SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarter ended September 30, 1998 Commission File Number 0-23599

MERCURY COMPUTER SYSTEMS, INC.
(Exact name of registrant as specified in its charter)

MASSACHUSETTS	04-2741391
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
199 RIVERNECK ROAD CHELMSFORD, MA	01824
(Address of principal executive offices)	(Zip Code)

978-256-1300
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

YES X NO ___

Number of shares outstanding of the issuer's classes of common stock as of October 30, 1998:

Class	Number of Shares Outstanding
Common Stock, par value $.01 per share	10,113,245

Total number of pages 14

MERCURY COMPUTER SYSTEMS, INC.

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PART I. FINANCIAL INFORMATION

ITEM 1. CONSOLIDATED FINANCIAL STATEMENTS

MERCURY COMPUTER SYSTEMS, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	SEPTEMBER 30, 1998	JUNE 30, 1998
	(UNAUDITED)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 7,207	$ 6,054
Marketable securities	7,582	10,077
Trade accounts receivable, net of allowances of $267 and $218 at September 30, 1998 and June 30, 1998, respectively	19,977	17,143
Inventory	7,568	9,125
Deferred income taxes, net	1,669	1,669
Prepaids expenses and other current assets	1,061	1,255
Total current assets	45,064	45,323
Marketable securities	21,696	18,889
Property and equipment, net	10,431	8,466
Capitalized software costs, net	208	104
Deferred income taxes, net	429	429
Other assets	350	358
Total assets	$ 78,178	$ 73,569
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,935	$ 3,368
Accrued expenses	2,855	2,804
Accrued compensation	4,011	3,316
Billings in excess of revenues and customer advances	845	1,017
Income taxes payable	2,473	2,024
Total current liabilities	14,119	12,529
Commitments and contingencies (Note E)	--	--
Stockholders' equity:		
Preferred stock, $.01 par value; 1,000,000 shares authorized and none issued and outstanding at September 30 and June 30, 1998, respectively (liquidation preference none)	--	--
Common stock, $.01 par value: 25,000,000 shares authorized; 10,067,133 and 9,973,491 shares issued and outstanding at September 30, 1998 and June 30, 1998, respectively	101	100
Additional paid-in capital	26,381	25,961
Retained earnings	38,012	35,483
Cumulative translation adjustment	(158)	(179)
Unrealized gains/(losses) on securities	48	--
Related parties notes receivable	(325)	(325)
Total stockholders' equity	64,059	61,040
Total liabilities and stockholders' equity	$ 78,178	$ 73,569

The accompanying notes are an integral part of the consolidated financial statements

MERCURY COMPUTER SYSTEMS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)
(Unaudited)

	THREE MONTHS ENDED SEPTEMBER 30, 1998	1997
Net revenue	$24,062	$19,039
Cost of revenue	8,460	6,661
Gross profit	15,602	12,378
Operating expenses:		
Selling, general and administrative	7,358	6,645
Research and development	4,707	3,381
Total operating expenses	12,065	10,026
Income from operations	3,537	2,352
Interest income, net	369	231
Other income (expenses), net	45	83
Income before income taxes	3,951	2,666
Provision for income taxes	1,422	1,060
Net income	$ 2,529	$ 1,606
Net income per share:		
Basic	$ 0.25	$ 0.31
Diluted	$ 0.24	$ 0.20
Weighted average shares outstanding:		
Basic	10,026	5,217
Diluted	10,620	7,920

The accompanying notes are an integral part of the consolidated financial statements

MERCURY COMPUTER SYSTEMS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	THREE MONTHS ENDED SEPTEMBER 30, 1998	1997
Cash flows provided from operating activities:		
Net income	$ 2,529	$ 1,606
Adjustments to reconcile net income to net cash		
Provided by (used in) operating activities:		
Depreciation and amortization	951	832
Deferred income taxes	--	(332)
Changes in assets and liabilities:		
Trade accounts receivable	(2,798)	446
Contracts in progress	--	(901)
Inventory	1,566	(591)
Prepaid expenses and other current assets	197	(260)
Other assets	9	(31)
Accounts payable	563	(485)
Accrued expenses and compensation	736	812
Billings in excess of revenues and customer advances	(172)	489
Income taxes payable	448	453
Net cash provided by operating activities	4,029	2,038
Cash flows from investing activities:		
Purchase of marketable securities	(312)	--
Purchases of property and equipment	(2,786)	(1,358)
Capitalized software development costs	(225)	--
Net cash used in investing activities	(3,323)	(1,358)
Cash flows from financing activities:		
Net proceeds from issuance of common stock	--	--
Proceeds from exercise of stock options and warrants	421	144
Net cash provided by financing activities	421	144
Effect of exchange rate change on cash and cash equivalents	26	18
Net change in cash and cash equivalents	1,153	842
Cash and cash equivalents at beginning of period	6,054	15,193
Cash and cash equivalents at end of period	$ 7,207	$ 16,035
Cash paid during the period for:		
Interest	$ --	$ 2
Income taxes	844	939

The accompanying notes are an integral part of the consolidated financial statements

MERCURY COMPUTER SYSTEMS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

A. BASIS OF PRESENTATION

These consolidated financial statements should be read in conjunction with the Company's financial statements and footnotes included in the Company's Form 10-K, filed with the Securities and Exchange Commission. In the opinion of management, the accompanying unaudited financial statements include all adjustments, consisting of normal recurring adjustments, necessary to present fairly the consolidated financial position, results of operations and cash flows of Mercury Computer Systems, Inc.

B. INVENTORY

	SEPTEMBER 30, 1998 (IN THOUSANDS)	JUNE 30, 1998 (IN THOUSANDS)
Raw materials	$3,169	$4,707
Work in process	2,236	2,814
Finished goods	2,163	1,604
Total	$7,568	$9,125

C. NET INCOME PER COMMON SHARE

The Company has adopted Statement of Financial Accounting Standard ("SFAS") No. 128, "Earnings Per Share," which specifies the computation, presentation and disclosure requirements for net income per common share. Basic net income per common share is computed based on the weighted average number of common shares outstanding during the period. Diluted net income per common share gives effect to all diluted potential common shares outstanding during the period. Under SFAS No. 128, the computation of diluted earnings per share does not assume the issuance of common shares that have an antidilutive effect on net income per common share.

Prior to the adoption of this statement, all common and common equivalent shares issued during the twelve month period prior to the filing of the initial public offering ("cheap stock") were included in the calculation of basic and diluted earnings per share as if they were outstanding for all periods presented. Adoption of this statement, and the related guidance set out in Securities and Exchange Commission Staff Accounting Bulletin No. 98, has eliminated the inclusion of cheap stock from the calculation of basic and diluted earnings per share prior to issuance of the securities.

	THREE MONTHS ENDED SEPTEMBER 30,	
	1998 (IN THOUSANDS)	1997 (IN THOUSANDS)
Net income	$ 2,529	$1,606
Shares used in computation:		
Weighted average common shares outstanding used in computation of basic net income per share	10,026	5,217
Dilutive effect of convertible preferred stock	--	2,557
Dilutive effect of stock options	594	141
Dilutive effect of warrants	--	5
Shares used in computation of diluted net income per share	10,620	7,920
Basic net income per share	$ 0.25	$ 0.31
Dilutive net income per share	$ 0.24	$ 0.20

Options to purchase 83,538 and 33,928 shares of common stock were outstanding during the three months ended September 30, 1998 and September 30, 1997, respectively, but were not included in the calculation of diluted net income per common share because the option price was greater than the average market price of the common shares during the period.

D. COMPREHENSIVE INCOME

Mercury's total comprehensive income was as follows (in thousands)

	THREE MONTHS ENDED SEPTEMBER 30, 1998	THREE MONTHS ENDED SEPTEMBER 30, 1997
Net income	$2,529	$1,606
Other comprehensive income, net of tax:		
Foreign currency translation adjustments	17	23
Unrealized gains on securities	27	--
Other comprehensive income	44	23
Total comprehensive income	$2,573	$1,629

E. INTERNAL REVENUE SERVICE AUDIT

On December 12, 1997, the Internal Revenue Service ("IRS") concluded an audit of the Company's tax returns for the years ended June 30, 1992 through June 30, 1995, and issued a formal report reflecting proposed adjustments with respect to the years under audit. The proposed IRS adjustments primarily relate to the disallowance of research and development tax credits claimed by the Company, as well as treatment of certain other items. The Company is in the process of appealing the proposed adjustments to the Appeals Division of the IRS. While the Company does not believe that the final outcome of the IRS audit will have a material adverse effect on the Company's financial condition or results of operations, no assurance can be given as to the final outcome of the audit, the amount of any final adjustments or the potential impact of such adjustments on the Company's financial condition or results of operations.

F. NEW ACCOUNTING PRONOUNCEMENTS

In June of 1997, the FASB issued SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information." This statement supercedes SFAS No. 14, "Financial Reporting for Segments of a Business Enterprise." This statement includes requirements to report selected segment information quarterly and entity-wide disclosures about products and services, major customers, and the material countries in which the entity holds assets and reports revenues. The statement will be effective for annual periods beginning after December 15, 1997 and the Company will adopt its provisions in fiscal 1999. Reclassification for earlier periods is required, unless impracticable, for comparative purposes. The Company is currently evaluating the impact this statement will have on its financial statements; however, the Company does not expect the statement to have a material impact on its financial position or results of operations because the statement requires only additional disclosure.

In March 1998, the American Institute of Certified Public Accountants issued SOP 98-1, "Internal Use Software," which provides guidance on the accounting for the costs of software developed or obtained for internal use. SOP 98-1 is effective for fiscal years beginning after December 15, 1998. Management does not expect the statement to have a material impact on its financial position or results of operations.

On June 15, 1998 the FASB issued SFAS No. 133 " accounting for Derivative Instruments and Hedging Activities". SFAS No. 133 is effective for all fiscal quarters for all fiscal years beginning after June 15, 1999. SFAS No. 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designated as part of a hedge transaction and the type of hedge transaction. Management of the Company anticipates that, due to its limited use of derivative instruments, the adoption of SFAS No. 133 will not have a material impact on its financial position or results of operations.

ITEM 2. MANAGEMENT DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

CERTAIN FACTORS THAT MAY AFFECT FUTURE RESULTS

From time to time, information provided by the Company, statements made by its employees or information included in its filings with the Securities and Exchange Commission may contain statements which are not historical facts but which are "forward-looking statements" which involve risks and uncertainties. The words "may," "will," "expect," "anticipate," "continue", "estimate", "project," "intend" and similar expressions are intended to identify forward-looking statements regarding events, conditions and financial trends that may affect the Company's future plans of operations, business strategy, results of operations and financial position. These statements are based on the Company's current expectations and estimates as to prospective events and circumstances about which there can be no firm assurances given. Further, any forward-looking statement speaks only as of the date on which such statement is made, and the Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made. As it is not possible to predict every new factor that may emerge, forward-looking statements should not be relied upon as a prediction of actual future financial condition or results. Important factors that may cause the Company's actual results to differ from forward-looking statements are referenced in the Company's Form 10K filed with the Securities and Exchange commission.

RESULTS OF OPERATIONS:
REVENUES

The Company's total revenues increased 26% from $19.0 million during the three months ended September 30, 1997 to $24.1 million during the three months ended September 30, 1998. Increases were realized in all areas.

Defense electronics revenues increased 17% from $15.1 million or 79% of total revenues during the three months ended September 30, 1997 to $17.8 million or 74% of total revenues during the three months ended September 30, 1998. The increase in revenues was due primarily to continued strong unit demand for defense electronics products, largely comprised of, advanced military applications in radar, sonar and airborne surveillance.

Medical imaging revenues increased 41% from $2.2 million or 12% of total revenues during the three months ended September 30, 1997 to $3.1 million or 13% of total revenues during the three months ended September 30, 1998. The increase in medical imaging revenues is reflective of the Company's ongoing investment in this business, expansion into new modalities and the resulting increased unit demand.

Other revenues increased 91% from $1.7 million or 9% of total revenues during the three months ended September 30, 1997 to $3.2 million or 13% of total revenues during the three months ended September 30, 1998. The increase in revenues was primarily due to increased unit demand by new and existing commercial customers.

COST OF REVENUES

Cost of revenues increased 27% from $6.7 million during the three months ended September 30, 1997 to $8.5 million during the three months ended September 30, 1998. This increase directly correlates with the corresponding revenue increase. As a percent of total revenues, cost of revenues remained constant at 35% for the three months ended September 30, 1997 and 1998. This constant level of cost of revenues as a percentage of total revenues was due primarily to the stable nature of the businesses, concerted efforts to control costs and is reflective of gross margins historically achieved by the Company as a whole.

SELLING, GENERAL AND ADMINISTRATIVE

Selling, general, and administrative expenses increased 11% from $6.6 million during the three months ended September 30, 1997 to $7.4 million during the three months ended September 30, 1998. These increases reflect the hiring of additional sales and administrative personnel, information system investments, increased commissions and marketing related costs, all of which are associated with higher sales volume, and to a lesser extent, continued global expansion.

RESEARCH AND DEVELOPMENT

Research and development expenses increased 39% from $3.4 million during the three months ended September 30, 1997 to $4.7 million during the three months ended September 30, 1998. The increase was due primarily to the hiring of additional software and hardware engineers to develop and enhance the features and functionality of the Company's products in response to increased demand for next generation product. Engineering expenses currently are running higher than management's target levels as the Company is completing some major development programs to deliver important new technology to its customers. The Company anticipates that the higher engineering spending will continue over the next several quarters.

INCOME FROM OPERATIONS

Income from operations increased 50% from $2.4 million during the three months ended September 30, 1997 to $3.5 million during the three months ended September 30, 1998. This increase is associated with higher sales volume coupled with improved spending efficiency. Included in income from operations during the three months ended September 30, 1998 were $562,000 in hardware and software revenues and $894,000 in direct expenses related to the shared storage business. Included in income from operations during the three months ended September 30, 1997 were $38,000 in hardware and software revenues and $670,000 in direct expenses related to the shared storage business. The direct expenses include expenses from marketing and engineering activities, primarily related to compensation, trade shows, prototype development and direct costs related to the sale of the product, including certain hardware costs.

INTEREST INCOME, NET

Interest income, net, increased 60% from $231,000 during the three months ended September 30, 1997 to $369,000 during the three months ended September 30, 1998. This increase reflects an increase in the Company's average cash balances primarily as a result of cash received from the Company's initial public offering. Offsetting the effect of higher average cash balances were lower yields achieved on the Company's cash. These lower yields were the result of a shift in investment strategy from taxable money market instruments to non-taxable securities.

PROVISION FOR INCOME TAX

The Company recorded a tax provision of $1.4 million during the three months ended September 30, 1998 reflecting a 36% tax rate as compared to a $1.1 million tax provision during the three months ended September 30, 1997, reflecting a 40% tax rate. The reduction in the effective tax rate was primarily due to the fact that the Company feels its provision for the Internal Revenue Service audit is adequate and, therefore, no longer needs to provide at such a high rate. Additionally, the aforementioned shift in investment strategy from taxable money market instruments to non-taxable securities has contributed to the reduced tax provision.

LIQUIDITY AND CAPITAL RESOURCES

As of September 30, 1998, the Company had cash and marketable investments of approximately $36.5 million. During the three months ended September 30, 1998, the Company generated approximately $4.0 million in cash from operations compared to $2.0 million generated during the three months ended September 30, 1997. The increase in cash generated from operations was due to several factors; particularly, increased profitability, inventory reductions and accounts payable increases. These cash increases were offset somewhat by an increase in accounts receivable. Days sales outstanding increased from 58 days at September 30, 1997 to 75 days at September 30, 1998 as a disproportionate amount of revenue was recorded at the end of the accounting period.

The Company has a line of credit agreement with a commercial bank on which the Company can borrow up to $5.0 million at an interest rate equal to the prime rate or, at the election of the Company, two and one quarter percentage points above the London InterBank Offered Rate. As of September 30, 1998, there was no outstanding borrowing on this line of credit.

During the three months ended September 30, 1998, the Company's investing activities used cash of $3.3 million which consisted of $1.8 million related to the development of additional office space, $957,000 for computers, furniture and equipment, $312,000 for the purchase of marketable securities (net) and $225,000 for capitalized software. During the three months ended September 30, 1997, the Company's investing activities used cash of $1.4 million, consisting of $730,000 for computers, furniture and equipment and $628,000 related to the development of additional office space.

During the three months ended September 30, 1998, the Company's financing activities provided approximately $421,000 in cash, all related to the issuance of stock options. During the three months ended September 30, 1997, the Company's financing activities provided $144,000 in cash from the issuance of stock options.

The Company believes that its available cash, cash generated from operations, and the Company's line of credit, will be sufficient to provide for the Company's working capital and capital expenditure requirements for the foreseeable future and any final adjustments resulting from the IRS audit described in the notes to the financial statements. If the Company acquires one or more businesses or products, the Company's capital requirements could increase substantially. In the event of such an acquisition or in the event that any unanticipated circumstances arise which significantly increase the Company's capital requirements, there can be no assurance that necessary additional capital will be available on terms acceptable to the Company, if at all.

YEAR 2000 COMPLIANCE

Many currently installed computer systems and software products are coded to accept only two-digit entries in the date code field and cannot distinguish 21st century dates from 20th century dates. These date code fields will need to distinguish 21st century dates from 20th century dates and, as a result, many companies' software and computer systems may need to be upgraded or replaced in order to comply with such "Year 2000" requirements. In the Company's Annual report on Form 10K for the fiscal year ended June 30, 1998, the Company made disclosures regarding the following matters: (i) the Company's state of Year 2000 readiness of the hardware and software products sold by the Company ("Products"), the information technology systems used in its operations ("IT Systems"), and its non-IT Systems, such as building security, voice mail and other systems, (ii) the expenditures expected to be incurred in connection with identifying, evaluating and settling any Year 2000 compliance issues, (iii) the risks associated with identified Year 2000 issues, and (iv) the Company's intention to develop a contingency plan to address identified Year 2000 compliance issues.

State of Readiness: Since the Company's original Year 2000 disclosure, the Company has completed reprogramming of the source code underlying its current financial and accounting software to make it Year 2000 compliant. Testing of the software is expected to be completed during the latter half of fiscal 1999. However, there has not been significant progress made with respect to the other steps being taken to achieve Year 2000 readiness. Accordingly, prior to the end of fiscal 1999, the Company still intends to (a) complete an internal review of the Year 2000 compliance of all prior versions of its Products, (b) circulate a questionnaire to vendors and customers with whom the Company has material relationships to obtain information about their Year 2000 compliance, and (c) retain an outside consultant to assist in compiling a comprehensive list of all IT-Systems and non-IT Systems. Until such information is obtained, the Company will not be able to effectively evaluate whether any corrective efforts will be required with respect to its IT Systems (except as described above), non-IT Systems or prior versions of its Products.

Costs: The Company has not incurred any material expenditures to date in connection with identifying or evaluating Year 2000 compliance issues.

Contingency Plan: The Company has not yet developed a Year 2000 specific contingency plan. The Company intends to prepare a contingency plan with respect to its financial and accounting software no later than mid-1999. In addition, if further Year 2000 compliance issues are discovered , the Company then will evaluate the need for one or more contingency plans relating to such issues.

MERCURY COMPUTER SYSTEMS, INC.
PART II. OTHER INFORMATION

(d) Use of Proceeds from Registered Securities.

During the three months of July, August and September 1998, the Company used approximately $1.8 million of proceeds received from the sale of the 2,000,000 shares for the construction of an additional facility as discussed in the Company's Form 10K filed with the Securities and Exchange Commission.

ITEM 6. EXHIBITS AND REPORTS FILED ON FORM 8-K

(a) Exhibits. See as listed

Exhibit Item #	
27.1	Financial Data Schedule

(b) Reports on Form 8-K. None.

MERCURY COMPUTER SYSTEMS, INC.
SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MERCURY COMPUTER SYSTEMS, INC.

Date: November 13, 1998 By: /s/ G. Mead Wyman

G. Mead Wyman
Senior Vice President, Chief Financial Officer
and Treasurer
(Principal Financial and Accounting Officer)

MERCURY COMPUTER SYSTEMS, INC.
EXHIBIT INDEX

Exhibit ITEM #	
27.1	Financial Data Schedule

5
1,000
U.S. DOLLARS

3-MOS
JUN-30-1999
JUL-01-1998
SEP-30-1998
1
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267
7,568
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23,424
12,993
78,178
14,119
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0
101
63,958
78,178
24,062
24,062
8,460
8,460
11,651
50
0
3,951
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2,529
0
0
0
2,529
.25
.24

5

1,000
U.D. DOLLARS

3-MOS
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JAN-01-1997
MAR-31-1998
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17,371
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51,445
18,466
11,408
70,393
12,177
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0
99
58,117
70,393
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22,364
7,832
7,832
10,597
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0
3,935
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2,439
0
0
0
2,439
.29
.24

5

1,000
U.S. DOLLARS

3-MOS
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JUL-01-1997
DEC-31-1997
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5

1,000
U.S. DOLLARS

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JUL-01-1997
SEP-30-1997
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19,039
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6,661
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0
0
1,606
.31
.20

5

1,000
U.S. DOLLARS

YEAR
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JUL-01-1996
JUN-30-1997
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5

1,000
U.S. DOLLARS

YEAR
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JUN-30-1996
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