greater diversification by increasing the relative size of our exploration and production activities.

Question: So you see a bright future for the gas business?

Croom: Most certainly. The demand, in fact *the need*, for natural gas is expected to increase steadily. Not only will historic markets grow, but the uses of gas as a motor fuel and for electric generation, both functions linked to the nation's environmental concerns, are expected to

expand significantly. Almost all observers—industry, government, financial analysts—see the coming years as the natural gas era in the nation's energy history.

Question: As Columbia moves into the future, do you see the composition of the System changing?

Croom: Yes. At the present time, more than half of our investment is in transmission properties, about a quarter in distribution properties and most of the remainder in oil and gas operations. We intend to bring the three segments more into balance, primarily by increasing investment in the exploration and production business.

Question: Is Columbia geared up for the industry's new competitive environment?

Croom: We are marketing-oriented all the way from well-head to burner tip. We must approach every operation by asking: how does it serve our customers? The expected increase in demand for natural gas will be felt through the whole System. While projections vary, one recent private study estimated that over the next 20 years the

United States can increase its use of natural gas by approximately one-third. Even if that estimate is on the high side, the implications for all segments of the business are significant.

Question: How is Columbia going after some of the business?

Croom: Much of the increase will result from the fact that the use of natural gas will contribute in a major way to easing our nation's air pollution problems. For example, natural gas is a clean-burning motor fuel and is expected to find a major market with urban transit systems where current diesel engines cannot meet future air cleanliness standards. Columbia is one of two gas companies funding development of a prototype transit bus which will use natural gas. We expect that bus to be in commercial service in Columbus, Ohio, later this year.

Similarly in electric generation, natural gas can replace or supplement coal and oil to reduce present pollution levels. Our cogeneration venture was launched in 1987, and we foresee a steady expansion there. Opportunities for co-firing of

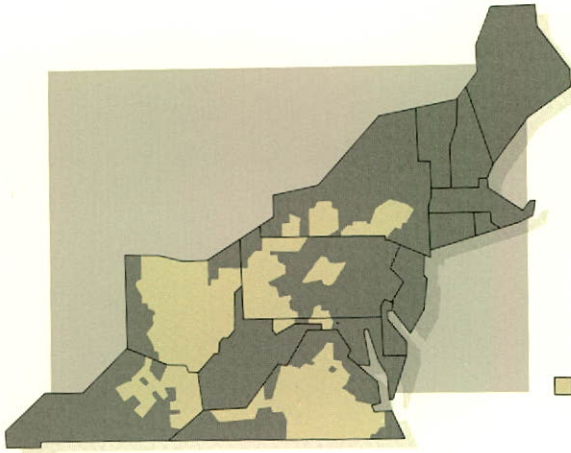
gas with other fuels in our service area are expected to develop, and we are conducting original research directed at that market. We expect our transportation business of moving gas owned by major power companies to grow. Indeed, in January 1989, Columbia Transmission announced two long-term contracts to sell gas to be used in electric generation, one to a major New England utility.

Question: What about the conventional residential market?

Croom: While we already serve a very high percentage of the homes in our market area, our studies show that significant opportunities exist in the years ahead for increasing base load sales to existing customers—such as water heaters, appliances and gas lights—with little additional capital investment. We also can convert non-gas homes by extending gas mains into areas not currently served. Our estimates are that construction of single-family and multi-family homes will be at a higher level than in the 1980s, providing greater sales opportunities. Through our own research program and those of others, we have developed new gas



Senior gas controllers Roger Grubbs (left) and Bill Wilson at Columbia Gas Transmission's dispatching center in Charleston, W. Va., get ready to meet a new day's demands for gas, as furnaces switch on and factories open. On a cold winter's day, throughput on the company's pipeline system exceeds 5 billion cubic feet.



■ Columbia's Retail Service Area

equipment for multi-family units, enabling us to now serve a market once almost totally electric. A high-rise condominium completed last year in Columbus, Ohio, has individual gas heating, cooking and water heating units, and is a showplace for our marketing activities.

Question: Will the commercial market be growing?

Croom: Developing technology for gas-fueled vehicles—both bus and truck fleets—is expected to have a substantial impact on commercial sales. There also are opportunities in space conditioning, both cooling and heating, and we continue to pursue the evident preference for gas in food service equipment.

Question: Has your industrial market improved from where it was a few years ago?

Croom: It certainly has; the time when people talked about a "rust belt" is gone. Thanks in considerable measure to our area development people, industrial use of gas is strong and will grow in the years ahead. We have major automobile assembly plants in our service territory, and these



New gas meters are loaded by customer service personnel Linda Thorne and Dick Zerman as they prepare to make the day's customer hookups. In 1988, approximately 34,000 new retail customers were brought on line by Columbia distribution companies.

are attracting scores of suppliers who open new facilities. Many other types of industries are also adding to the demand for gas, and we have a strong research program to develop new or improved utilization techniques.

Question: Are you looking for acquisitions in the distribution segment?

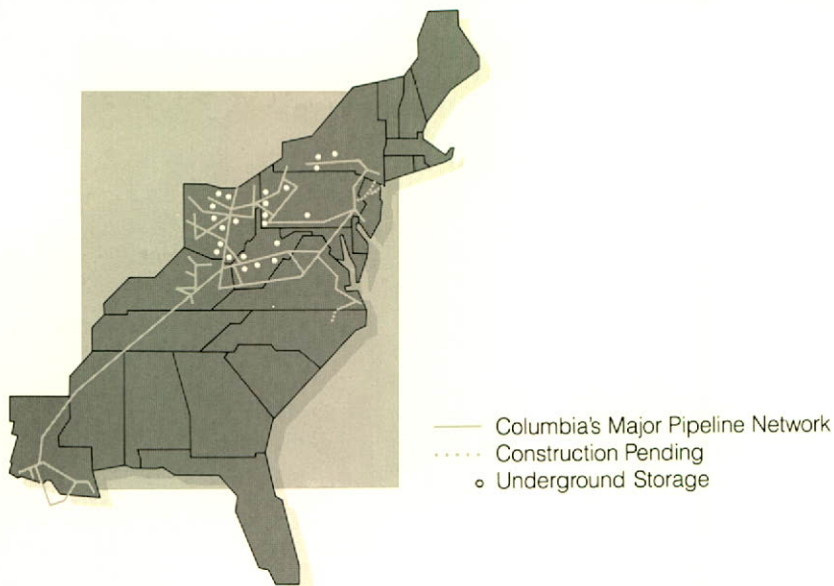
Croom: We are always on the lookout. The merger of Lynchburg Gas Company into the System in 1988 solidified our position in Virginia, which is one of the states with greatest growth potential in our service area. I expect there will be opportunities in the years ahead, and if the price makes sense for the stockholders' interests, we will act.

Question: Cost of gas and the assurance of supply are key concerns both for distribution companies and utility commissions. Has Columbia changed in its distribution supply patterns?

Croom: Our distribution companies must have access to the most economical supplies, consistent with their



Driver Ed Curtis of Columbia's propane marketing company in Virginia delivers fuel used for home heating. Propane service provides the benefits of gas energy to thousands of residential, commercial and industrial consumers not currently connected to a gas main.



utility obligation to serve. The distribution companies have done two things: they have diversified their supply sources by building pipeline connections to interstate pipelines other than their affiliate, Columbia Gas Transmission; and they have made direct purchases from producers when price terms are favorable, moving the gas through the interstate pipelines available to them. In sum, they are strong on the supply side going into the 90s.

Question: You said marketing is the moving force all over the System. How is the transmission segment reaching out?

Croom: Columbia Gas Transmission has a far-reaching plan in place to focus the attention of all its employees on the need to improve return on invested capital, and the way to do this is through the fullest utilization of facilities. This means close attention to the needs of customers; what services they want and how Columbia can provide them.

Question: How is the focus on marketing working?

Croom: Columbia Transmission expanded in a major way in 1988 by beginning deliveries to utilities in New Jersey

and Delaware. It already has contracted to transport gas for a utility in Rhode Island, and is awaiting federal approval to construct the necessary connecting line. Late in 1988, the company contracted to sell gas to a utility in North Carolina, our first venture in that state—but not our last, I am sure. Early in 1989, as I mentioned earlier, Columbia Transmission signed to deliver gas for a large electric utility in Massachusetts and to expand significantly service to New Jersey. All of these are contracts that extend into the next century. With our access to ample reserves and excellent facilities, we'll be expanding further in the future. In an industry where competition is the way of life, we look on the whole eastern part of the country as our hunting ground.

Question: How does your LNG project with Shell tie in to all that you have discussed?

Croom: It's a perfect fit with the expected increase in demand and the strategic location of our facilities to serve the East Coast. We have contracted to sell Shell Oil Company a half-interest in our subsidiary which owns a

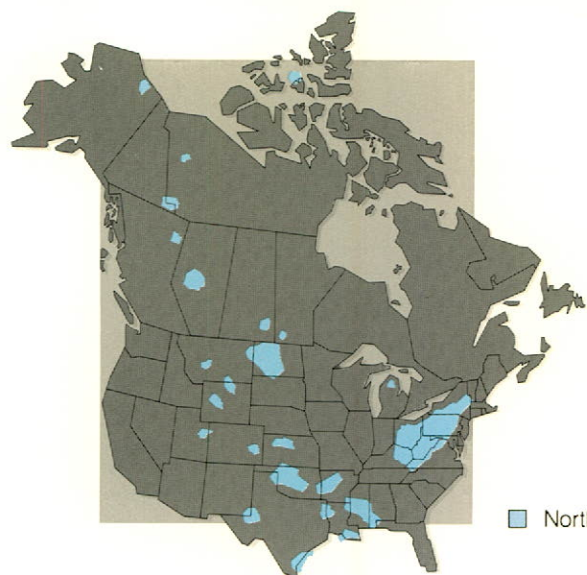
liquefied natural gas (LNG) import terminal on Chesapeake Bay, a facility that has been idle for more than eight years. That sale will take place if certain conditions are met over the next two years. It is also planned that Shell and Columbia will form a partnership to market the LNG throughout the eastern states.

Question: Can imported LNG be competitive?

Croom: Yes. LNG producers now have a realistic view of the U.S. gas market. We expect that our partnership will be competitively marketing LNG from our terminal as early as mid-1991.

Question: You've talked about building up the exploration and production segment. What is planned?

Croom: With the financial constraints we have experienced in the last few years, capital outlays for exploration and production have necessarily been reduced. For several years we were at levels only about half of what had been invested in the early 80s. We feel the time is right to invest additional capital into the acquisition and development of oil and gas reserves. Our



■ North American Acreage Holdings



10:30 AM

capital budget for 1989 is up about 70% from the previous year, and we plan to increase the budgets in the 90s.

Question: Is Columbia set up to expand its E&P program?

Croom: Definitely. First of all we have disposed of our interest in Canadian offshore east coast properties, which could have absorbed tremendous sums in the coming years without any near-term return. We are, therefore, positioned to direct our E&P investments in areas closer to our markets. We are proud to have talented people in our E&P affiliates, who are primed to step up activity. We also have a substantial acreage position in promising hydrocarbon basins.

Question: How do you translate all of the programs you have discussed into a benefit for the stockholders?

Croom: In the most fundamental way. We are committed to earnings improvements that will support dividend increases.



10:30 AM

Columbia research engineers Ed Reid and Norm Malcosky review plans for a natural gas-fueled transit bus targeted for commercial production by 1991. Higher air pollution standards taking effect at that time are expected to force current diesel engines off the road, opening broad new markets for gas in fueling bus and truck fleets.

Transmission Operations

Restructuring for the future

The transmission segment of the gas industry has been buffeted since the early 1980s by two conditions: a surplus of available supply nationwide and the FERC's policy decision to allow competitive forces to have greater influence on the business. These two conditions have forced pipeline companies and their employees to transform their traditional methods of operation and planning. They have required that they adopt a "competitive" mindset and forget years of "regulatory" response to events.

For the System's largest operating unit, Columbia Transmission, the transition has required major transformations in marketing practices, customer relations, pricing policies, and supply management. Such changes are not accomplished in just a few months, but developments in 1988 evidenced the coming together of many individual initiatives, and as the year ended the company had in place an integrated program of actions expected to restore the earnings performance of the transmission segment of the System.

Specifically, Columbia Transmission in 1988 attracted new customers in nontraditional market areas such as New England and North Carolina. In addition, Columbia Transmission neared completion of its program to restructure gas purchase contracts with nonaffiliated pipeline suppliers to better balance its supply with its obligations to serve the market and enhance its competitive position. Lastly, Columbia Transmission implemented recovery of its own and its pipeline suppliers' contract reformation costs.

Market initiatives

In spite of a continuing customer swing from sales merchant services to transportation services and competitive pressures from other gas and energy suppliers, Columbia Transmission registered strong throughput performance in 1988.

Columbia Transmission's growing marketing strength is a direct result of its efforts to extend its market areas into nontraditional service territories, intensify its marketing effort in its traditional service area and maintain competitive services and rates. Prospects for an even stronger perfor-

mance in the marketplace of the 1990s have been enhanced by a number of identifiable programs to expand Columbia Transmission's markets along the East Coast.

- Initiation of service to Delmarva Power and Light Company in Delaware and South Jersey Gas Company in New Jersey in early 1988 has proven to be successful. Deliveries to both markets exceeded 12 billion cubic feet, considerably higher than the company's expectations. These markets hold considerable promise for sustained growth.

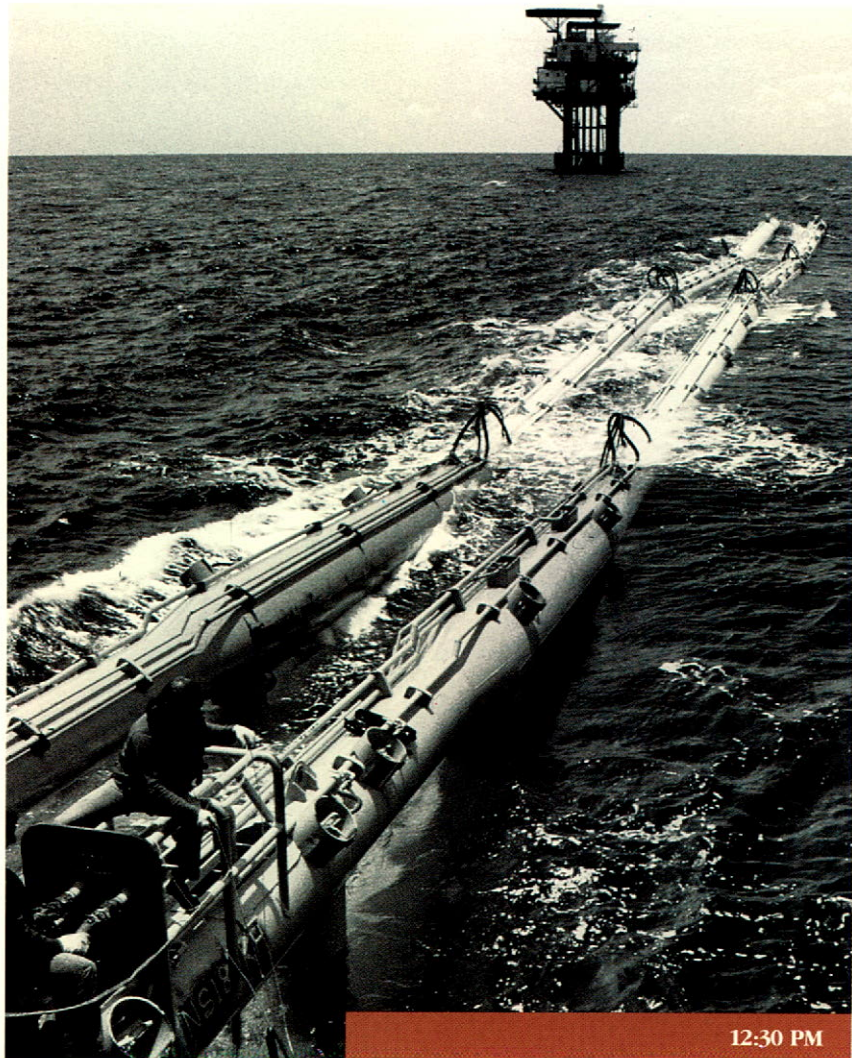
- In its expansion program into the Northeast, Columbia Transmission expects to receive environmental clearance and FERC authorization to begin construction of facilities this summer to provide new gas service to New Jersey Natural Gas Company and increased service to Elizabethtown Gas Company totaling approximately 8 billion cubic feet annually. Additionally, Columbia Transmission has recently applied to serve a cogeneration facility under construction near Westville, New Jersey, with firm transportation of 18 billion cubic feet annually.

- Marking its initial penetration into New England,

Columbia Transmission filed an application with the FERC to provide service in Rhode Island to Providence Gas Company and in Massachusetts to New England Power Company. The agreement with Providence Gas Company provides for annual sales and transportation deliveries of 15 billion cubic feet, while the New England Power Company arrangement calls for firm transportation service of 17 billion cubic feet a year to help meet increased electric generating needs and improve air quality by replacing residual fuel oil.

- In the mid-Atlantic region, Columbia Transmission has applied to initiate direct sales service to Virginia Natural Gas Company to complement the firm transportation service that began in December 1988. Annual deliveries will total approximately 2 billion cubic feet.

- And further south, Columbia Transmission, in another FERC application, is seeking authorization to extend its pipeline facilities into North Carolina to become the second interstate pipeline serving that state. The arrangement with North Carolina Natural Gas Corporation



Divers help guide a pipeline being built for Columbia in the Gulf of Mexico as it moves from the lay barge to the sea floor. The line connects the production platform to an existing Columbia line, expanding the company's offshore transportation capacity.



12:50 PM

initially provides for annual sales of 6 billion cubic feet.

In addition to its market expansion programs, Columbia Transmission continues to emphasize the competitive fundamentals required to prosper in the marketplace. In 1988, Columbia Transmission expanded its commitment to provide competitive rates and services. The company's sales rates were competitive with other pipelines, and it provided customers attractively priced transportation options. Also, Columbia Transmission bolstered its sales force and customer service capabilities which are already generating considerable benefits.

Service and supply initiatives

In 1988, Columbia Transmission moved forward with efforts to adjust its service offerings and supply portfolio to better reflect the changing needs and preferences of the market.

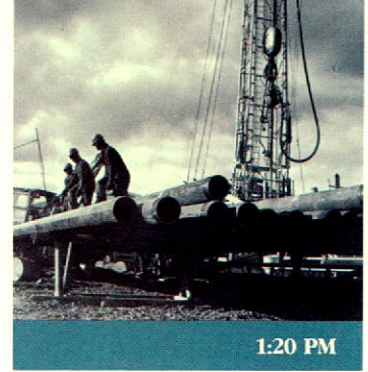
The new market initiatives are aimed explicitly at recognizing that local distribution companies and end-users are less reliant on Columbia Transmission for merchant sales and more dependent on Columbia Transmission's transportation and storage services. The

process required to restructure these complex relationships is necessarily lengthy and will ultimately have to be reflected in Columbia Transmission's tariffs and customer service agreements. Upon completion, Columbia Transmission will have defined its merchant role with much more precision and will be in an improved position to realize the value of its extensive transportation and storage operations.

As to gas supply, Columbia Transmission continued to adjust its purchase commitments consistent with its reduced merchant role. In 1988, Columbia Transmission neared completion of its comprehensive pipeline supply restructuring program. The effort is aimed at minimizing other pipelines as a source of supply, thereby reducing gas purchase costs. To maintain flexibility, Columbia Transmission is converting much of its remaining contract entitlements to firm transportation services so that it can serve markets which are dependent upon these pipelines for physical deliveries, while providing Columbia Transmission with capacity to access more competitive producer supplies in the Southwest.

Having restructured its high-cost pipeline supply contracts, Columbia Transmission will obtain future supply requirements largely from producers under long-term market-sensitive contracts. With these arrangements, Columbia Transmission can access required quantities of gas from a diversity of producing regions, maintain purchasing flexibility and exert substantial control over its gas supply costs. In the future, by virtue of its extensive pipeline capacity holdings and open access transportation, Columbia Transmission will have the opportunity to tap supplies in virtually every major domestic location, as well as in Canada. In addition, Columbia Transmission will have access to LNG which is to be delivered into the heart of its market area by Columbia LNG Corporation if the pending agreement with Shell Oil Company is completed. Columbia Transmission is constantly reassessing its supply arrangements to ensure it maintains the ability to react rapidly to changing market requirements.

During 1988, Columbia Transmission continued to address the few remaining producer contracts with



unacceptable provisions. As discussed in some detail in Note 10 of the Notes to Consolidated Financial Statements, Columbia Transmission is involved in a number of lawsuits with certain producer suppliers. Management believes that it is probable that Columbia Transmission will prevail in these proceedings and, accordingly, their resolution should not have a material adverse effect on the corporation's financial position or results of operations.

Regulatory initiatives

The System's 1987 Annual Report detailed many of the frustrating regulatory and court proceedings, including certain adverse orders issued in early 1988, which have impeded Columbia Transmission's transition into the era of increased competition. Columbia Transmission has continued to aggressively seek resolution of these troubling matters through litigation and at the negotiating table. During the last half of 1988, there was considerable progress:

Contract reformation costs

■ In July, the FERC permitted Columbia Transmission to begin collecting, subject to refund, \$281 million of its con-

tract reformation costs under the Commission's Order No. 500 procedures. Although the FERC directed that further hearings be conducted to determine the extent of Columbia Transmission's recovery of such costs, management believes that, based on prior FERC rulings and precedents, Columbia Transmission should retain substantially all amounts being collected.

■ Some of Columbia Transmission's pipeline suppliers have also filed for recovery of their contract reformation costs under Order No. 500. While the FERC has not accepted Columbia Transmission's arguments challenging the pipelines' cost allocation procedures, the Commission at the end of October gave Columbia Transmission final approval to recover these direct-billed amounts from its customers in a timely fashion. As expected, certain customers have sought court review of this approval on various grounds. Management believes the courts will affirm the FERC's approval and that all such pipeline supplier Order No. 500 costs billed to Columbia Transmission will be recovered.

Gas purchasing issues

■ Columbia Transmission's purchasing practices, as reflected in its PGA filings, continue to be challenged. Acting on the basis of hearings held in August 1988 to consider these challenges, a FERC administrative law judge in February 1989 issued an initial decision which found Columbia Transmission's conduct to be proper. However, in his initial decision, the law judge also determined that a 1985 rate settlement bars the recovery of any of the cost of over 18 Bcf of gas purchased and injected into storage inventory in 1986 and withdrawn in 1987 for sale to customers. The law judge's decision did not explicitly address an additional 27 Bcf of gas, which was purchased and injected into storage in 1986, but has not yet been withdrawn. The gas cost in question is approximately \$3.25 per Mcf. Columbia Transmission considers this decision to be inconsistent with the intent of the 1985 settlement, and takes strong exception to this initial finding. After the submission of legal briefs, this matter will go to the FERC for its consideration.

■ A separate hearing has been scheduled for the spring of 1989 to formulate a price cap to apply to gas purchases after March 31, 1987, under contracts covered by a January 1988 FERC abuse finding. The Commission is still considering various arguments advanced by Columbia Transmission which would significantly dampen the adverse impact of a price cap.

As the discussion of regulatory matters in Note 2 of the Notes to Consolidated Financial Statements indicates, considerable uncertainty remains, principally because of the complex, interrelated nature of the proceedings. Nevertheless, the recent FERC developments have, for the most part, provided additional clarification, and, in certain instances, have given Columbia Transmission added reason to be optimistic about its prospects if it were required to resolve each matter by litigation. More encouraging, however, has been the resumption of constructive settlement negotiations with customers to resolve these issues. While prepared to litigate if necessary, Columbia Transmission's long-standing preference has been to resolve these proceedings by way of settlement.

In an unrelated matter, the FERC, in an order issued in January 1989, authorized a pipeline supplier of Columbia Transmission to retroactively collect higher prices for gas it produced and sold between 1979 and 1983. The order, which permits the pipeline supplier to direct bill Columbia Transmission and other customers for the price increase based on their levels of pur-

chases during the period, is an abrupt reversal of the FERC's long-standing position that the pipeline supplier should recover the higher prices through a surcharge added to its current commodity sales rate. Columbia Transmission intends to seek reversal of this action. As Note 2 of the Notes to Consolidated Financial Statements indicates, management believes the FERC order contains a number of factual and legal flaws and that Columbia Transmission has a reasonable chance of prevailing.

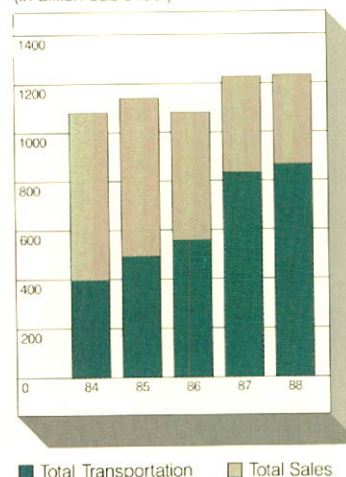
Volumes

Total throughput for the transmission segment increased only 1% in 1988 despite the fact that 1988 was approximately 11% colder than 1987. This occurred primarily because of the timing of the 1987 and 1988 heating season deliveries of prepaid gas which reduced the reported sales volumes by 49 Bcf.

Reduced sales volumes of 25 Bcf in 1988 were more than offset by the 34 Bcf increase in transportation volumes. Long-haul transportation for local distribution companies and end-users increased by 52 Bcf in 1988, while short-haul transportation volumes in the Southwest, which command a lower transportation margin, decreased by 18 Bcf.

In 1987, throughput levels were higher by 149 Bcf or 14% over 1986 levels. The 252 Bcf or 43% increase in transportation volumes more than offset the sales decline of 103 Bcf or 21% experienced in 1987. The sales decline is primarily attributable to customers purchasing cheaper gas on the spot market. As was the case in 1988, the increase in trans-

Transmission Gas Throughput
(in billion cubic feet)



portation volumes reflects customers taking advantage of Columbia Transmission's competitive transportation rates to transport spot market gas supply.

Revenues

Total revenues increased by \$87.6 million in 1988. The increase is attributable to \$183.7 million of revenue adjustments which relate to the passthrough of upstream pipeline take-or-pay and contract reformation costs and other unbilled gas costs, neither of which affect operating income, offsetting the effect of recorded estimated rate refunds.

Excluding these revenue adjustments, revenues decreased \$122 million in 1988 primarily due to the impact of lower average prices and the shift in throughput from sales to transportation. Sales volumes generate higher revenue per unit of throughput than do transportation volumes because the commodity cost of the gas is included in the sales price. The reduction in prices reflects the lower prices placed into effect on April 1, 1987. Significantly higher sales prices, fixed by the 1985 cus-

Transmission Financial Results

Gas Transmission (\$ in Millions)	1988	1987	1986	1985	1984
Unaffiliated Revenues	1,080.3	1,083.2	1,464.6	1,679.1	1,919.3
Intersegment Revenues	777.8	896.9	1,119.1	1,551.9	1,543.5
Adjustments*	183.7	(25.9)	(92.4)	—	—
Total Revenues	2,041.8	1,954.2	2,491.3	3,231.0	3,462.8
Operating Income (loss)	148.6	179.1	167.6	(326.4)	224.1
Depreciation and Depletion	90.6	102.2	114.6	136.9	120.7
Capital Expenditures	102.6	100.9	60.7	55.6	96.2
Identifiable Assets	3,251.3	3,127.0	3,362.1	3,630.3	3,045.2

*The revenue adjustments relate to the passthrough of upstream pipeline take-or-pay and contract reformation costs and other unbilled gas costs, neither of which affect operating income, offsetting the effect of recorded estimated

rate refunds. The portion of these adjustments applicable to affiliated distribution companies is eliminated in consolidation. Prior period revenues have been reclassified to conform to the 1988 presentation.

tomor settlement agreement, were in effect during the first quarter of 1987.

Total revenues declined significantly in 1987 for similar reasons. Although total throughput was up by 14% in 1987, sales volumes were down by 21%.

Operating income

Operating income in 1988 was \$148.6 million compared with \$179.1 million in 1987 and \$167.6 million in 1986.

The decrease in operating income in 1988 was due to:

- The beneficial effect in 1987 of a prior rate settlement.
- Rate refund adjustments in 1988 relating to issues before the FERC.

- Competitive pressures on margins. Additional flexing of transportation rates was required in 1988 to meet oil and gas-to-gas competition.

- Lower margins reflecting the full year's impact of lower federal income tax rates. This decline is offset in income tax expense.

These reductions were partially offset by:

- The recovery of contract reformation costs by Columbia Transmission and the associated reduced amortization of these prepaid gas purchased

costs from the prior years. Columbia Transmission placed rates into effect August 1, 1988, under Order No. 500, subject to refund, to recover \$281 million of its contract reformation costs over a five-year period. Of this amount, \$94 million is to be collected through nonvolumetric direct billing charges and \$187 million through volumetric surcharges on both sales and transportation volumes. The \$94 million portion has been treated as an accounts receivable and a reduction to prepayments for producer contract modifications.

Contributing to the \$11.5 million increase in operating income in 1987 was the 14% improvement in throughput and the reduction to 1986 earnings due to a \$65 million reserve for unrecovered gas purchased costs. The increase was offset in part due to:

- Recording increased unrecovered gas costs caused by March 1987 and January 1988 regulatory rulings, retroactive to April 1, 1986, relating to the ability of Columbia Transmission to recover funds expended to reform certain gas purchase contracts as

well as increases in other rate refund reserves.

- Increased operation and maintenance costs.
- Reductions in rates to reflect lower federal income tax rates, which were offset in net income through lower income tax expense.



1:40 PM

Columbia environmentalist Dr. Don Gartman checks the work site on a pipeline construction project in southern Pennsylvania. As pipelines are built to serve new markets, care is taken to protect land and water resources and to exceed regulatory standards.

Distribution Operations

As the distribution companies prepare for the 1990s, management is focusing on positioning prices, services and supply portfolios to meet the needs in a highly competitive market. Management continues to implement additional operating efficiencies that will allow profitable growth in an era of increased competition and an increasingly complex regulatory environment.

Among the accomplishments for the distribution companies in 1988 were:

- Continuation of economic development efforts which contributed to attracting \$1.46 billion of new investment and 10,300 new jobs in their service area.

- Completion of new interstate pipeline interconnections that provide increased supply flexibility through access to two of the largest interstate pipeline systems.

- Execution of the distribution companies' first long-term contract for gas supplies from a Southwest producer as part of a gas procurement program aimed at providing a "best cost" secure supply of gas.

- Significantly improved earnings over 1987. As a group, the distribution com-

panies recorded the second highest earnings level in their history.

- The merger of two Virginia distribution operations—Columbia Gas of Virginia into Commonwealth Gas Services. This merger will provide the Richmond-based company with improved services and significant operating efficiencies through economies of scale.

- Acquisition of Lynchburg (Va.) Gas Company. Lynchburg Gas, which serves approximately 10,400 customers, will be merged with Commonwealth Gas Services in mid-1989. The combined company will serve more than 117,000 customers.

Pricing and regulatory environment

Columbia's distribution companies are among the industry's leaders in design of services and their pricing, the central element of a successful marketing strategy. In the past several years, they have made significant progress in unbundling rates and allocating expenses to the customer classes responsible for those expenses.

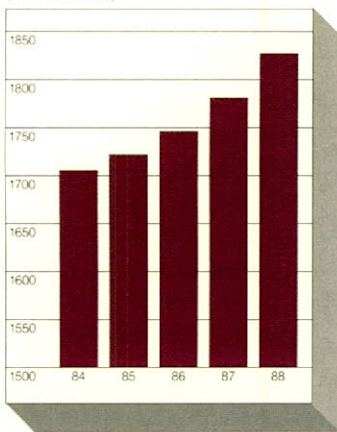
These service design changes have allowed the dis-

tribution companies to offer a menu of services to fit customers' specific needs in the highly competitive industrial market. Examples are flexible transportation rates to meet competition from alternate fuels, programs in which the distribution companies act as agent for the end-user in acquiring gas supplies and inexpensive mainline service pricing for customers within close proximity to an interstate pipeline.

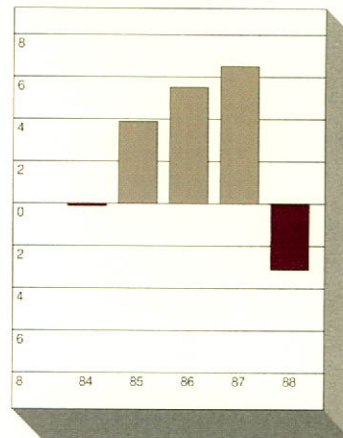
In accordance with FERC Order No. 500, pipelines are pursuing recovery from their customers of producer take-or-pay settlement and contract reformation costs. The direct billings to the distribution companies principally relate to their share of the take-or-pay and contract reformation costs of Columbia Transmission's pipeline suppliers and to a lesser extent to Columbia Transmission's own Order No. 500 direct billings.

These direct billings could be approximately \$160 million over five years. Columbia's distribution companies have been actively working with their respective state utility commissions and consumer groups to assure they are allowed full and timely recovery of these costs while, at the same time,

Number of Retail Customers Served at Year End
(in thousands)



Degree Days
(variation from normal in percent)



■ Warmer than Normal
■ Colder than Normal

assuring that the prices of their distribution services are competitive. Columbia's distribution companies in Virginia and Kentucky have received state commission approval to recover the billings related to these costs. Columbia Gas of Maryland and Columbia Gas of Ohio are recovering these costs subject to refund as is Columbia Gas of New York on a partial basis. Columbia Gas of Pennsylvania is deferring these costs pending review by its state utility commission.

Market expansion

Economic conditions vary within the six-state area served by the distribution companies. The outlook is especially positive in portions of Ohio, Kentucky and Virginia, which are served by the distribution companies.

The distribution companies' strong growth of 13.1 billion cubic feet in industrial throughput in 1988 is indicative of this resurgence, with three-fourths of this industrial growth occurring in Ohio. This additional industrial throughput is the largest increase in nearly two decades.

Ohio is not only moving to restructure its economy, but is also expanding such traditional manufacturing industries



Columbia educational specialist Bernadette Guest explains the company's "latchkey" information program to fourth grade elementary school pupils in Ohio. Part of Columbia's educational assistance activities, the program provides guidance to children who must be alone at home after school hours.

Distribution Financial Results

Gas Distribution (\$ in Millions)	1988	1987	1986	1985	1984
Revenues	1,678.9	1,619.1	1,907.3	2,152.8	2,459.6
Adjustments*	109.9	1.0	(46.2)	—	—
Total Revenues	1,788.8	1,620.1	1,861.1	2,152.8	2,459.6
Operating Income	140.7	108.6	184.7	135.7	129.2
Depreciation and Depletion	48.5	47.1	45.9	38.3	30.5
Capital Expenditures	110.4	105.8	101.0	80.8	76.6
Identifiable Assets	1,576.9	1,488.4	1,472.0	1,519.0	1,315.5

*The revenue adjustments relate to: (1) the passthrough of upstream pipeline take-or-pay and other unbilled gas costs from the affiliated pipeline; (2) the passthrough of estimated rate refunds to be received from the affiliated pipeline; and

(3) rate refunds related to distribution operations. Neither items (1) or (2) affect operating income. Prior period revenues have been reclassified to conform to the 1988 presentation.

as steel, fabricated metals, petroleum and chemicals.

Major new business in the industrial sector includes a joint venture between Ford and Nissan at Avon Lake, Ohio; the expansion of Cushwa Brick in Maryland and the displacement of coke utilized in blast furnaces by U.S. Steel in Lorain, Ohio. These projects will provide nearly 4 billion cubic feet of new annual throughput.

Population growth in Kentucky, Ohio and Virginia is expected to support a high level of new housing starts in the metropolitan areas. The Lexington, Kentucky, area is beginning to enjoy the benefits associated with the expansion of the Toyota auto manufacturing facility, which is served by one of the distribution companies. Virginia continues to exhibit a strong economy, especially in the eastern half of the state. Wages and housing starts should remain strong around the Washington, D.C., area.

Cogeneration activity is increasing in Columbia-served areas. Gas deliveries by distribution companies to cogeneration customers is expected to increase from 1 billion cubic feet in 1988 to over 6 billion

cubic feet in 1989. Based on cogeneration plants under construction or in the design phase, gas deliveries to cogeneration systems could increase to more than 20 billion cubic feet by the early 1990s.

Competition

Competitively priced sales and transportation services have enabled the distribution companies to deal successfully with the bypass threat. However, they continue to closely monitor this situation.

In cases of competition from alternate fuels, the distribution companies have been successful in retaining load through innovative design of services and their pricing. The standing of natural gas as a premium, economic, efficient and environmentally safe fuel makes it particularly suited for many industrial applications.

Research for new markets

Columbia's research program continues its focus on the development of innovative gas-fired equipment to open new gas markets and to deepen penetration in existing markets. Examples of encouraging progress include:

- Plans and design work were completed for a new transit bus which will operate

on natural gas only. The bus will be tested by the Central Ohio Transit Authority in Columbus, Ohio, beginning in mid-1989 to prove its ability to provide acceptable and economical service, while meeting stricter pollution standards.

- Gas-heated radiant tubes are being developed for high-temperature industrial processes which require a controlled atmosphere in the furnace. Such systems could open up substantial market applications.

- Columbia and its sponsors are developing a catalytic process using natural gas to remove sulfur oxides and nitrogen oxides from the flue gases of utility coal boilers. A field test will be made in 1989.

- Columbia is holding discussions with potential licensees for the manufacturing and marketing of its internally developed absorption heat pump technology.

Volumes

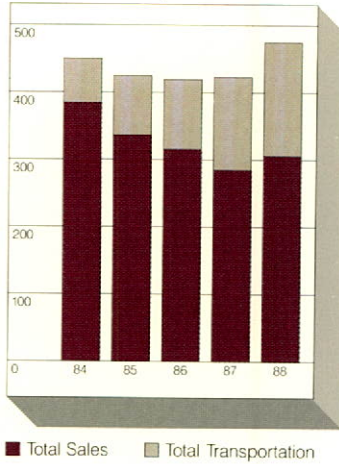
Total throughput increased 48 Bcf or 11% in 1988.

Sales volumes rose 29 Bcf in 1988 primarily because of colder weather.

Transportation volumes rose 19 Bcf in 1988 due to:

- Market-responsive transportation rates and services

Distribution Gas Throughput
(in billion cubic feet)



offered to compete primarily with the cost of alternate fuels.

- The continued availability of lower-cost spot market gas.
- Aggressive marketing programs which increased commercial and industrial load.
- Continued economic recovery in the service territory, especially in the steel industry.

Total throughput increased 1% in 1987. The availability of spot market gas for industrial and large commercial customers helped increase volumes transported by 36 Bcf in 1987. The low cost of spot gas, coupled with competitive transportation rates, allowed the distribution companies to regain most of the load lost earlier to price competition primarily from alternative fuels.

Sales volumes for 1987 were lower than 1986 because of warmer weather as average temperatures were slightly warmer than the previous year and 6% above normal. Additionally, sales volumes were lower because of switching to transportation service.

Revenues

Total revenues increased \$168.7 million in 1988. Included in total revenues are revenue adjustments which

relate to the passthrough of upstream pipeline take-or-pay and other unbilled gas costs from the affiliated pipeline and the passthrough of estimated rate refunds to be received from the affiliated pipeline, neither of which affect operating income. Also included in these revenue adjustments are rate refunds related to distribution operations.

Excluding revenue adjustments, revenues increased \$59.8 million in 1988 primarily because of colder weather and the effect of a rate refund reserve recorded in 1987. These improvements were partially offset by lower margins, reflecting reductions in federal income tax rates and rate reductions.

Total revenues decreased in 1987 although throughput remained steady. The decline in total revenues was attributable to lower average sales rates reflecting lower gas costs and increasing replacement of industrial and commercial sales revenues with transportation service revenues, which exclude the cost of gas.

Operating income

Operating income was higher by \$32.1 million in 1988 primarily because of colder weather and the effect of a rate refund reserve recorded in 1987.

This improvement occurred despite higher depreciation and other operating expenses, net rate reductions and lower federal income tax rates reflected in revenues, which were offset in net income through lower income tax expense. The higher operating expenses must be recovered in rates if the distribution operations are to maintain an adequate level of earnings.

Operating income in 1987 declined \$76.1 million. This decline was primarily caused by a favorable adjustment recorded in 1986 related to the recovery of certain uncollectible amounts previously expensed. Additionally, warmer weather, the recording of a rate refund reserve, rate reductions and lower federal income tax rates reflected in revenues contributed to the decline. These reductions were partially offset by increased operating income from transportation services.

Oil and Gas Operations

Low wellhead prices continue to adversely affect oil and gas operations. Nevertheless, the System has been successful in maintaining its reserve position.

Market conditions

Low wellhead prices continued to depress the earnings of the System's exploration and production operations; however, the decline in gas prices in the past several years appears to have bottomed out. The average price for domestic gas production was \$1.74 per Mcf in 1988 compared with \$1.68 per Mcf in 1987 while prices for domestic oil production and other liquids declined to \$13.66 per barrel from \$15.99 per barrel in 1987. Gas prices for the System's Canadian operations also stabilized while prices for oil and other liquids declined to \$12.10 per barrel compared with \$14.66 per barrel in 1987.

Spot gas prices exhibited a similar pattern to that experienced in the last few years by strengthening in the heating season and then softening during the months of off-peak demand. During the summer and fall, oil prices approached the depressed levels of 1986

due to excess world supply and adequate inventories. However, with the November 1988 production accord reached by the OPEC members, West Texas Intermediate oil prices rebounded by \$5 per barrel to over \$18 per barrel at year-end 1988.

As in the past two years, production in 1988 was slightly below full deliverability. Some of Columbia's working interest partners have decreased production when prices were felt to be abnormally soft. To maximize revenue, Columbia, to the extent possible, has been scheduling well workovers in the summer when prices are lower.

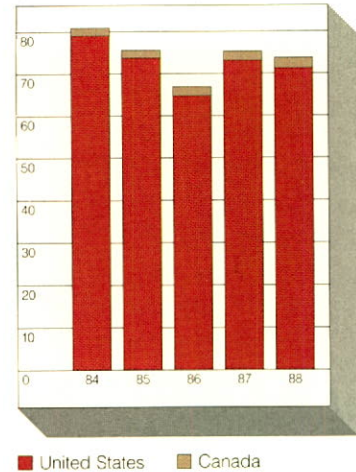
Long-term outlook

While oil and gas prices remain considerably below the levels earlier in the decade, the prospect for future price increases is favorable.

Growth in oil consumption, especially within developing nations, will cause world demand for oil to increase. Although oil prices are expected to remain volatile in the next few years, the declining crude production from non-OPEC sources should put upward pressure on oil prices.

The prospect for higher domestic gas prices is partic-

Gas Production
(in billions of cubic feet)

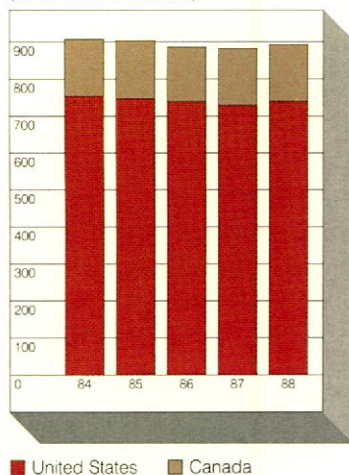


ularly favorable. The depressed wellhead prices of the past several years have severely reduced drilling activity. Consequently, nationwide gas reserve additions have not replaced production. As the current excess deliverability of gas comes into balance with demand, wellhead prices should continue to strengthen. In addition to a tightening of supply, the demand for natural gas remains strong because of its favorable environmental impact compared to other fossil fuels and its lower associated capital requirements for utilization as compared to other forms of energy.

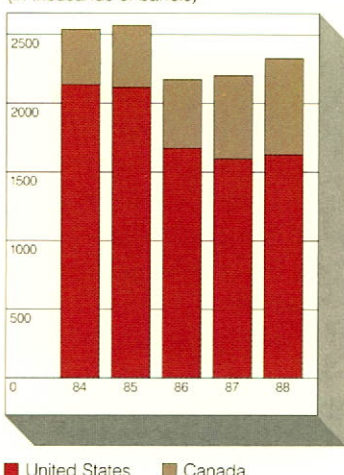
Strategy

Columbia's strategy for its exploration and production operations is to ensure that the segment is positioned to participate in the turnaround when product prices begin to escalate. The System has demonstrated itself to be a cost-efficient explorer and developer of hydrocarbons. Systemwide finding costs are comparable to, or superior to, industry averages. With the prospect for higher prices and improved profitability, the System is committed to increasing the relative size of the oil and

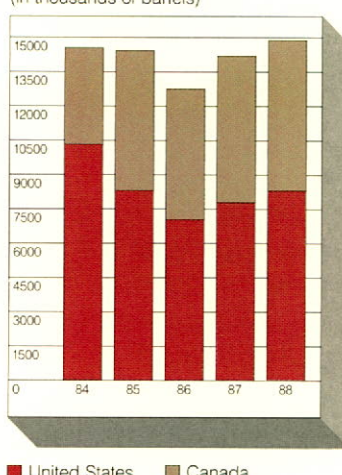
Gas Reserves
(in billions of cubic feet)



Oil Production
(in thousands of barrels)



Oil Reserves
(in thousands of barrels)



gas segment to more nearly equal the System's transmission and distribution operations. Oil and gas assets currently comprise slightly in excess of 20% of the System's net plant.

Columbia will be expanding its exploration, development and production activities in the Gulf of Mexico, the Southwest and in the Williston and Rocky Mountain basins while at the same time pursuing opportunities for acquisitions.

The System has an extensive acreage position in the Appalachian basin where its reserves represent approximately 10% of the basin's total. The foundation of the System's Appalachian operations is the steady deliverability of its 6,800 producing wells. In addition, geological and geophysical evaluations have identified over 500 economically drillable well locations on the System's 2.8 million net acreage position in Appalachia.

The System will continue to selectively explore in the Western provinces of Canada. The recent passage of the Free Trade Agreement between Canada and the U.S. will help assure Canadian producers access to the U.S. markets. Several major pipeline expan-

sions have been announced to bring additional Canadian gas to the California and Eastern U.S. markets. These projects will help Columbia Canada to market its reserves including a 33% share of 50 million cubic feet per day capacity from the idle Kotaneelee field located in the southern Yukon Territory.

In September 1988, Columbia Canada sold its eastern offshore Canadian oil and gas properties for \$83 million to Chevron Canada. The major asset in the sale was Columbia's 5.47% working interest in the Hibernia block. Retention of these properties would have required the System to concentrate a disproportionate share of its future oil and gas capital investments into a single project with expected production delayed to 1995.

Drilling and production activities

Systemwide total proved gas reserves increased to 898 Bcf in 1988. Domestic gas reserves increased by 1%, primarily because of 68 Bcf of revisions to prior estimates. A total of 43 Bcf of the revisions is attributable to an extension of the economic productive reserve life of wells in the Appalachian basin. The balance of the revi-

sions is attributable to favorable changes in operating conditions and reservoir performance for its Southwest wells. Gas reserves in Canada increased 4%. Total System oil reserves at year end also increased by 5%.

Capital expenditures were down 13% in 1988 after increasing 22% in 1987 from 1986 levels. Expenditures in 1989 are expected to be 70% higher than in 1988.

Columbia maintained an active exploration and development program in 1988 in North Dakota, Wyoming, the Mid-Continent and the onshore and offshore Gulf of Mexico regions.

The Appalachian drilling program had to be reduced in 1988 because of delays in establishing new long-term markets and securing transportation capacity. Near-term plans of Columbia include efforts to evaluate prospects in the Michigan and Illinois basins in addition to its traditional drilling program in Appalachia. Drilling opportunities also include joint venture prospects involved in the production of methane from coal seams in southern West Virginia. This project would benefit from tax credits of as

Oil & Gas Financial Results

Oil and Gas (\$ in Millions)	1988	1987	1986	1985	1984
Unaffiliated Revenues	130.4	112.5	65.0	156.2	98.8
Intersegment Revenues	31.3	51.2	106.8	97.7	193.5
Total Revenues	161.7	163.7	171.8	253.9	292.3
Operating Income	35.2	41.2	14.8	100.9	133.9
Depreciation and Depletion	70.7	66.1	94.6	84.7	92.4
Capital Expenditures	71.1	81.5	66.8	78.2	92.1
Identifiable Assets	709.1	779.9	746.8	766.7	836.7

much as \$.80 per dekatherm as an incentive for producing natural gas from nontraditional sources such as Devonian shale and coal seams.

Columbia Canada will drill the large Crow River prospect in northeast British Columbia in 1989. Columbia Canada has a 65% working interest in a \$9 million well which is located 25 miles southwest of the Kotaneelee field. Elsewhere, Columbia Canada's efforts will be progressively shifting from the search for oil in the medium-depth areas of Alberta to the search for gas in the deeper basin areas fronting the Rocky Mountains in Alberta and British Columbia.

Revenues and volumes

Total revenues declined negligibly in 1988 after decreasing 5% in 1987. Unaffiliated revenues rose in 1988 and 1987 as more of the production was being sold on the spot market at prices higher than being offered by affiliates.

The average domestic gas prices for the last two years have not materially changed after falling 20% from the 1986 rates. The modest increase in price received for southwest gas production in 1988 was partially offset by a decline in the price for Appalachian gas. Canadian gas prices also leveled off in 1988 after declining 14% in 1987. Average System oil prices fell 15% per barrel in 1988 after rebounding slightly in 1987 from the sharp decline in 1986.

Gas production has not materially changed in the last three years. Modest increases in oil production were achieved in both 1988 and 1987.

Operating income

The decline in 1988 operating income reflects the \$6.9 million writedown of the Canadian oil and gas assets. The writedown in the carrying value of the assets was required because of the low oil and gas prices in the second quarter of 1988. Operating income increased significantly in 1987 due to writedowns in 1986 of the Canadian assets totaling \$26.6 million.

In accordance with full cost accounting rules, the entire proceeds from the sale of the eastern Canadian properties have been credited to the Canadian cost center. As a result, operating income will improve approximately \$2.5 million annually due to the effect of lower depletion expense in the future.

Other Operations



In pursuit of its mission to be active in diversified energy markets related to the natural gas business, the System conducts operations in several other fields.

Propane marketing

Propane ranks fourth in supplying the nation's energy needs. The market for this versatile fuel has been growing steadily since 1982, primarily in suburban and rural areas beyond natural gas mains.

Columbia Hydrocarbon Corporation markets propane to retail customers primarily in Ohio and Pennsylvania. During 1988, Columbia Hydrocarbon Corporation sold its fractionation plant in order to concentrate on the retail market for propane.

Commonwealth Propane, Inc., is a major propane marketer in Virginia, with a well-balanced mix of residential, agricultural, industrial and commercial customers. During 1988, Commonwealth Propane shipped approximately 31 million gallons of imported propane from Atlantic Energy, Inc.

Coal activities

During 1988, Columbia continued to sublet its coal properties. Approximately 25,000 acres, consisting of some 35 million tons of recoverable coal reserves, have been leased to a company which plans to start production in the second quarter of 1989 at the rate of 500,000 tons per year. A number of small- and medium-sized reserve blocks have been delineated and are now being offered for sale or lease to independent operators for development.

Columbia sold its Kiah Creek mineral interest of approximately 100 million tons of coal in 1987. Columbia retains an undivided 50 percent ownership in 200 million tons of reserves dedicated to the Wayne County, West Virginia, coal mining venture discontinued in 1984. In addition, Columbia owns 450 million tons of other low-sulfur coal reserves, some of which are now leased to others for development.

Cogeneration investment

Cogeneration is the simultaneous production of electricity and useful thermal energy from a single, primary fuel source, such as natural

gas. According to the Gas Research Institute, by the year 2000, cogeneration will supply more than 10 percent of the nation's electricity needs.

Cogeneration Partners of America (CPA) provides Columbia with equity participation in cogeneration projects. It also offers Columbia opportunities to increase affiliated production company revenues and throughput on its pipeline and distribution system, by supplying natural gas to projects CPA develops. CPA is jointly owned by Columbia's TriStar Ventures and a subsidiary of Atlantic Energy, Inc., a major electric utility in New Jersey.

As of year end, a cogeneration plant at Crozer-Chester Medical Center was in operation and three other cogeneration plants were in final stages of construction.

CPA has several other projects in various stages of development, including natural-gas-fired plants in Pedricktown, New Jersey, and Binghamton, New York.

These projects, which include cogeneration for Fortune 500 chemical companies and major paper operations, could ultimately consume

Other Operations Financial Results

Other Operations (\$ in Millions)	1988	1987	1986	1985	1984
Unaffiliated Revenues	49.2	53.0	59.2	99.7	146.2
Intersegment Revenues	63.3	55.6	58.7	101.5	156.1
Total Revenues	112.5	108.6	117.9	201.2	302.3
Operating Income (loss)	4.6	5.2	5.2	11.2	(51.9)
Depreciation and Depletion	3.0	4.6	5.2	7.6	7.5
Capital Expenditures	23.8	10.6	3.8	5.3	7.2
Identifiable Assets	98.2	101.4	100.0	119.2	119.9

more than 10 Bcf per year of natural gas.

Revenues

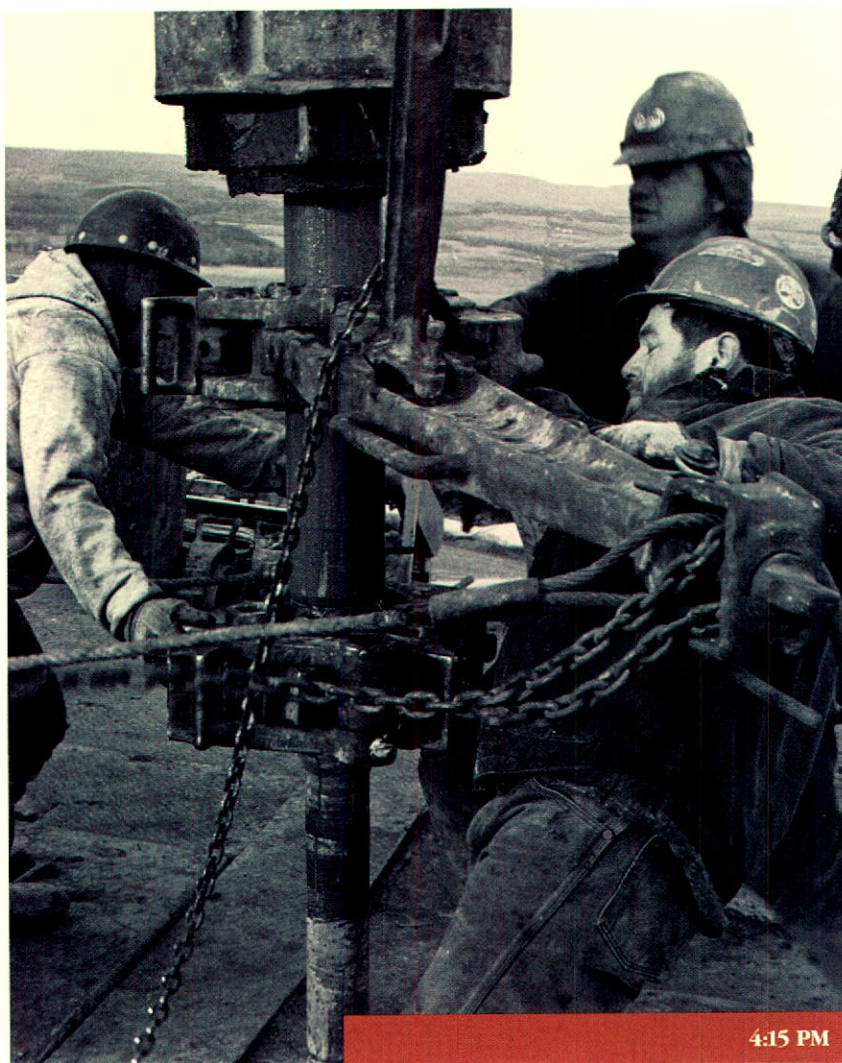
Unaffiliated revenues decreased in 1988 primarily due to the decline in revenues brought about by the sale of the fractionation plant in 1988. This decrease was partially offset by an increase in propane sales.

Unaffiliated revenues declined in 1987 due to the discontinuance of synthetic gas production as of March 31, 1986. Synthetic gas revenues were \$12.2 million in 1986. This decline was partially offset by an increase in revenues from propane operations in 1987, due largely to an increase in spot market sales.

Operating income

Operating income for 1988 declined due to the sale of the fractionation plant. This decline was partially offset by an increase in operating income from the propane operations resulting from acquisitions and colder weather.

Operating income was unchanged in 1987 as depressed propane sales prices offset the effect of higher sales.



4:15 PM

Drilling continues on a Columbia well probing for gas in northern Pennsylvania. Columbia's exploration efforts are expected to increase in 1989.

Consolidated Earnings Review

Earnings on common stock

Earnings on common stock for 1988 were \$111.1 million or \$2.46 per share compared with 1987 earnings of \$100.5 million or \$2.30 per share and 1986 earnings of \$87.9 million or \$2.12 per share before extraordinary charges totaling \$12.6 million or \$0.30 per share. The 1986 extraordinary charges resulted from premiums paid to refund high-cost debt and an additional loss incurred in connection with the prior sale of a distribution subsidiary.

The \$10.6 million earnings increase reflects much stronger distribution segment results, essentially flat oil and gas results, slightly lower transmission results and significantly lower results in the other segments.

Gas distribution segment earnings of \$63.1 million in 1988 were \$23.8 million over 1987 earnings, reflecting colder weather conditions. The weather, which was 11 percent colder in 1988 than in 1987, resulted in higher sales and transportation service. Additionally, a charge against 1987 earnings of \$5.1 million related to a rate refund by the Ohio distribution subsidi-

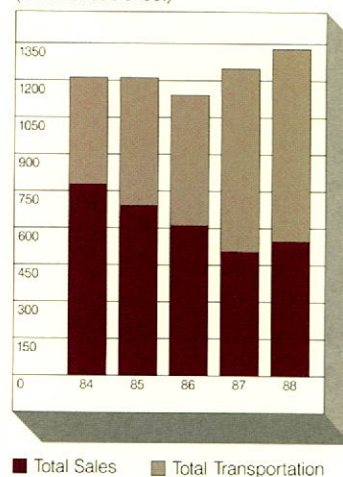
ary benefited the year-to-year comparison. Partially offsetting the improved results were higher depreciation and other operating expenses.

Earnings from the transmission segment declined \$1.1 million from the prior year to \$38.1 million. Contributing significantly to these results were recovery of contract reformation costs by Columbia Transmission under the FERC's Order No. 500 and the associated reduced amortization of these prepaid gas purchased costs. This was offset by the beneficial effect in 1987 of a prior rate settlement, by current year rate refund adjustments and by competitive pressure on margins, among other factors.

Earnings in the oil and gas segment were \$8.7 million, relatively unchanged from 1987 as production rates were essentially equal. Average prices for the year, while strengthening in the fourth quarter, were not significantly different than 1987. A \$6.9 million writedown of the Canadian oil and gas assets was required because of the low oil and gas prices in the second quarter of 1988.

Earnings from other operations of \$1.2 million in 1988

Total System Gas Throughput
(in billion cubic feet)



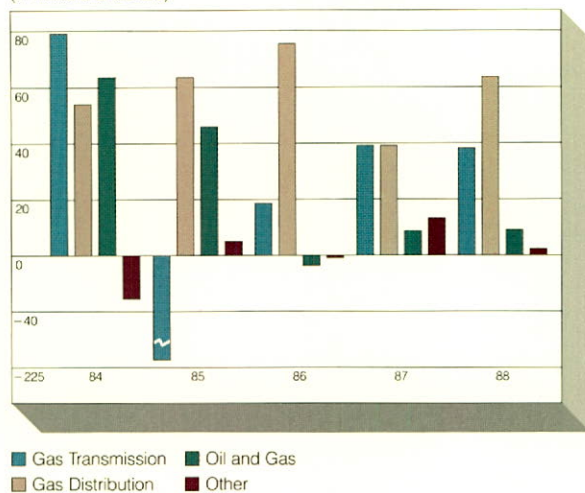
were \$11.8 million lower than in 1987. Largely accounting for this decline was the 1987 sale of certain coal interests, which produced earnings on common stock of \$9.1 million.

Revenues

Gas operating revenues increased in 1988 primarily as a result of the recording of receivables for the recovery of upstream pipeline supplier take-or-pay and contract reformation costs and colder weather. This was partially offset by a reduction in average sales prices which reflected significantly reduced gas costs and, in turn, enabled Columbia Transmission and the affiliated distribution companies to reduce their commodity sales prices. Sales revenues also continued to decline as sales volumes were replaced with transportation volumes.

Gas operating revenues declined in 1987 mainly because of lower average sales prices. Sales revenues declined due to the replacement of sales volumes with transportation volumes. Additionally, sales volumes declined in 1987 as a result of warmer weather that caused a significant reduction in

Earnings by Segment before Extraordinary Charges
(in millions of dollars)



usage by heating customers.

Both transportation revenues and other revenues were up slightly in 1988. Transportation revenues, excluding adjustments, were up 40% in 1987 due to a substantial increase in transportation volumes. Other revenues in 1988 were up \$3.4 million due to higher revenues from the sale of propane and other hydrocarbons.

Expenses

Products purchased, mainly gas costs, rose in 1988 primarily due to the effect of costs recognized to reflect the passthrough of upstream pipeline supplier take-or-pay and contract reformation costs and the effect of colder weather. Gas purchased costs decreased in 1987 and 1986 due to lower sales volumes as well as a significant reduction in unit costs.

Operation and maintenance expenses increased 5% in 1988 and 7% in 1987 after adjusting 1986 expenses, which included a reduction of \$31.1 million which resulted from favorable court actions related to the right to recover the cost of previously expensed uncollectible accounts. Depreciation and depletion declined 3% in 1988 and 15% in 1987. The decrease in 1987 depreciation

and depletion is primarily due to lower depreciation rates applicable to transmission properties.

Interest income and other, net

Interest income and other, net decreased \$7.8 million in 1988 and increased \$12.6 million in 1987. The primary factor influencing both years was the \$13.8 million realized from the sale of certain coal interests in 1987.

Interest expense and related charges

Interest expense and related charges decreased in 1988 and 1987 due largely to completion in 1987 of the amortization of debt discount on producer settlement obligations. Long-term debt interest also declined in both 1988 and 1987 as a result of continued refunding of high-cost debt.

Income taxes

Income taxes, as detailed on the Statements of Consolidated Taxes, decreased \$14.4 million and \$13.7 million in 1988 and 1987 respectively, primarily due to the effect of the reduction in the federal corporate income tax rates to 34% and 40%, respectively, and the effect of a change

in income tax rates on certain deferred taxes previously provided.

In 1987 and 1988, the Financial Accounting Standards Board (FASB) issued pronouncements regarding accounting for income taxes. The Corporation expects to adopt these pronouncements effective January 1, 1990, although early adoption is permitted, and does not plan to restate prior periods. Among other things, these pronouncements require immediate financial statement recognition of changes in tax regulations by redefining as liabilities the amounts previously recognized as deferred tax credits arising from the measure of the difference between pre-tax accounting income and statutory income for tax purposes.

These pronouncements also require that the cumulative effects on accrued future tax liabilities of future tax rate changes be recorded in current earnings except for rate regulated entities which follow the accounting and reporting requirements of Statement of Financial Accounting Standards No. 71 of the Financial Accounting Standards Board, such as the Corporation's distribution subsidiaries.

The Corporation continues to analyze the effects of adopting this statement. A substantial one-time benefit to non-cash earnings is expected for the Corporation's unregulated operations in the year of adoption. Regulatory commissions continue to analyze the impact of lower income tax rates and implementation of their own rules for determining when excess deferred taxes will reduce customer rates. The FASB is in the

process of providing guidance on the implementation issues as a result of concern expressed by preparers and auditors of financial statements about the degree of complexity involved in applying the provisions of the pronouncements. Until such guidance is provided, effects of adopting the new method of accounting cannot be reasonably determined.

Effects of inflation

Because the Corporation's subsidiaries are engaged in capital-intensive lines of business, the cumulative effects of inflation require substantially greater investment to replace existing productive capacity. However, such replacements occur over extended periods and revenues generally have been adequate to recover plant investment.

During periods of high inflation, operating cost increases generally are not concurrently reflected in increased revenues due to the delays inherent in the rate making process governing the Corporation's regulated subsidiaries. Recently, inflation rates have been increasing and most of the Corporation's distribution subsidiaries have planned rate filings for 1989 to recover current costs.

Common stock prices and dividends

The common stock of The Columbia Gas System, Inc., is listed on the New York Stock Exchange, Philadelphia Stock Exchange and Toronto Stock Exchange under the symbol CG. At December 31, 1988, there were 92,770 stockholders of record. The table to the right shows the dividends paid and the price

Throughput and Revenues	1988	1987	1986
Sales (billion cubic feet):			
Residential	195.5	175.1	178.8
Commercial	85.6	79.8	87.2
Industrial	26.9	22.4	47.7
Wholesale	220.8	214.8	283.6
Other	22.5	18.9	9.2
Total Sales	551.3	511.0	606.5
Total Transportation Volumes	779.4	745.8	541.5
Total Throughput	1,330.7	1,256.8	1,148.0
Gas Operating Revenues (\$ in millions):			
Residential	1,108.2	1,033.3	1,115.6
Commercial	448.0	426.9	502.7
Industrial	113.1	104.4	223.6
Wholesale	794.7	879.3	1,321.5
Other	40.6	28.2	16.1
Transportation	342.1	306.8	218.7
Adjustments*	190.2	(32.6)	(92.4)
Total Gas Sales and Transportation Operating Revenues	3,036.9	2,746.3	3,305.8
Other Operating Revenues	92.0	88.6	90.3
Total Operating Revenues	3,128.9	2,834.9	3,396.1

*The revenue adjustments relate to the passthrough of upstream pipeline take-or-pay and other unbilled gas costs offsetting the effect of recorded estimated rate refunds.

Quarter Ended	Market Price			Quarterly Dividends Paid
	High	Low	Close	
	\$	\$	\$	¢
1988				
December 31	36½	33¾	34½	50
September 30	35	30¼	33½	50
June 30	33¾	26¾	32½	50
March 31	44¾	26¾	27¾	79.5
1987				
December 31	52¼	35½	40¼	79.5
September 30	56½	47¾	51¼	79.5
June 30	51½	44	50½	79.5
March 31	56¼	45½	48¾	79.5



ranges of the Corporation's common stock, by quarters, for the last two years.

Liquidity and capital resources

Cash from operations decreased from \$684.2 million in 1987 to \$453.8 million in 1988. This decrease is primarily attributable to an increase in federal tax payments, payments made to customers by Columbia Transmission to satisfy a liability recorded in prior years under the 1985 customer settlement agreement and an increase in working capital.

On October 3, 1988, the Corporation redeemed all outstanding shares of its three preferred stock issues, which had a total par value of \$110 million, to increase its financing flexibility and reduce its cost of capital.

On October 5, 1988, the Corporation entered into two new bank credit facilities which have improved pricing terms and less restrictive covenants than the prior bank credit facilities. One facility is a \$750 million subordinated five-year revolving credit agreement. The other new facility is a \$500 million short-term revolving credit

facility which parallels the new subordinated facility's covenants and provides better pricing than the \$500 million short-term agreement it replaced. The unused portions of these facilities are used as support for the Corporation's outstanding commercial paper and notes. As of December 31, 1988, the Corporation had \$697.1 million of commercial paper and bank loans outstanding.

Upon entering into these two new bank credit facilities, the Corporation cancelled a subordinated revolving credit agreement, under which \$300 million was outstanding, and a \$350 million revolving production loan agreement, under which no borrowings were outstanding.

The cost of borrowing under the new subordinated revolving credit agreement will normally exceed the cost of the Corporation's commercial paper. It is expected that at least \$300 million of the currently outstanding variable rate debt will continue to be outstanding for at least twelve months and, consequently, such amount has been reclassified as long-term debt on the December 31, 1988, balance sheet.

During 1988, the Corporation entered into a series of interest rate swaps totaling \$300 million in order to reduce the Corporation's exposure to interest rate volatility.

On November 23, 1988, the Corporation sold through competitive bidding \$100 million of 10.15% debentures due 2013, with an effective cost to the Corporation of 10.362%. The Corporation has available \$200 million of debentures under a shelf Registration

Statement under the Securities Act of 1933. The Corporation had approximately \$253 million of senior debt capacity available at December 31, 1988, under the most restrictive issuance covenant of its indenture.

Approximately 332,000 shares of common stock were issued in 1988 under the Dividend Reinvestment Plan and the Long-Term Incentive Plan. Proceeds to the Corporation from the Dividend Reinvestment Program were \$10.3 million. During 1988, the Corporation switched to a market purchase program for the Dividend Reinvestment Plan. It is anticipated that a minimal number of new shares will be issued in the near future under the Long-Term Incentive Plan.

Approximately 379,000 shares of the Corporation's common stock were exchanged on May 23, 1988, for the approximately 262,000 shares of Lynchburg Gas Company common stock outstanding.

During 1988, the Corporation continued a program, begun in 1986, of accelerating the retirement of high-cost debt. This is currently being pursued under the accelerated sinking fund redemption provisions included in the individual debenture series' indentures. These provisions permit limited periodic redemptions without the payment of premiums. The 11¾% and 12¾% debentures were retired through this method during 1988. It is presently anticipated that the remaining amount of the 15¾% debentures will be retired by this method during 1989.

In 1988, the Corporation paid dividends of \$2.295 per share on its common stock. On April 20, 1988, the Board of Directors of The Columbia Gas System, Inc. reduced the Corporation's quarterly common stock dividend to 50 cents per share, equivalent to \$2.00 per share annually, from the 79.5 cents per share, or \$3.18 annually, previously paid. The Board's decision was largely the result of the unexpected adverse decisions by the FERC in cases involving Columbia Transmission. As of December 31, 1988, the Corporation had \$124.6 million of retained earnings available for common stock dividends under the most restrictive covenants of the Corporation's indenture and loan agreements.

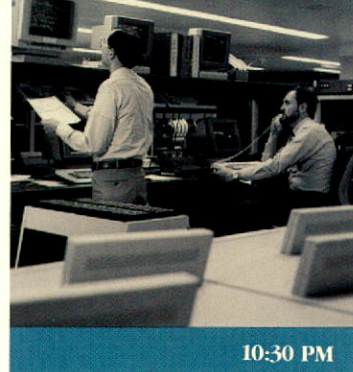
The sale of Columbia Gas Development of Canada, Ltd.'s eastern offshore properties to Chevron Canada Resources for \$83 million significantly improved the Corporation's liquidity. Resolution of certain regulatory matters pending before the FERC concerning Columbia Transmission could require substantial refunds of amounts already collected and materially affect the Corporation's future liquidity. Revenues collected subject to refund have reduced the Corporation's financing needs to date. Financing needs are expected to increase should these refunds be required. The refunds have been considered in establishing the Corporation's credit facilities and financing plans.

Capital expenditures increased from \$299 million in 1987 to \$308 million in 1988. Capital expenditures for 1989

are projected to be \$480 million. Capital expenditures for the transmission segment are expected to be \$215 million, an increase of \$112 million from 1988. The majority of the increase is attributable to expansion into new markets. For the distribution segment, capital expenditures are projected to increase to \$132 million, up \$22 million from the 1988 program. This increase is primarily to serve new customers. With an expanded drilling program, capital expenditures in the oil and gas segment are projected to be \$121 million in 1989 as compared to \$71 million in 1988.

External financing requirements for 1989 are currently projected to be approximately \$340 million. A significant portion of this requirement is to finance potential rate refunds during 1989. Approximately \$85 million is for the retirement of long-term debt. It is expected that the majority of the 1989 cash requirement will be obtained from internally generated cash, the sale of commercial paper and the \$750 million subordinated credit facility.

The Corporation believes that it will have sufficient resources to meet its future cash requirements. These resources include: (1) internally generated cash, (2) the additional \$556 million available under current credit facilities, and (3) senior debt capacity available under its indenture. Although not planned for use, equity financing is also available.



10:30 PM

Comparative Gas Operations Data

The Columbia Gas System, Inc. and Subsidiaries

	1988	1987	1986	1985	1984*
Sales and Transportation Revenues					
(\$ in millions)					
Residential	1,108.2	1,033.3	1,115.6	1,210.6	1,278.7
Commercial	448.0	426.9	502.7	566.6	617.6
Industrial	113.1	104.4	223.6	383.2	592.1
Wholesale	794.7	879.3	1,321.5	1,566.0	1,843.2
Other	40.6	28.2	16.1	12.2	15.3
Transportation	342.1	306.8	218.7	200.1	108.0
Adjustments	190.2	(32.6)	(92.4)	—	—
Total sales and transportation revenues	3,036.9	2,746.3	3,305.8	3,938.7	4,454.9
Sales (billion cu. ft.)					
Residential	195.5	175.1	178.8	181.4	188.5
Commercial	85.6	79.8	87.2	91.6	97.0
Industrial	26.9	22.4	47.7	73.2	108.1
Wholesale	220.8	214.8	283.6	344.6	385.0
Other	22.5	18.9	9.2	4.2	4.3
Total sales	551.3	511.0	606.5	695.0	782.9
Transportation volumes	779.4	745.8	541.5	511.2	423.4
Total throughput	1,330.7	1,256.8	1,148.0	1,206.2	1,206.3
Sources of Gas Sold (billion cu. ft.)					
Total gas purchased	517.5	491.5	596.8	616.9	705.1
Total gas produced (natural and synthetic)	74.6	76.0	73.2	101.0	125.5
Exchange gas—net	5.8	(13.1)	7.7	(10.3)	(1.6)
Gas withdrawn from (delivered to) storage	(0.2)	(4.1)	(24.2)	45.0	(1.9)
Company use and other	(46.4)	(39.3)	(47.0)	(57.6)	(44.2)
Total sources of gas sold	551.3	511.0	606.5	695.0	782.9
Customers at Year End					
Residential	1,666,013	1,626,341	1,598,960	1,579,279	1,564,460
Commercial	157,475	152,104	148,013	141,859	138,663
Industrial	2,341	2,190	2,180	2,261	2,280
Wholesale	79	82	78	78	75
Other	96	92	41	40	48
Total customers at year end	1,826,004	1,780,809	1,749,272	1,723,517	1,705,526
Average Usage Per Customer (thousand cu. ft.)					
Residential	117.4	107.7	111.8	114.8	120.5
Commercial	543.6	524.7	589.3	645.6	699.8
Degree Days					
Increase (decrease) over normal (%)	5,580	5,029	5,067	5,167	5,410
	3.3	(6.4)	(5.7)	(3.9)	0.1

*Wholesale data include the operation of a distribution company sold in June 1984, for the entire year.

Selected Financial Data

The Columbia Gas System, Inc. and Subsidiaries

(Dollars in millions except per share amounts)	1988	1987	1986	1985	1984
Income Statement Data (\$) (Notes 2A and 2C)					
Total operating revenues	3,128.9	2,834.9	3,396.1	4,086.4	4,618.4
Products purchased	1,783.0	1,503.1	1,983.9	2,715.2	3,114.6
Earnings (Loss) on common stock from continuing operations before extraordinary charges	111.1	100.5	87.9	(107.0)	165.4
Earnings (Loss) on common stock	111.1	100.5	75.3	(107.0)	138.6
Per Share Data					
Earnings (Loss) per common share (\$):					
From continuing operations before extraordinary charges	2.46	2.30	2.12	(2.67)	4.22
Earnings (Loss) on common stock	2.46	2.30	1.82	(2.67)	3.53
Dividends:					
Per share (\$)	2.295	3.18	3.18	3.18	3.18
Payout ratio (%)	93.3	138.3	174.7	N/M	90.1
Average common shares outstanding (000)	45,190	43,763	41,436	40,134	39,227
Balance Sheet Data (\$)					
Capitalization:					
Common stock equity	1,552.6	1,523.7	1,448.7	1,422.7	1,634.2
Preferred stock	—	50.0	50.0	50.0	50.0
Redeemable preferred stock	—	60.0	65.0	70.0	75.0
Long-term debt	1,338.4	1,438.0	1,378.5	1,659.6	1,348.5
Total capitalization	2,891.0	3,071.7	2,942.2	3,202.3	3,107.7
Total assets	5,641.0	5,440.9	5,590.2	5,835.2	5,200.5
Other Financial Data					
Capitalization ratio (%):					
Common stock equity	53.7	49.6	49.2	44.4	52.6
Preferred stock	—	3.6	3.9	3.8	4.0
Long-term debt	46.3	46.8	46.9	51.8	43.4
Capital expenditures (\$)	307.9	298.8	232.3	220.0	272.0
Cash from continuing operations (\$)	453.8	684.2	574.0	81.7	725.3
Book value per common share (\$)	34.18	34.08	34.06	35.10	41.22
Return on average common equity before discontinued operations and extraordinary charges (%)	7.2	6.8	6.1	N/M	10.2

N/M—Not Meaningful

MANAGEMENT'S STATEMENT OF RESPONSIBILITY FOR FINANCIAL STATEMENTS

The accompanying consolidated financial statements and related notes have been prepared by the Corporation based on generally accepted accounting principles, and are considered by management to present fairly and consistently the Corporation's financial position and results of operations. The integrity and objectivity of the data in these financial statements, including estimates and judgments relating to matters not concluded by year end, are the responsibility of management as is all other information included in the Annual Report, unless otherwise indicated.

To meet its responsibilities with respect to financial information, management maintains an accounting system and related controls to reasonably assure the integrity of financial records and the protection of assets. The effectiveness of this system is enhanced by the selection and training of qualified personnel, an organizational structure that provides an appropriate division of responsibility, a strong budgetary system of control, and a comprehensive program of internal audits

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Stockholders of The Columbia Gas System, Inc.:

We have audited the accompanying consolidated balance sheets of The Columbia Gas System, Inc. (a Delaware corporation) and subsidiaries (the "Corporation") as of December 31, 1988 and 1987, the related statements of consolidated income, taxes and common stock equity for each of the three years in the period ended December 31, 1988, the related consolidated statement of cash flows for the year ended December 31, 1988 and the related consolidated statements of changes in financial position for each of the two years in the period ended December 31, 1987. These financial statements are the responsibility of the Corporation'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 financial statements referred to above present fairly, in all material respects, the financial position of The Columbia Gas System, Inc. and subsidiaries as of December 31, 1988 and 1987, and the results of their operations for each of the three years in the

designed, in total, to provide reasonable assurance regarding the adequacy of internal controls and implementation of company policies and procedures. The internal audit staff is under the direction of the Vice President and General Auditor who reports directly to the Chairman of the Board.

An audit committee assists the Board of Directors in its oversight role and is composed of seven directors who are not officers or employees of the Corporation. The audit committee meets periodically with the Vice President and General Auditor to review his work and to monitor the discharge of his responsibilities. The audit committee also meets periodically with the Corporation's independent public accountants, who have free access to the audit committee of the Board, to discuss internal accounting controls, auditing and financial reporting matters.

period ended December 31, 1988, their cash flows for the year then ended and the changes in their financial position for each of the two years in the period ended December 31, 1987, in conformity with generally accepted accounting principles.

As discussed in Note 2A, Columbia Gas Transmission Corporation ("Columbia Transmission") is involved in a number of proceedings before the Federal Energy Regulatory Commission ("FERC") related to its ability to recover certain gas purchased and other costs. The outcome of these proceedings cannot be predicted by management.

As discussed in Note 2C, the FERC issued an order in January 1989 authorizing a pipeline supplier of Columbia Transmission to retroactively collect higher prices from its customers for gas it produced and sold in prior years. Although management believes the order contains a number of factual and legal flaws and Columbia Transmission has a reasonable chance of prevailing, the ultimate outcome of this matter is uncertain. Accordingly, no provision for any liability that may result from this matter has been made in the accompanying consolidated financial statements.

As discussed in Note 1J, the Corporation, as required by generally accepted accounting principles, has presented a consolidated statement of cash flows for the year ended December 31, 1988, in place of a consolidated statement of changes in financial position.

Arthur Andersen & Co.

New York, New York
February 16, 1989

Statements of Consolidated Income

The Columbia Gas System, Inc. and Subsidiaries

Year Ended December 31 (in millions)	1988	1987	1986
Operating Revenues			
Gas sales	\$2,749.7	\$2,462.2	\$3,087.1
Transportation	287.2	284.1	218.7
Other	92.0	88.6	90.3
Total operating revenues	3,128.9	2,834.9	3,396.1
Operating Expenses			
Products purchased	1,783.0	1,503.1	1,983.9
Provision for unrecovered gas costs	—	—	65.0
Operation	563.6	531.7	457.4
Maintenance	82.6	82.9	85.7
Depreciation and depletion	212.8	220.0	260.3
Other taxes	170.0	170.7	179.2
Total operating expenses	2,812.0	2,508.4	3,031.5
Operating Income	316.9	326.5	364.6
Other Income (Deductions)			
Interest income and other, net (Note 11)	24.6	32.4	19.8
Interest expense and related charges (Note 12)	(171.9)	(182.6)	(199.0)
Total other income (deductions)	(147.3)	(150.2)	(179.2)
Income before Income Taxes and Extraordinary Charges	169.6	176.3	185.4
Income taxes	50.6	65.0	86.0
Income before Extraordinary Charges	119.0	111.3	99.4
Extraordinary charges (Note 3)	—	—	12.6
Net Income	119.0	111.3	86.8
Preferred stock dividends	7.9	10.8	11.5
Earnings on Common Stock	\$ 111.1	\$ 100.5	\$ 75.3
Earnings Per Share of Common Stock (based on average shares outstanding)			
Before extraordinary charges	\$ 2.46	\$ 2.30	\$ 2.12
Extraordinary charges	—	—	.30
Earnings on common stock	\$ 2.46	\$ 2.30	\$ 1.82
Dividends Per Share of Common Stock	\$ 2.295	\$ 3.18	\$ 3.18
Average Common Shares Outstanding (thousands)	45,190	43,763	41,436

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated Balance Sheets

The Columbia Gas System, Inc. and Subsidiaries

Assets As of December 31 (in millions)	1988	1987
Property, Plant and Equipment		
Gas utility and other plant, at original cost	\$ 5,133.7	\$ 4,979.1
Accumulated depreciation and depletion	(2,526.1)	(2,445.3)
	2,607.6	2,533.8
Oil and gas producing properties, full cost method		
United States cost center	948.8	961.1
Canadian cost center (\$48.6 in 1987 was not being amortized) (Note 1D)	202.7	244.2
Accumulated depletion	(495.0)	(488.0)
	656.5	717.3
Net property, plant and equipment	3,264.1	3,251.1
Investments and Other Assets		
Gas supply prepayments (Note 4)	575.0	755.5
Accounts receivable—noncurrent	174.5	43.7
Unconsolidated affiliates (less than 50% owned)	43.3	45.3
Other	33.3	61.0
Total investments and other assets	826.1	905.5
Current Assets		
Cash and temporary cash investments	5.6	3.8
Accounts receivable		
Customers (less allowance for doubtful accounts of \$7.4 and \$6.7, respectively)	648.3	472.0
Other	239.0	162.8
Income tax refunds	5.3	25.6
Gas inventory	338.3	332.0
Other inventories—at average cost	46.9	43.5
Prepayments	105.4	105.5
Other	49.2	41.2
Total current assets	1,438.0	1,186.4
Deferred Charges	112.8	97.9
Total Assets	\$ 5,641.0	\$ 5,440.9

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

Capitalization and Liabilities As of December 31 (in millions)

1988

1987

Common Stock Equity

Common stock, par value \$10 per share—outstanding 45,422,790 and 44,711,502 shares, respectively	\$ 454.2	\$ 447.1
Additional paid in capital	415.9	409.8
Retained earnings	681.6	675.2
Accumulated foreign currency translation adjustment	.9	(8.4)
Total common stock equity	1,552.6	1,523.7
Preferred Stock (Note 5)	—	50.0
Redeemable Preferred Stock (Note 5)	—	60.0
Long-Term Debt (Note 8)	1,338.4	1,438.0
Total capitalization	2,891.0	3,071.7
Current Liabilities		
Short-term debt (Note 9)	397.1	327.5
Current maturities of long-term debt and preferred stock	52.7	69.6
Accounts and drafts payable	259.3	233.5
Accrued taxes	111.5	100.5
Accrued interest	40.4	39.8
Estimated rate refunds	255.5	245.4
Estimated supplier obligations	193.9	85.5
Other	236.6	157.7
Total current liabilities	1,547.0	1,259.5
Other Liabilities and Deferred Credits		
Income taxes, noncurrent	959.7	981.5
Estimated supplier obligations—noncurrent	152.7	43.7
Investment tax credits	49.6	51.5
Other	41.0	33.0
Total other liabilities and deferred credits	1,203.0	1,109.7
Commitments and Contingencies (Notes 2 and 10)		
Total Capitalization and Liabilities	\$5,641.0	\$5,440.9

Consolidated Statement of Cash Flows

The Columbia Gas System, Inc. and Subsidiaries

Year Ended December 31 (in millions)

1988

Operations:

Cash received from customers	\$2,863.8
Other operating cash receipts	197.4
Cash paid to suppliers	(1,481.0)
Interest paid	(147.9)
Income taxes paid	(96.3)
Other tax payments	(177.1)
Cash paid to employees and other employee benefits	(385.0)
Other operating cash payments	(320.1)
Net cash from operations	453.8

Investment Activities:

Capital expenditures*	(298.3)
Gas supply prepayments—net	23.1
Sale of Canadian properties	82.8
Net investment activities	(192.4)

Financing Activities:

Dividends paid	(112.2)
Retirement of revolving credit agreement	(300.0)
Retirement of long-term debt and preferred stock	(251.6)
Retirement of production loan	(75.0)
Issuance of common stock	10.4
Issuance of long-term debt	100.0
Increase in short-term debt**	368.8
Net financing activities	(259.6)

Increase in cash and temporary cash investments	1.8
Cash and temporary cash investments at beginning of year	3.8
Cash and temporary cash investments at end of year	\$ 5.6

Net Income Reconciliation:

Net income	\$ 119.0
Items not requiring (providing) cash:	
Depreciation and depletion	212.8
Deferred income taxes	(54.0)
Estimated rate refunds	145.3
Amortization of prepayments for producer contract modifications	47.8
Other—net	20.1
Net change in working capital (Note 13)	(37.2)

Net Cash From Operations

\$ 453.8

*Includes amounts transferred from interest paid, cash paid to employees and other employee benefits and other operating cash payments.

**Includes amount reclassified to long-term debt on the consolidated balance sheet.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated Statements of Changes in Financial Position

The Columbia Gas System, Inc. and Subsidiaries

Year Ended December 31 (in millions)	1987	1986
Cash From Operations		
Income before extraordinary charges	\$ 111.3	\$ 99.4
Items not requiring (providing) cash:		
Depreciation and depletion	220.0	260.3
Deferred income taxes	35.9	76.8
Estimated rate refunds	157.4	52.4
Nonrecurring charges—net	—	(5.9)
Amortization of prepayments for producer contract modifications	77.0	68.4
Other—net	(17.7)	(1.7)
Net change in working capital (Note 13)	100.3	24.3
Cash from operations before extraordinary charge	684.2	574.0
Extraordinary charge	—	(8.6)
Net cash from operations	684.2	565.4
Capital Investment Activities		
Capital expenditures	(298.8)	(232.3)
Gas supply prepayments—net	(226.5)	(314.6)
Net capital investment activities	(525.3)	(546.9)
External Financing Activities		
Dividends	(149.6)	(142.6)
Retirement of long-term debt and preferred stock	(156.6)	(273.6)
Repayment of production loan	(100.0)	(75.0)
Issuance of common stock	107.5	80.8
Issuance of long-term debt	200.0	250.0
Issuance of production loan	—	100.0
Decrease in short-term debt	(65.9)	(24.7)
Net external financing activities	(164.6)	(85.1)
Other—net	(5.0)	22.1
Decrease in Cash and Temporary Cash Investments	\$ (10.7)	\$ (44.5)

Statements of Consolidated Taxes

The Columbia Gas System, Inc. and Subsidiaries

Year Ended December 31 (in millions)	1988	1987	1986
Income Taxes			
Currently payable:			
Federal	\$ 98.4	\$ 23.2	\$ (3.0)
State	4.7	6.5	13.8
Investment credits	1.5	(0.6)	(3.3)
Total currently payable	104.6	29.1	7.5
Deferred:			
Federal	(52.5)	37.0	84.0
State	1.4	(0.1)	(5.7)
Foreign	—	0.8	—
Total deferred	(51.1)	37.7	78.3
Deferred investment credits, net	(2.9)	(1.8)	(1.5)
Provision for employee stock ownership plan	—	—	1.7
Income taxes included in income before extraordinary charge	50.6	65.0	86.0
Federal income taxes, current—extraordinary charge	—	—	(7.3)
Total income taxes	50.6	65.0	78.7
Other Taxes			
Property	64.9	57.1	55.2
Gross receipts	71.7	80.7	91.6
Payroll	23.0	21.9	21.6
Other	10.4	11.0	10.8
Total other taxes	170.0	170.7	179.2
Total Tax Expense	\$220.6	\$235.7	\$257.9

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

Computation of Income Taxes

Total income taxes are different than the amount which would be computed by applying the statutory federal income tax rate to book income before income tax.

The major reasons for this difference are as follows:

	1988		1987		1986	
Book income before income taxes (including extraordinary charges)*	\$169.6		\$176.3		\$165.5	
Tax expense at statutory federal income tax rate	\$ 57.7	34.0%	\$ 70.5	40.0%	\$ 76.1	46.0%
Increases (reductions) in taxes resulting from—						
State income taxes, net of federal income tax benefit	3.7	2.2	4.2	2.4	4.2	2.5
Investment credits not deferred and amortization of credits deferred in prior years	(1.4)	(0.8)	(2.5)	(1.4)	(3.1)	(1.9)
Depreciation expense for accounting purposes over amounts claimed for income tax purposes	2.5	1.4	1.9	1.0	2.0	1.2
Extraordinary charge for which no tax benefit has been provided	—	—	—	—	1.9	1.1
Effect of change in tax rates on certain deferred taxes previously provided	(7.3)	(4.3)	(1.4)	(0.8)	—	—
Loss carryforward utilized	—	—	(3.2)	(1.8)	—	—
Other	(4.6)	(2.7)	(4.5)	(2.5)	(2.4)	(1.4)
Total Income Taxes	\$ 50.6	29.8%	\$ 65.0	36.9%	\$ 78.7	47.5%

*Includes income (loss) from foreign operations of \$1.5 million, \$3.2 million, and \$(26.0) million, respectively.

Deferred Income Taxes

Deferred income taxes result from timing differences in recognition of revenues and expenses for tax and accounting purposes.

The source of these differences and tax effect of each is as follows:

Acquisition, exploration and development costs	\$ 4.3	\$ (2.9)	\$ 6.5
Sale of Canadian properties	(26.9)	—	—
Depreciation expense	18.5	26.5	19.7
Gas purchased costs	1.5	81.7	153.4
Estimated rate refunds	(52.1)	(32.0)	(117.7)
Unbilled utility revenue	(15.3)	(4.1)	(0.9)
Alternative minimum tax	15.0	(15.0)	—
Other	3.9	(16.5)	17.3
Total Deferred Income Taxes	\$(51.1)	\$ 37.7	\$ 78.3

Statements of Consolidated Common Stock Equity

The Columbia Gas System, Inc. and Subsidiaries

(in millions except for share amounts)	Common Stock*		Additional Paid In Capital	Retained Earnings	Accumulated Foreign Currency Translation Adjustment
	Shares Outstanding (000)	Par Value			
Balance at December 31, 1985	40,530	\$405.3	\$263.3	\$769.3	\$(15.2)
Net Income				86.8	
Dividends:					
Common (\$3.18 per share)				(131.1)	
Preferred:					
10.96% Series B				(2.4)	
10.24% Series C				(5.1)	
Adjustable rate Series D (Note 5)				(4.0)	
Common stock issued:					
Dividend Reinvestment Plan	707	7.1	20.8		
Employee Stock Ownership Plan	40	0.4	1.2		
Public offering	1,250	12.5	38.8		
Other					1.0
Balance at December 31, 1986	42,527	425.3	324.1	713.5	(14.2)
Net Income				111.3	
Dividends:					
Common (\$3.18 per share)				(138.8)	
Preferred:					
10.96% Series B				(1.9)	
10.24% Series C				(5.1)	
Adjustable rate Series D (Note 5)				(3.8)	
Common stock issued:					
Dividend Reinvestment Plan	358	3.6	12.8		
Employee Stock Ownership Plan	31	0.3	1.3		
Public offering	1,750	17.5	70.1		
Long-Term Incentive Plan	46	0.4	1.5		
Other					5.8
Balance at December 31, 1987	44,712	447.1	409.8	675.2	(8.4)
Net Income				119.0	
Dividends:					
Common (\$2.295 per share)				(103.4)	
Preferred:					
10.96% Series B**				(1.0)	
10.24% Series C**				(3.9)	
Adjustable rate Series D (Note 5)**				(3.0)	
Common stock issued:					
Lynchburg acquisition	379	3.8	(1.0)		
Dividend Reinvestment Plan	328	3.3	7.0		
Long-Term Incentive Plan	4		0.1		
Lynchburg retained earnings				4.4	
Preferred stock call premium				(5.7)	
Other					9.3
Balance at December 31, 1988***	45,423	\$454.2	\$415.9	\$681.6	\$ 0.9

*100 million shares authorized at December 31, 1988, 1987 and 1986 - \$10 par value and 50 million shares authorized at December 31, 1985.

**Series B, C and D were redeemed on October 3, 1988 and dividends were paid through October 2, 1988.

***\$557.0 million of retained earnings is not available for cash dividends and other capital stock distributions at December 31, 1988.

The accompanying Notes to Consolidated Financial Statements are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Principles of Consolidation. The Consolidated Financial Statements include the accounts of the Corporation and all subsidiaries. All appropriate intercompany accounts and transactions have been eliminated.

On May 23, 1988, the Corporation acquired Lynchburg Gas Company through an exchange of common stock. This acquisition was accounted for as a pooling of interests in the 1988 consolidated financial statements. Prior period financial statements have not been restated as the effect is immaterial.

Certain reclassifications have been made to the 1987 and 1986 financial statements to conform to the 1988 presentation.

B. Basis of Accounting for Rate Regulated Subsidiaries. Statement of Financial Accounting Standards No. 71 (SFAS No. 71) provides that rate regulated public utilities account for and report assets and liabilities consistent with the economic effect of the way in which regulators establish rates, if the rates established are designed to recover the costs of providing the regulated service, and if the competitive environment makes it reasonable to assume that such rates can be charged and collected. The Corporation's interstate transmission companies do not meet these criteria, and consequently, do not apply the provisions of SFAS No. 71. The Corporation's gas distribution subsidiaries continue to meet the criteria, and accordingly, follow the accounting and reporting requirements of SFAS No. 71.

C. Gas Utility and Other Plant and Related Depreciation. Property, plant and equipment (principally utility plant) is stated at original cost. The cost of gas utility and other plant of the distribution companies includes an allowance for funds used during construction (AFUDC). Property, plant and equipment of other subsidiaries includes interest during construction (IDC). The before tax rates for AFUDC and IDC were as follows:

Year Ended December 31 (%)	1988	1987	1986
AFUDC	9.6	9.3	8.6
IDC	9.7	9.2	9.4

The Corporation's subsidiaries provide for depreciation on a composite straight line basis. The annual depreciation rates were as follows:

Year Ended December 31 (%)	1988	1987	1986
Transmission property	3.0	3.1	3.6
Distribution property	3.4	3.5	3.8

D. Oil and Gas Producing Properties. The Corporation's subsidiaries engaged in exploring for and developing oil and gas reserves follow the full cost method of accounting. Under this method of accounting, all productive and nonproductive costs directly identified with acquisition, exploration and development activities are capitalized in country-wide cost centers. If costs exceed the sum of the estimated present value of the cost centers' net future oil and gas revenues and the lower of cost or estimated value of unproved properties, an amount equivalent to the excess is charged to current depletion expense. Gains or losses on the sale or other disposition of oil and gas properties are normally recorded as adjustments to capitalized costs.

Depletion related to costs capitalized in the United States cost center is based upon the ratio of current year revenues to expected revenues, utilizing current prices, over the life of production. Depletion related to costs capitalized in the Canadian cost center is based upon the ratio of volumes produced to total reserves.

Capitalized costs of \$48.6 million for certain unevaluated Canadian properties were excluded from amortization in 1987 pending determination of proved reserves and/or value attributable to the properties. These properties were sold during 1988, resulting in a reduction in the costs being amortized in the Canadian cost center equal to the excess of the proceeds over the carrying value of the properties.

Improvements and replacements of retirement units are capitalized at cost. When units of property are retired, the accumulated provision for depreciation is charged with the cost of the units and the cost of removal, net of salvage. Maintenance, repairs and minor replacements of property are charged to expense.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

E. Gas Inventory. Current inventory is carried at cost on a last-in, first-out (LIFO) basis. Liquidation of LIFO layers related to gas delivered to market does not affect income since the effect is passed through to customers as part of the Purchased Gas Adjustment (PGA) tariff. The estimated replacement cost of gas inventory in excess of carrying amounts was approximately \$210 million at December 31, 1988.

F. Income Taxes and Investment Tax Credits. The Corporation's subsidiaries record income taxes to recognize full interperiod tax allocation which arise from timing differences in the recognition of revenues and expenses for income tax and accounting purposes, except when regulatory commissions do not recognize interperiod tax allocation for rate purposes. The cumulative amount of income tax timing differences for which deferred income taxes have not been provided was approximately \$139 million at December 31, 1988, principally related to tax deductions for accelerated depreciation of the Corporation's gas distribution subsidiaries.

Most investment tax credits were eliminated by the Tax Reform Act of 1986. Prior to 1986, investment tax credits were recorded in income currently, except for credits of the gas distribution subsidiaries, which have been deferred and are being amortized over the life of the related properties to conform with regulatory policy.

Additional information related to the components of tax expense is contained in the Statements of Consolidated Taxes. Management's Discussion and Analysis of Financial Condition and Results of Operations provides information concerning the Financial Accounting Standards Board's pronouncements which require the Corporation to adopt a new method of accounting for income taxes no later than January 1, 1990.

G. Estimated Rate Refunds. Certain rate regulated subsidiaries collect revenues subject to refund pending final determination in rate proceedings. In connection with such revenues, estimated rate refund liabilities are

recorded which reflect management's current judgment of the ultimate outcome of the proceedings. No provisions are made when, in the opinion of management, the facts and circumstances preclude a reasonable estimate of the outcome.

H. Deferred Gas Purchased Costs. The Corporation's gas distribution subsidiaries defer differences between gas purchased costs and the recovery of such costs in revenues, and adjust future billings for such deferrals on a basis consistent with applicable tariff provisions.

I. Revenue Recognition. The Corporation's rate regulated subsidiaries bill customers on a monthly cycle billing basis. Revenues are recorded on the accrual basis including an estimate for gas delivered but unbilled at the end of each accounting period. Columbia Gas Transmission Corporation (Columbia Transmission) also records revenues to reflect future billings to recover or refund the difference between current gas costs and amounts billed through its PGA tariff.

J. Statement of Cash Flows. In November 1987, the Financial Accounting Standards Board issued Statement No. 95, "Statement of Cash Flows." As permitted by the Statement, the Corporation has presented a Statement of Cash Flows for 1988 and Statements of Changes in Financial Position for 1987 and 1986. The Corporation considers all highly liquid debt instruments purchased with a maturity of three months or less to be cash equivalents.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

2. REGULATORY MATTERS

A. Columbia Transmission's Rate Proceedings. Columbia Transmission is involved in a number of proceedings before the Federal Energy Regulatory Commission (FERC) related to its ability to recover certain gas purchased and other costs. The major issues include: (1) a general rate filing under which revenues have been collected subject to refund since April 1, 1987; (2) several protested PGA filings since April 1, 1987; and (3) the application of a price cap which would limit the recovery of certain gas purchased costs incurred since April 1, 1987, covering previously defined problem contracts with producers.

On February 16, 1989, a FERC administrative law judge (ALJ) issued an initial decision on the protested PGA filings which seems to call into question Columbia Transmission's right to recover the cost of up to 45 billion cubic feet of purchased gas. The ALJ said that a 1985 rate settlement between Columbia Transmission and its wholesale customers bars the recovery of the cost of over 18 billion cubic feet of gas purchased and injected into storage in 1986 and withdrawn in 1987 for sale to those customers. The decision did not explicitly address an additional 27 billion cubic feet of gas which was also purchased and stored in 1986, but which has not yet been withdrawn. The gas in question is valued at approximately \$3.25 an Mcf.

Columbia Transmission considers this initial decision to be inconsistent with the intent of the 1985 settlement and takes strong exception to its findings. After the submission of legal briefs, this matter will go to the FERC for its consideration. Columbia Transmission plans to strongly oppose the findings which would require the sale of gas injected into storage in 1986 to its wholesale customers at zero cost.

Management makes periodic reviews of the level of rate refund reserves recorded and adjusts the reserves as may be appropriate. These reviews take into consideration the progress of the proceedings, as well as court rulings, previously issued FERC orders and other factors. Management believes the rate refund reserves are adequate in the aggregate to cover the ultimate resolution of these matters. However, the proceedings are in various stages and their outcomes cannot be predicted with a high degree of accuracy. Estimates of exposure are inherently imprecise because of the varied stages of each proceeding, their interrelationships and the novel legal and regulatory issues involved; nevertheless, management believes that the maximum additional exposure in excess of amounts already provided should not exceed \$60 million.

Columbia Transmission is engaged in broad discussions with its customers, the FERC staff and other parties looking toward settlement of these issues. However, due to the complexity of the issues, the magnitude of dollars and the divergent interests

involved, the outcome of these discussions cannot be predicted at this time.

B. Direct Billings of Take-or-Pay Payments and Contract Reformation Costs. Most of Columbia Transmission's pipeline suppliers have filed to recover their take-or-pay and contract reformation costs under the current guidelines of Order No. 500 issued by the FERC in August 1987. Based on estimates contained in pipeline supplier filings and other available information, Columbia Transmission's noncommodity direct billings from its pipeline suppliers could approximate \$375 million, including interest.

In July 1988, the FERC issued an order allowing Columbia Transmission to track such payments in its rates to customers. The order provided that the recovery of these costs was subject to refund pending the outcome of a hearing established to investigate the prudence of Columbia Transmission's purchasing practices. In October 1988, the FERC ruled a 1985 customer settlement agreement barred an investigation of Columbia Transmission's prudence in this matter and ordered the hearing be terminated. This ruling has been appealed to the courts by certain customers. In management's opinion, the FERC ruling will be upheld.

Columbia Transmission's billings of these costs to its affiliated distribution companies could approximate \$160 million. Most of the state regulatory commissions which have jurisdiction over the Corporation's distribution subsidiaries have undertaken studies to determine the appropriate treatment of these billings from pipeline suppliers and three commissions are allowing full recovery. It is management's opinion that the System's distribution subsidiaries will ultimately be able to pass on all such billings from Columbia Transmission to their customers.

C. Direct Billings by Pipeline Supplier. The FERC issued an order on January 13, 1989, authorizing a pipeline supplier to retroactively collect higher prices for certain gas it produced and sold between 1979 and 1983. The order permits the pipeline supplier to direct bill its customers, including Columbia Transmission, for the price increase based on their levels of purchase during the period. The acceptance of this direct billing approach is an abrupt reversal of the FERC's long-standing position that the pipeline supplier should recover the higher prices through a surcharge added to its commodity sales rate. Based upon a February 13, 1989, filing, it is currently estimated that this could amount to approximately \$60 million, including interest. Columbia Transmission's prior estimate was \$25 million.

In management's opinion, the FERC order contains a number of factual and legal flaws and, consequently, Columbia Transmission intends to request rehearing of the decision of the FERC, and if necessary, appeal to the courts. Management believes that Columbia Transmission has a reasonable chance of prevailing.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

3. EXTRAORDINARY CHARGES

In the third quarter of 1986, the Corporation recorded an additional loss of \$4.0 million related to the sale of an unprofitable gas distribution subsidiary. The loss resulted from the settlement of various lawsuits associated with the sale.

In the fourth quarter of 1986, the Corporation redeemed \$135.5 million of debentures at a premium of \$15.9 million (\$8.6 million net of income tax benefits).

4. GAS SUPPLY PREPAYMENTS

The following prepayments represent payments to producers and pipeline suppliers in connection with gas supply:

At December 31 (\$ in millions)	1988	1987
Prepayments for producer contract modifications	450.9	592.2
Other gas supply prepayments	124.1	163.3
Total	575.0	755.5

A. Prepayments for Producer Contract Modifications.

Payments have been made to certain producers in return for contract modifications related to future purchases of gas. These payments are being amortized on a volumetric basis over a ten-year period ending June 30, 1995, the primary period of benefit.

B. Other Gas Supply Prepayments. Prepayments are based upon the take-or-pay provisions of the various producer and pipeline supplier contracts. They are recoupable through future deliveries of gas or, in some cases, cash payments.

5. PREFERRED STOCK

On October 3, 1988, the Corporation redeemed all outstanding shares of its three preferred stock issues and at December 31, 1988 had authorized, but unissued, 10,000,000 shares, par value \$50.00 per share.

As of December 31, 1987, the Corporation had authorized 10,000,000 shares of preferred stock, par value \$50.00 per share, and had outstanding 300,000 shares of 10.96% redeemable Series B Preferred Stock, 1,000,000 shares of 10.24% redeemable Series C Preferred Stock and 1,000,000 shares of Adjustable Rate Series D Preferred Stock which was redeemable only at the option of the Corporation. The adjustable divi-

dend rate was adjusted quarterly in accordance with a formula based on U.S. Treasury securities. The annual rates used for each quarterly period were as follows:

Quarter Ended (%)	1988	1987	1986
November	8.35	7.95	7.50
August	8.20	7.70	7.50
May	7.50	7.50	8.25
February	8.00	7.50	9.20

6. ACCOUNTING FOR PENSION COSTS AND OTHER POST-RETIREMENT BENEFITS

The Corporation has trustee, noncontributory pension plans which, with minor exceptions, cover all regular employees, 21 years of age and over. The plans provide defined benefits based on the largest three-year average annual compensation in the final five years of service, and years of accredited service. It is the Corporation's funding policy to contribute annually to the plans based on a percentage of expected employees' earnings, estimated at the beginning of the year and subject to the statutory minimum and maximum limits.

The following table provides 1988-1986 pension cost components for the plans along with additional relevant data:

Pension Costs (\$ in millions)	1988	1987	1986
Service cost	12.5	14.4	14.4
Interest cost	47.9	45.5	46.7
Return on assets	(55.0)	(54.7)	(49.2)
Other, net	1.3	1.2	(0.3)
Net pension expense	6.7	6.4	11.6
Annual contribution	5.8	7.2	17.9
Assumed asset earnings rate	9%	9%	9%

Actual return on plan assets for 1988, 1987 and 1986 was \$72.9 million, \$39.4 million and \$92.2 million, respectively. The difference between the assumed return on assets used in the calculation of net periodic pension expense and the actual return on assets, among other things, is included in the following table in unrecognized net gain.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

Effective January 1, 1989, certain plan provisions were amended. The cost of these changes, which enhance retirement benefits, has been recognized as of December 31, 1988. These plan revisions have a significant impact on prior service cost as disclosed in the following table.

Pension plan assets consist principally of common stock equities, fixed income securities and real estate investments. The following table reconciles plan assets and liabilities to the funded status of the plans:

Plan Assets and Obligations at December 31 (\$ in millions)	1988	1987
Plan assets at fair value	664.5	628.3
Actuarial present value of benefit obligations:		
Vested benefits	523.1	504.2
Nonvested benefits	38.7	26.7
Accumulated benefit obligation	561.8	530.9
Effect of projected future salary increases	108.4	87.7
Total projected benefit obligation	670.2	618.6
Plan assets in excess of (less than) projected benefit obligation	(5.7)	9.7
Less unrecognized net gain	56.5	22.6
Plus unrecognized prior service cost	52.4	2.6
Plus unrecognized transition obligation	16.2	17.4
Prepaid pension cost	6.4	7.1
Discount rate assumption	8.5%	8.0%
Compensation growth rate	6.5%	6.5%

In addition to providing pension benefits, the Corporation's subsidiaries provide other post-retirement benefits including medical care and life insurance which cover substantially all active employees upon their retirement. Medical care benefits for retirees are expensed as paid. Life insurance benefit costs are expensed and funded based on normal cost and the amortization of an accrued unfunded actuarial liability. The expense recognized for these post-retirement benefits was \$6.7 million in 1988 and \$6.1 million in both 1987 and 1986.

7. LONG-TERM INCENTIVE PLAN

The Corporation has a Long-Term Incentive Plan (Plan) which provides for the granting of incentive stock options, nonqualified stock options, stock appreciation rights and contingent stock awards. A total of 1,500,000 shares of the Corporation's authorized common stock was initially reserved for issuance under the Plan's provisions. There were 722,930 shares remaining available for awards at December 31, 1988.

Stock options are granted at an exercise price equal to the fair market value on the date of the grant. The outstanding grants provide that 50% of the options are exercisable beginning one year after the date of grant and 50% beginning two years from the date of grant. Options expire ten years from the date of grant.

Stock appreciation rights, which are granted in connection with nonqualified stock options, entitle the holders to receive stock, cash or a combination thereof equal to the excess market value over the grant price.

Transactions for 1986-1988 are as follows:

	Option Shares		Option Price Range
	Without Stock Appreciation Rights	With Stock Appreciation Rights	
Outstanding 12/31/85	158,950	6,100	\$38.30-\$38.31
1986			
Granted	141,390	25,380	\$42.99
Exercised	—	—	—
Cancelled	(4,950)	—	\$38.30-\$38.31
Outstanding 12/31/86	295,390	31,480	\$38.30-\$42.99
1987			
Granted	177,680	26,910	\$37.74
Exercised	(30,245)	—	\$38.30-\$42.99
Cancelled	(13,325)	—	\$38.30-\$42.99
Converted	(2,480)	2,480	\$42.99
Outstanding 12/31/87	427,020	60,870	\$37.74-\$42.99
1988			
Granted	210,080	30,870	\$34.30
Exercised	—	—	—
Cancelled	(9,435)	(9,790)	\$37.74-\$42.99
Converted	(11,980)	11,980	\$37.74-\$42.99
Outstanding 12/31/88	615,685	93,930	\$34.30-\$42.99
Exercisable 12/31/88	318,765	50,750	\$37.74-\$42.99

In addition to the options, contingent stock awards have been granted to certain key executives. The outstanding awards granted in 1988, 1987 and 1986 are 2,500, 8,900 and 6,000 shares, respectively. In 1988 and 1987, 4,000 and 15,810 shares of common stock, respectively, were issued for vested awards. Subject to meeting the award contingencies, stock will be issued as follows: 3,000 shares in 1989 and 14,400 shares in 1990.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

8. LONG-TERM DEBT

The long-term debt (exclusive of current maturities) of the Corporation and its subsidiaries is as follows:

At December 31 (\$ in millions)	1988	1987
The Columbia Gas System, Inc. Debentures:		
4½% Series due May 1989	—	15.0
4½% Series due October 1989	—	12.0
9½% Series due November 1989	—	7.5
4½% Series due May 1990	11.4	13.4
4½% Series due October 1990	12.0	13.4
6¼% Series due October 1991	13.4	14.8
6½% Series due October 1992	9.2	10.1
7¼% Series due May 1993	19.9	22.0
9% Series due August 1993	150.0	150.0
7% Series due October 1993	16.1	17.6
9% Series due October 1994	21.8	23.8
8¾% Series due April 1995	18.5	20.3
9½% Series due October 1995	23.7	25.5
10½% Series due November 1995	23.3	28.0
8½% Series due March 1996	37.7	40.7
9½% Series due May 1996	28.0	32.6
8¼% Series due September 1996	30.2	32.7
7½% Series due March 1997	27.3	28.2
7½% Series due June 1997	32.7	34.8
15¾% Series due June 1997	24.8	49.8
7½% Series due October 1997	32.7	34.6
7½% Series due May 1998	28.4	30.7
10¼% Series due May 1999	42.5	47.5
9½% Series due June 1999	24.5	26.0
11¾% Series due October 1999	—	15.6
12¾% Series due August 2000	—	15.6
10¼% Series due August 2011	100.0	100.0
10½% Series due June 2012	200.0	200.0
10¾% Series due November 2013	100.0	—
	1,028.1	1,062.2
Unamortized debt discount, less premium	(6.4)	(5.7)
	1,021.7	1,056.5
Revolving credit agreement ^(a)	—	281.3
Short-term debt reclassified ^(b)	300.0	—
Subsidiary debt:		
Production loan ^(c)	—	75.0
Other	11.1	9.2
Capitalized lease obligations	5.6	16.0
Total long-term debt	1,338.4	1,438.0

^(a)On October 5, 1988, the Corporation cancelled a \$300 million commitment available to the Corporation on a revolving basis. All borrowings under this agreement were subordinate to the Corporation's debentures. The notes bore interest according to various rate options (based on the prime rate, bank certificates of deposit, or the London InterBank Offered Rate) selected by the Corporation for varying time periods.

^(b)At December 31, 1988, \$300 million of short-term debt was reclassified on the accompanying consolidated balance sheet to long-term debt (see Note 9) based upon management's intent and ability to maintain that amount outstanding for more than 12 months.

^(c)On September 27, 1988, the Corporation cancelled an amended Limited Recourse Loan Agreement, (Production Loan), available to Columbia Transmission for up to \$350 million on a revolving basis through October 15, 1988. Columbia Transmission paid a fee of ½% per annum on the daily average unused commitment through September 27, 1988. The notes bore interest according to various rate options (based on the prime rate, bank certificates of deposit, the London InterBank Offered Rate, or Fixed Rate Options) selected by the company for various time periods.

The aggregate maturities of long-term debt (excluding short-term debt reclassified) for the five years ending December 31, 1993, are as follows:

(\$ in millions)	
1989	52.7
1990	62.5
1991	51.5
1992	46.7
1993	219.5

The Corporation from time to time satisfies sinking fund requirements through open market purchases.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

9. SHORT-TERM DEBT

The short-term financing requirements of the Corporation and its subsidiaries are met through the sale of commercial paper and/or through borrowings under bank lines of credit. The commercial paper is sold through dealers in maturities normally ranging from one day to six months. The bank loans are made under either: a \$500 million revolving short-term committed line of credit; a \$750 million revolving five-year subordinated line of credit; or through notes sold directly to commercial banks. Loans under these agreements bear interest according to various rate options (based on prime, bank certificates of deposit or the London InterBank Offered Rate) to be selected by the Corporation for various time periods. Banks participating in the credit lines are paid fees equal to $\frac{1}{4}\%$ per annum and $\frac{3}{8}\%$ per annum, respectively, on the unused portions of each facility. Outstanding commercial paper and notes are supported by unused bank lines of credit.

In 1988, the Corporation also entered into three interest rate swap agreements (each with a commitment of three years) based on total notional amounts of \$300 million. These agreements, which have an average fixed rate of 8.74%, reduce the Corporation's exposure to interest rate fluctuations. In addition to facilities maintained by the Corporation, one subsidiary company had a \$3 million short-term line of credit at year end 1988. It is anticipated this line of credit will be terminated during 1989.

It is expected that at least \$300 million of the currently outstanding variable rate debt will continue to be outstanding for at least twelve months and, consequently, such amount has been reclassified as long-term debt on the December 31, 1988 balance sheet (see Note 8).

Year Ended December 31 (\$ in millions)	1988	1987	1986
Maximum outstanding:			
Commercial paper	439.7	401.4	448.3
Bank loans	481.5	—	418.0
Daily average outstanding:			
Commercial paper	230.4	106.9	118.5
Bank loans	94.3	—	46.4
Interest rates:			
Commercial paper	6.6%-9.9%	5.9%-8.7%	5.7%-8.5%
Bank loans	7.7%-10.5%	—	8.9%-9.4%
Weighted daily average rate:			
Commercial paper	8.1%	6.8%	6.4%
Bank loans	9.1%	—	9.0%
Weighted average rate at year end:			
Commercial paper	9.2%	8.1%	6.2%
Bank loans	9.8%	—	—
Weighted average maturity at year end (days):			
Commercial paper	31.2	21.8	30.0
Bank loans	27.8	—	—
Credit lines at year end	1,253.0	525.0	525.0
Unused credit lines at year end	555.9	197.5	131.6
Outstanding at December 31:			
Commercial paper	385.0	327.5	393.4
Bank loans	312.1	—	—
Total	697.1	327.5	393.4
Amount reclassified to long-term debt (Note 8) ^(a)	300.0	—	—
Short-term debt	397.1	327.5	393.4

^(a)Statistics calculated in this table include all commercial paper and bank loans and do not reflect the impact of the reclassification.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

10. OTHER COMMITMENTS AND CONTINGENCIES

A. Capital Expenditures. Capital expenditures for 1989 are estimated at \$480 million. Of this amount, \$215 million is for transmission operations, \$132 million for distribution operations, \$121 million for oil and gas operations and \$12 million for other operations.

B. Producer Contract Disputes. Columbia Transmission began a program in 1985 to amend its high-cost gas purchase contracts with producers in the Southwest and Rocky Mountain areas. In connection with such contract renegotiations, Columbia Transmission agreed to indemnify producers against potential liabilities that may be incurred by them as a result of such contract modifications. Since 1986, several lawsuits have been filed by royalty owners challenging certain provisions of the contract modifications. In management's opinion, these indemnifications will not result in liabilities that will have material adverse effects on the consolidated financial position of the Corporation and its subsidiaries.

Certain producers which were not involved in the 1985 contract renegotiations have filed claims against Columbia Transmission related to take-or-pay, price and other provisions of gas purchase contracts. Columbia Transmission has settled some of these contractual disputes and settlement negotiations with certain other producers are in progress. Among the unsettled claims are a number of suits, including one class action suit, which have been filed on behalf of certain Appalachian gas producers challenging Columbia Transmission's right to invoke "cost recovery" rights of the contracts and the reduced price then paid to the producers. Management is of the opinion that it is probable it will prevail in these proceedings and, accordingly, their resolution should not have a material adverse effect on the Corporation's financial position or results of operations.

C. Other Legal Proceedings. The Corporation and its subsidiaries have been named as defendants in various other legal proceedings arising from the conduct of their business operations. In the opinion of management, the ultimate disposition of the currently asserted claims will not have a material impact on the Corporation's consolidated financial position or results of operations.

D. Assets Under Lien and Other Guarantees. Substantially all of Columbia Transmission's properties have been pledged to the Corporation as security for debt owed by Columbia Transmission to the Corporation; and certain customers have made prepayments for gas service which are secured by a pledge of an interest in Columbia Transmission's gas inventory.

E. Cove Point LNG Terminal. Deliveries of liquefied natural gas to Columbia LNG Corporation's (Columbia LNG) Cove Point terminal ceased in April 1980 due to failure of the Algerian government to approve a price agreement reached in 1979 between the Algerian national company producing the liquefied natural gas and the company from whom Columbia LNG was purchasing the gas.

On November 10, 1988, the Corporation agreed to sell 50 percent of its stock in Columbia LNG to Shell Oil Company for approximately \$110 million. The sale is expected to take place in steps over the next two years, if certain significant conditions are met. The first deliveries of liquefied natural gas to the Cove Point terminal could occur as early as mid-1991.

F. Operating Leases. Payments made in connection with operating leases are charged to operation and maintenance expense as incurred. Such amounts were \$41.9 million in 1988, \$35.2 million in 1987, and \$27.9 million in 1986.

Future minimum rental payments required under operating leases that have initial or remaining noncancellable lease terms in excess of one year are:

(\$ in millions)	
1989	7.2
1990	6.7
1991	5.2
1992	5.0
1993	5.0
After 1993	66.5

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

11. INTEREST INCOME AND OTHER, NET

Year Ended December 31 (\$ in millions)	1988	1987	1986
Interest income	25.7	15.6	15.2
Gain on sale of coal interests	—	13.8	—
Income (loss) from equity investments	(4.3)	1.8	2.9
Miscellaneous	3.2	1.2	1.7
Total	24.6	32.4	19.8

12. INTEREST EXPENSE AND RELATED CHARGES

Year Ended December 31 (\$ in millions)	1988	1987	1986
Interest on debt	148.8	140.3	149.3
Amortization of debt discount on contract modification obligations	—	22.5	44.2
Interest on rate refunds	14.7	9.7	1.2
Other interest charges	12.7	14.9	8.5
Allowance for borrowed funds used and interest during construction	(4.3)	(4.8)	(4.2)
Total	171.9	182.6	199.0

13. CHANGES IN COMPONENTS OF WORKING CAPITAL

(excludes cash and temporary cash investments, short-term debt and current maturities of long-term debt and preferred stock)

Year Ended December 31 (\$ in millions)	1988	1987	1986
Accounts receivable, net	(252.5)	11.9	1.4
Income tax refunds	20.3	86.8	16.7
Gas inventory	(6.3)	46.1	(94.1)
Accounts and drafts payable	25.8	(42.9)	(73.2)
Accrued taxes	11.0	3.0	14.2
Estimated rate refunds	10.1	157.4	52.4
Estimated supplier obligations	108.4	(61.6)	(97.7)
Deferred income taxes	—	(109.6)	(55.1)
Miscellaneous	68.2	1.7	51.6
Change in working capital	(15.0)	92.8	(183.8)
Reclassifications	(22.2)	7.5	208.1
Net change in working capital	(37.2)	100.3	24.3

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

14. BUSINESS SEGMENT INFORMATION

The following tables provide information concerning the Corporation's major business segments. Revenues include intersegment sales to affiliated subsidiaries, which are eliminated when consolidated. Affiliated sales are recognized on the basis of prevailing market or regulated prices. Operating income is derived from revenues and expenses directly associated with each segment. Identifiable assets include only those attributable to the operations of each segment.

Earnings reflect the allocation of certain corporate income and expenses. The basis for allocation or assignment to a specific segment is dependent on the nature

of the item. Income or loss attributable to equity investments is assigned to specific segments. Corporate income, interest expense and preferred stock dividends are allocated in proportion to capital employed by identifiable segments. The provision for income taxes is allocated based upon each segment's pre-tax income adjusted for assignable statutory tax rate differences.

Identifiable assets related to other operations include the net assets of coal mining operations discontinued in 1984. Such amounts were \$11.9 million in 1988, \$12.4 million in 1987 and \$13.5 million in 1986.

(\$ in millions)		1988	1987	1986
Revenues				
Transmission	–Unaffiliated	1,080.3	1,083.2	1,464.6
	–Intersegment	777.8	896.9	1,119.1
	–Revenue adjustments*	183.7	(25.9)	(92.4)
	Total	2,041.8	1,954.2	2,491.3
Distribution	–Unaffiliated	1,678.8	1,618.8	1,899.7
	–Intersegment	.1	.3	7.6
	–Revenue adjustments*	109.9	1.0	(46.2)
	Total	1,788.8	1,620.1	1,861.1
Oil and gas	–Unaffiliated	130.4	112.5	65.0
	–Intersegment	31.3	51.2	106.8
	Total	161.7	163.7	171.8
Other	–Unaffiliated	49.2	53.0	59.2
	–Intersegment	63.3	55.6	58.7
	Total	112.5	108.6	117.9
Adjustments and eliminations	–Unaffiliated	—	—	—
	–Intersegment	(872.5)	(1,004.0)	(1,292.2)
	–Revenue adjustments*	(103.4)	(7.7)	46.2
	Total	(975.9)	(1,011.7)	(1,246.0)
Consolidated		3,128.9	2,834.9	3,396.1

*Revenue adjustments relate to the passthrough of upstream pipeline take-or-pay and other unbilled gas costs and the effect of recorded estimated rate refunds.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

(\$ in millions)	1988	1987	1986
Operating Income (Loss)			
Transmission	148.6	179.1	167.6
Distribution	140.7	108.6	184.7
Oil and gas	35.2	41.2	14.8
Other	4.6	5.2	5.2
Corporate	(12.2)	(7.6)	(7.7)
Consolidated	316.9	326.5	364.6
Earnings (Loss) from Continuing Operations Before Extraordinary Charges			
Transmission	38.1	39.2	19.4
Distribution	63.1	39.3	75.1
Oil and gas	8.7	9.0	(6.5)
Other	1.2	13.0	(.1)
Consolidated	111.1	100.5	87.9
Depreciation & Depletion			
Transmission	90.6	102.2	114.6
Distribution	48.5	47.1	45.9
Oil and gas	70.7	66.1	94.6
Other	3.0	4.6	5.2
Consolidated	212.8	220.0	260.3
Identifiable Assets			
Transmission	3,251.3	3,127.0	3,362.1
Distribution	1,576.9	1,488.4	1,472.0
Oil and gas	709.1	779.9	746.8
Other	98.2	101.4	100.0
Adjustments and eliminations	(113.8)	(125.8)	(168.2)
Corporate and unallocated	119.3	70.0	77.5
Consolidated	5,641.0	5,440.9	5,590.2
Capital Expenditures			
Transmission	102.6	100.9	60.7
Distribution	110.4	105.8	101.0
Oil and gas	71.1	81.5	66.8
Other	23.8	10.6	3.8
Consolidated	307.9	298.8	232.3

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

15. QUARTERLY FINANCIAL DATA (UNAUDITED)

Comparison of results of operations among quarters during the year may be misleading in obtaining an understanding of the trend of the System's business operations, since total throughput is predominantly influenced by seasonal weather patterns which, in

turn, affect earnings and related components of operating revenues and expenses. The total of quarterly amounts may not equal annual earnings per share due to increasing average shares outstanding.

Quarter Ended (\$ in millions except per share data)	Operating Revenues	Income (Loss) from Operations Before Income Taxes	Earnings (Loss) on Common Stock	Earnings (Loss) Per Share
1988				
December 31	890.5	78.0	53.0	1.17
September 30	453.7	(30.7)	(21.0)	(0.46)
June 30⁽¹⁾	463.6	(3.9)	(2.8)	(0.06)
March 31	1,321.1	126.2	81.9	1.83
1987				
December 31	922.6	54.4	33.6	0.75
September 30 ⁽²⁾	361.7	(1.1)	(6.4)	(0.14)
June 30	454.6	4.4	0.1	—
March 31 ⁽³⁾	1,096.0	118.6	73.2	1.71

⁽¹⁾Includes a decrease in earnings of \$4.5 million to record a write-down of the carrying value of Canadian oil and gas properties.

⁽²⁾Includes an increase in earnings of \$9.1 million related to the sale of certain coal interests.

⁽³⁾Includes a decrease in earnings of \$19.2 million as a result of regulatory rulings related to the ability of Columbia Transmission to recover certain gas purchase contract reformation costs retroactive to April 1, 1986, of which \$12.1 million is applicable to 1986.

16. OIL AND GAS PRODUCING ACTIVITIES (UNAUDITED)

Introduction. Reserve information contained in the following tables for the U.S. properties are management's estimates which are reviewed by the independent consulting firm of Ryder Scott Company Petroleum Engineers. Reserve information for the Canadian properties was supplied by John R. Lacey International Ltd.

U.S. reserves are reported as net working interest, while Canadian reserves are gross working interest reserves, since royalties related to Canadian leases generally provide for payment on a basis other than a percent of production. Gross revenues are reported after deduction of royalty interest payments.

CAPITALIZED COSTS

(\$ in millions)	United States			Canada			Total		
	1988	1987	1986	1988	1987	1986	1988	1987	1986
Capitalized Costs at Year End									
Proved properties	887.1	904.1	916.1	175.0	169.0	148.3	1,062.1	1,073.1	1,064.4
Unproved properties ^(a)	61.7	57.0	48.3	27.7	75.2	64.2	89.4	132.2	112.5
Total capitalized costs	948.8	961.1	964.4	202.7	244.2	212.5	1,151.5	1,205.3	1,176.9
Accumulated depletion	(434.3)	(441.0)	(445.2)	(60.7)	(47.0)	(41.2)	(495.0)	(488.0)	(486.4)
Net capitalized costs	514.5	520.1	519.2	142.0	197.2	171.3	656.5	717.3	690.5
Costs Capitalized During Year									
Acquisition	5.2	19.5	9.3	5.3	5.8	3.2	10.5	25.3	12.5
Exploration	21.4	18.0	24.0	9.4	8.7	7.2	30.8	26.7	31.2
Development	24.7	24.9	16.1	4.5	4.1	5.5	29.2	29.0	21.6
Costs capitalized	51.3	62.4	49.4	19.2	18.6	15.9	70.5	81.0	65.3

^(a)Represents expenditures associated with properties on which evaluations have not been completed.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

HISTORICAL RESULTS OF OPERATIONS	United States			Canada			Total		
	1988	1987	1986	1988	1987	1986	1988	1987	1986
(\$ in millions)									
Gross revenues									
Unaffiliated	119.0	101.2	56.3	11.2	11.4	8.9	130.2	112.6	65.2
Affiliated	30.9	50.7	106.5	—	—	—	30.9	50.7	106.5
Production costs	28.7	34.0	32.2	3.8	2.6	2.8	32.5	36.6	35.0
Depletion	58.5	60.9	63.7	11.8^(a)	4.8 ^(a)	30.2 ^(a)	70.3	65.7	93.9
Income tax expense	21.3	22.8	30.6	(1.5)	1.6	(11.1)	19.8	24.4	19.5
Results of operations	41.4	34.2	36.3	(2.9)	2.4	(13.0)	38.5	36.6	23.3

Results of operations for producing activities exclude administrative and general costs, corporate overhead and interest expense. Income tax expense is expressed at statutory rates less investment tax credits.

^(a)Includes write-down of the carrying value of \$6.9 million for 1988, \$0.8 million for 1987 and \$26.6 million for 1986.

OTHER OIL AND GAS PRODUCTION DATA	United States			Canada		
	1988	1987	1986	1988	1987	1986
Average sales price per Mcf of gas (\$)	1.74	1.68	2.11	1.15	1.23	1.41
Average sales price per barrel of oil and other liquids (\$)	13.66	15.99	14.37	12.10	14.66	14.30
Production (lifting) cost per dollar of gross revenue (\$)	0.19	0.22	0.20	0.34	0.23	0.32
Depletion rate per dollar of gross revenue (\$)	0.39	0.40	0.39	—	—	—
Depletion rate per equivalent Mcf (\$)	—	—	—	0.74	0.72	0.74

RESERVE QUANTITY INFORMATION	United States		Canada ^(a)	
	Gas (Bcf)	Oil and Other Liquids (000 Bbls)	Gas (Bcf)	Oil and Other Liquids (000 Bbls)
Proved Reserves				
Reserves as of December 31, 1985	751.4	8,378	154.4	6,004
Revisions of previous estimate	36.3	(97)	(9.8)	(671)
Extensions, discoveries and other additions	20.7	482	—	791
Production	(66.1)	(1,667)	(2.0)	(503)
Purchase/(sale) of minerals-in-place	—	—	—	(18)
Reserves as of December 31, 1986	742.3	7,096	142.6	5,603
Revisions of previous estimate	29.4	761	4.0	(53)
Extensions, discoveries and other additions	27.0	1,445	3.7	1,371
Production	(73.8)	(1,597)	(2.0)	(602)
Purchase/(sale) of minerals-in-place	7.8	27	1.1	82
Reserves as of December 31, 1987	732.7	7,732	149.4	6,401
Revisions of previous estimate	68.1	1,577	3.4	127
Extensions, discoveries and other additions	14.8	502	3.5	743
Production	(72.2)	(1,637)	(2.4)	(691)
Purchase/(sale) of minerals-in-place	(1.2)	71	1.7	79
Reserves as of December 31, 1988	742.2	8,245	155.6	6,659
Proved developed reserves as of December 31				
1986	702.1	6,845	142.6	5,206
1987	694.4	6,562	149.4	6,024
1988	697.6	6,706	154.4	6,298

^(a)Gross working interest reserves.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Columbia Gas System, Inc. and Subsidiaries

STANDARDIZED MEASURE OF DISCOUNTED FUTURE NET CASH FLOWS

(\$ in millions)	United States			Canada			Total		
	1988	1987	1986	1988	1987	1986	1988	1987	1986
Future cash inflows	1,880.9	1,688.1	1,663.8	280.3	281.2	241.9	2,161.2	1,969.3	1,905.7
Future production costs	(351.0)	(355.7)	(375.5)	(55.5)	(53.1)	(49.9)	(406.5)	(408.8)	(425.4)
Future development costs	(102.0)	(131.5)	(127.8)	(10.0)	(6.2)	(4.6)	(112.0)	(137.7)	(132.4)
Future income tax expense	(439.7)	(357.0)	(345.2)	(54.0)	(62.3)	(51.3)	(493.7)	(419.3)	(396.5)
Future net cash flows	988.2	843.9	815.3	160.8	159.6	136.1	1,149.0	1,003.5	951.4
Less 10% discount	471.9	386.6	382.7	78.5	82.3	71.4	550.4	468.9	454.1
Standardized measure of discounted future net cash flows	516.3	457.3	432.6	82.3	77.3	64.7	598.6	534.6	497.3

Future cash inflows are computed by applying year end prices to estimated future production of proved oil and gas reserves. Future expenditures (based on year end costs) represent those costs to be incurred in developing and producing the reserves. Discounted future net cash flows are derived by applying a 10% discount rate, as required by FASB rules, to the future net cash flows. This data is not intended to reflect the actual economic value of the Corporation's oil and gas producing properties or the true present value of estimated future cash flows since many arbitrary assumptions are

used. The data does provide a means of comparison among companies through the use of standardized measurement techniques.

A reconciliation of the components resulting in changes in the standardized measure of discounted cash flows attributable to proved oil and gas reserves for the three years ending December 31, 1988, follows:

(\$ in millions)	United States			Canada			Total		
	1988	1987	1986	1988	1987	1986	1988	1987	1986
Beginning of year	457.3	432.6	520.6	77.3	64.7	84.8	534.6	497.3	605.4
Oil and gas sales, net of production costs	(121.2)	(117.8)	(130.7)	(7.4)	(8.8)	(6.1)	(128.6)	(126.6)	(136.8)
Net changes in prices and production costs	76.0	22.9	(236.2)	(8.1)	8.5	(45.8)	67.9	31.4	(282.0)
Extensions, discoveries and other additions, net of related costs	20.8	34.2	22.6	6.6	10.0	1.7	27.4	44.2	24.3
Revisions of previous estimates, net of related costs	80.1	30.7	31.6	2.3	2.0	(6.9)	82.4	32.7	24.7
Accretion of discount	64.0	60.5	86.8	10.7	8.9	14.0	74.7	69.4	100.8
Net change in income taxes	(37.2)	(9.9)	174.5	2.8	(5.9)	31.2	(34.4)	(15.8)	205.7
Other	(23.5)	4.1	(36.6)	(1.9)	(2.1)	(8.2)	(25.4)	2.0	(44.8)
End of year	516.3	457.3	432.6	82.3	77.3	64.7	598.6	534.6	497.3

The estimated discounted future net cash flows increased during 1988 primarily due to changes in prices and production costs and revisions of previous estimates.

COMMON STOCK DATA

The Columbia Gas System, Inc.

Year	Number of Shares Traded (000)	High \$	Market Price	Low \$
1988	47,906	44¾		26⅞
1987	31,491	56½		35½
1986	26,311	46		34¾
1985	29,135	40		26¾
1984	14,624	37½		27
1983	14,191	35½		27⅞
1982	7,414	33⅞		26⅞
1981	6,692	41½		27⅞
1980	10,297	47		33¾
1979	7,126	40¾		25¼

Dividend Reinvestment—Columbia offers a Dividend Reinvestment Plan to its common stockholders which provides a convenient and economical method of acquiring additional shares of Columbia Common Stock through the reinvestment of quarterly cash dividends, and optional cash payments.

There is a brokerage commission on shares purchased through the Plan. Participation in the Plan may be discontinued at any time, in which case you will receive a stock certificate, or if you prefer, cash for shares credited to your account. Participants will be treated for federal income tax purposes as having received a cash dividend and will be taxed on the full amount of the dividend utilized to purchase additional shares.

Common stockholders desiring a complete description of the Plan should request a copy of the Prospectus by writing to: Columbia Dividend Reinvestment, Stockholder Services Department, P.O. Box 2318, Columbus, Ohio 43216.

Additional Information—A supplementary report containing more detailed operating, financial and statistical data on the Columbia Gas System is prepared each year for stockholders and others interested in such information. A copy of Form 10-K filed annually with the Securities and Exchange Commission is also available. A copy of either document may be obtained by writing to: Secretary, The Columbia Gas System, Inc., 20 Montchanin Road, Wilmington, Delaware 19807.

Investor Information—Security analysts, investment managers, brokers and others with financial questions should contact D. W. McFarland, Vice President for Investor Relations, Columbia Gas System Service Corporation, at Corporate Headquarters, or call directly at (302) 429-5363.

Annual Meeting—The Corporation's 1989 Annual Meeting of Stockholders will be held at the Hotel du Pont, Wilmington, Delaware, on April 21, 1989 at 1:00 p.m. Proxy material will be mailed on or about March 20, 1989.

DIVIDEND DISBURSEMENT AND CERTIFICATE INQUIRIES:

The Columbia Gas System, Inc.
Stockholder Services Department
P.O. Box 2318
Columbus, Ohio 43216

COMMON STOCK LISTED:

New York Stock Exchange
Philadelphia Stock Exchange
Toronto Stock Exchange

TICKER SYMBOL: CG**DIVIDEND REINVESTMENT PLAN:**

The Columbia Gas System, Inc.
Stockholder Services Dept.
P.O. Box 2318
Columbus, Ohio 43216

TRANSFER AGENTS AND REGISTRARS:

Harris Trust Company of New York
Corporate Trust Department
77 Water Street 4th Floor
New York, New York 10005

The National Trust Company
Shareholder Relations
4 King Street West
Toronto, Ontario, Canada M5H 3W7

TRUSTEE AND PAYING AGENT FOR DEBENTURES:

Morgan Guaranty Trust
Company of New York
Security Holder Relations
30 West Broadway
12th Floor
New York, New York 10015

The Columbia Gas System, Inc.

Directors

Thomas S. Blair^{3,4}

Chairman, Blair Strip Steel Company
New Castle, Pennsylvania

John H. Croom¹

Chairman, President and Chief
Executive Officer

Frank J. Durzo^{1,2}

Former Chairman and Chief
Executive Officer
Jeffrey Galion, Inc.
Acquired by Dresser Industries, Inc.
Industrial Equipment, Columbus, Ohio

Dr. Sherwood L. Fawcett^{3,4}

Trustee and Former Chairman,
Board of Trustees
Battelle Memorial Institute
Columbus, Ohio

J. Robert Fletcher^{2,4}

Chairman, J. H. Fletcher & Co.
Manufacturer of Mining Equipment
Huntington, West Virginia

Robert H. Hillenmeyer^{1,2}

Chairman and Chief Executive Officer
Hillenmeyer Nurseries, Inc.
Lexington, Kentucky

Malcolm T. Hopkins^{2,3}

Former Vice Chairman, Chief Financial
Officer and Director
St. Regis Corporation
Forest Products, Oil, Gas and Insurance
New York, New York

W. Frederick Laird¹

Former Chairman of the Board

Dr. William E. Lavery^{3,4}

Chancellor and Former President
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia

George P. MacNichol, III^{2,4}

Private Investor; Former Vice President,
Libbey-Owens-Ford Company, Glass
and Plastics Business
Toledo, Ohio

Robert A. Oswald

Senior Vice President and
Chief Financial Officer

Ernesta G. Procope^{2,3}

President and Chief Executive Officer
E. G. Bowman Co., Inc.
Insurance Brokerage Firm
New York, New York

Arch A. Sproul^{1,2}

Chairman
Virginia Trading Company
Staunton, Virginia

William R. Wilson^{3,4}

Chairman of the Board, President
and Chief Executive Officer
Lukens, Inc.
Steel and Industrial Products
Coatesville, Pennsylvania

Officers

John H. Croom

Chairman, President and
Chief Executive Officer

Robert A. Oswald

Senior Vice President and
Chief Financial Officer

Daniel L. Bell, Jr.

Senior Vice President,
Chief Legal Officer
and Secretary

Richard E. Lowe

Vice President and Controller

Larry J. Bainter

Treasurer

Alexander P. McCann

Assistant Treasurer and
Assistant Secretary

Tejinder S. Bindra

Joyce K. Hayes
Assistant Secretaries

Columbia Gas System Service Corporation

John H. Croom

Chairman, President and
Chief Executive Officer

Daniel L. Bell, Jr.

Senior Vice President and
Chief Legal Officer

Robert A. Oswald

Senior Vice President and
Chief Financial Officer

Robert L. Geiler

Stanley C. Kauffman

Max M. Levy

Senior Vice Presidents

Larry J. Bainter

Vice President and Treasurer

William J. Forsythe

Vice President and General Auditor

Richard E. Lowe

Vice President and Controller

Richard A. Casali

John W. F. Faircloth

Philip L. Magley

Gilbert A. Martin

Dennis W. McFarland

Robert E. Miller

William F. Morse

Bruce Quayle

Robert C. Skaggs, Jr.

Robert W. Welch, Jr.

Vice Presidents

Alexander P. McCann

Secretary

Tejinder S. Bindra

Joyce K. Hayes

Assistant Secretaries and

Associate General Counsels

Lawrence J. Doyle

Joseph V. Yandoli

Assistant Treasurers

Donato Furlano

John F. Litzinger

Martin J. Vitek

Assistant Controllers

Operating Company Executives

Columbia Distribution Companies

C. Ronald Tilley
Chairman and Chief Executive Officer

Columbia Gas of Kentucky, Inc.
Columbia Gas of Maryland, Inc.
Columbia Gas of New York, Inc.
Columbia Gas of Pennsylvania, Inc.

Richard J. Gordon
President and Chief Operating Officer

Columbia Gas of Ohio, Inc.

G. Ninde Lawson
President and Chief Operating Officer

Commonwealth Gas Services, Inc.**Lynchburg Gas Company**

Paul R. Bigley
President and Chief Operating Officer

Columbia Gas Development Corporation

John P. Bornman, Jr.
President

Columbia Gas Development of Canada Ltd.

Spencer S. Chambers
President

Columbia Gas Transmission Corporation

John D. Daly
Chairman and Chief Executive Officer
Robert M. Bennett
Vice Chairman
James P. Holland
President

Columbia Natural Resources, Inc.

Columbia Coal Gasification Corporation
Donald C. Hubbard
President

Columbia Gulf Transmission Company

Thomas E. Harris
President and Chief Executive Officer

Commonwealth Gas Pipeline Corporation**Commonwealth Propane, Inc.**

Paul R. Bigley
Chairman and President

Columbia LNG Corporation

Max M. Levy
President

TriStar Ventures Corporation

Robert A. Oswald
President

1. Member of the Executive Committee

2. Member of the Audit Committee

3. Member of the Compensation Committee

4. Member of the Long-Range Planning Committee

Glossary

Defined below are some generally used energy industry terms.

Btu—Abbreviation for British thermal unit, a measure of heating value—the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

Cogeneration—Process in which two forms of energy, often electrical and thermal (in the form of hot water), are produced simultaneously from a single fuel source, such as natural gas.

Cubic Foot—measured in thousands (Mcf), millions (Mmcf), billions (Bcf)—The most common measurement of gas volume. It is the amount of gas required to fill a volume of one cubic foot under stated conditions of temperature and pressure.

Degree Day—A measure of the coldness of the weather experienced.

Dekatherm—A measure of heating value meaning one million Btu's. One dekatherm roughly equals one thousand cubic feet of gas (one Mcf) in heating value.

Development—The drilling and related activities necessary after initial discovery of oil or gas to begin production.

Distribution Company—Utility which sells gas to local residential, commercial and industrial consumers. Also referred to as a local distribution company (LDC).

Exploratory Well—A well drilled to a previously untested geologic structure to determine the presence of oil or gas.

Federal Energy Regulatory Commission (FERC)—The federal agency that has regulatory jurisdiction over the System's interstate natural gas operations. The FERC is an independent agency within the U.S. Department of Energy.

Liquefied Natural Gas (LNG)—Natural gas that has been liquefied by reducing its temperature to minus 260°F at atmospheric pressure. In volume it occupies 1/600 the space of the gas in its vapor state. LNG can be transported in insulated tankers and stored in insulated tanks. It returns to a vaporous state when warmed.

Market-Sensitive Contract—A contract whose pricing and sales quantity terms can be adjusted to reflect changes in supply and demand conditions.

Minimum Bill—A provision in a gas purchase contract specifying a minimum volume of gas the purchaser is obligated to pay for on an annual basis.

Open Access—A transportation plan under which pipelines that agree to transport natural gas for one customer are required to transport gas for all customers on a nondiscriminatory basis.

Reserves—The amount of commercially recoverable gas or oil estimated to lie within a given reservoir.

Sales/Transportation Service—Under traditional sales service agreements, gas pipeline companies purchase gas from suppliers, transport the gas to customers and resell it to them. Under transportation service agreements, pipelines transport gas supplies for customers who have purchased the gas directly from other parties.

Spot Market Sales—Short-term contract sales of natural gas, crude oil, refined petroleum products or LP-Gas.

Take-or-Pay—A clause in a gas supply contract providing for a minimum quantity of gas to be paid for, whether or not taken by the purchaser.

Tariff—The rate and general terms and conditions under which natural gas will be supplied by a pipeline.

Throughput—Total volume of transportation volumes and tariff sales; all gas volumes delivered.



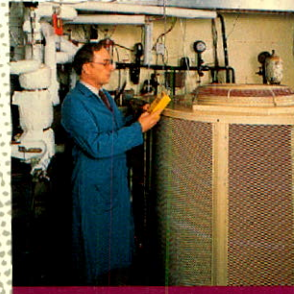
Propane



Cogeneration



LNG



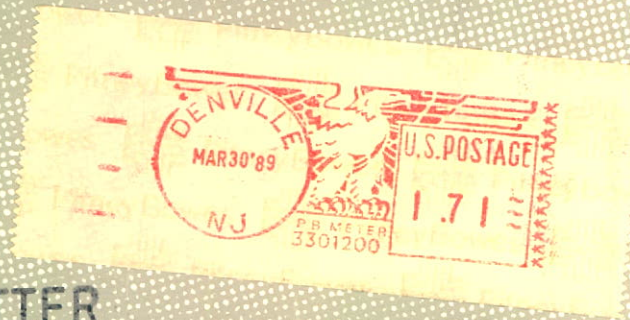
Research



Marketing

COLUMBIA GAS
System

20 Montchanin Road, Wilmington, Delaware 19807



PRINTED MATTER

112900-C
MCGILL UNIVERSITY
HOWARD ROSS LIBRARY OF MGMT
1001 SHERBROOKE ST W
MONTREAL PQ CANADA H3A 1G5