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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**Form 10-K**

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934  
FOR THE FISCAL YEAR ENDED JUNE 30, 2006**

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

**FOR THE TRANSITION PERIOD FROM TO**

**COMMISSION FILE NUMBER 0-12944**

**ZYGO CORPORATION**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**Laurel Brook Road, Middlefield, Connecticut**  
(Address of principal executive offices)

**06-0864500**  
(IRS Employer  
Identification Number)

**06455-1291**  
(Zip Code)

**Registrant's telephone number, including area code: (860) 347-8506**

**Securities registered pursuant to Section 12(b) of the Act:**

None

**Securities registered pursuant to Section 12(g) of the Act:**

Common Stock, \$.10 Par Value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in rule 12b-2 of the Exchange act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes  No

The aggregate market value of the registrant's Common Stock held by non-affiliates, based upon the closing price of the Common Stock on December 31, 2005, as reported by the NASDAQ National Market, was approximately \$167,707,254. Shares of Common Stock held by each executive officer and director and by each person who owns 5% or more of the outstanding Common Stock, based on filings with the Securities and Exchange Commission, have been excluded since such persons may be deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

Indicate the number of shares outstanding of each of the registrant's classes of Common Stock, as of the latest practicable date.

18,231,754 Shares of Common Stock, \$.10 Par Value, at September 1, 2006

**Documents incorporated by reference:**

Specified portions of the registrant's Proxy Statement related to the registrant's 2006 Annual Meeting of Stockholders, to be filed pursuant to Regulation 14A of the Securities Exchange Act of 1934 with the Securities and Exchange Commission, are incorporated by reference into Part II (Item 5) and Part III (Items 10-14) of this Annual Report on Form 10-K to the extent stated herein.

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As used in this Annual Report on Form 10-K, unless the context otherwise requires, the terms “we,” “us,” “our,” “Company”, and “ZYGO” refer to Zygo Corporation, a Delaware corporation.

## **FORWARD-LOOKING STATEMENTS**

All statements other than statements of historical fact included in this Annual Report regarding our financial position, business strategy, plans, anticipated growth rates, and objectives of management for future operations are forward-looking statements. These forward-looking statements include without limitation statements under “Business,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Risk Factors.” Forward-looking statements are intended to provide management’s current expectations or plans for the future operating and financial performance based upon information currently available and assumptions currently believed to be valid. Forward-looking statements can be identified by the use of words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plans,” “strategy,” “project,” and other words of similar meaning in connection with a discussion of future operating or financial performance. Actual results could differ materially from those contemplated by the forward-looking statements as a result of certain factors such as those disclosed under “Risk Factors.” Such statements reflect our current views with respect to future events and are subject to these and other risks, uncertainties, and assumptions relating to the operations, results of operations, and our growth strategy.

Any forward-looking statements included in this Annual Report speak only as of the date of this document. ZYGO undertakes no obligation to publicly update or revise forward-looking statements to reflect events or circumstances occurring after the date of this 10-K.

## PART I

### Item 1. *Business*

#### OVERVIEW

Zygo Corporation (“ZYGO,” “we,” “us,” “our,” or “Company”) designs, develops, and manufactures ultra-high precision measurement solutions to improve our customers’ manufacturing yields, and optical components and systems as OEM sub-components and end-user optical systems. ZYGO’s measurement solutions are designed to improve quality, increase productivity and decrease the overall cost of manufacturing and product development for high-technology manufacturing processes. The Company’s optical component and systems products provide high-end solutions for laser fusion research, imaging systems, and measurement system components.

We serve the semiconductor and industrial markets through our three core product lines, metrology, precision positioning systems, and optical systems solutions. Our semiconductor product offerings include OEM solutions and major technology development projects for the semiconductor capital equipment industry and in-line automated yield improvement systems for both flat panel displays and advanced semiconductor packaging manufacturing. One of our strategic initiatives is to expand our product offerings to include integrated in-line technology. This will allow us to take our patented technology directly to selected markets. During fiscal 2006, we announced our first shipment of a new front-end semiconductor metrology tool, the Z3D-7000™, to a leading tier one semiconductor manufacturer. This tool is for in-line use in manufacturing, demonstrating our ability to move from our traditional lab environment to the production floor.

Our industrial market products serve the automotive, consumer electronics, defense/aerospace, and all markets other than semiconductor. Industrial market products include optical components, optical systems and measurement-based process control systems for defense and aerospace customers, and measurement-based process control and yield-enhancement systems for automotive and consumer electronics customers. During the last two years, we introduced and marketed the GPI XP/D™ and GPI FlashPhase™ systems. The GPI FlashPhase™ system operates on the production floor where standard interferometers cannot measure or do not meet the demanding requirements of the defense/aerospace market.

ZYGO’s solutions are primarily based on optical interferometric technology. ZYGO continues to be a world leader in optical interferometry with a patent portfolio of approximately 240 active and 210 pending patents, most of which are related to the broad field of interferometry and its practical application. ZYGO metrology solutions provide process control for surface shape and roughness, which are critical to all of the Company’s markets. Our displacement measurement systems are used extensively in ultra-precise wafer positioning systems for the semiconductor capital equipment industry.

ZYGO’s optical component and systems products, used in both semiconductor and industrial markets, reflect our broad range of capabilities and provide high-end solutions for our customers. The Company’s resources in this business include high-level design services and proprietary manufacturing processes, as well as assembly capabilities and our expertise in interferometric metrology.

In May 2000, we acquired Firefly Technologies, Inc., renamed Zygo TeraOptix, which developed optical components and modules for the telecommunications market. We exited this telecommunications segment of our business in September 2002.

We were incorporated in 1970 under the laws of the State of Delaware. The address of our principal executive offices is Laurel Brook Road, Middlefield, Connecticut, 06455-1291. Our telephone number at that address is (860) 347-8506. Our website address is [www.zygo.com](http://www.zygo.com). The information on our website is not part of this Form 10-K.

## MARKETS, PRODUCTS, AND CUSTOMERS

Manufacturers in the semiconductor and industrial markets strive to improve their processes in order to compete more effectively in a marketplace characterized by decreasing product dimensions, increasingly complex manufacturing processes, decreasing product life cycles, declining product prices, and intensifying global competition, among other factors. As such, precision metrology and optical components are designed to help these manufacturers continually achieve process and design improvements.

### **Semiconductor Market**

ZYGO serves several areas of the semiconductor market, notably capital equipment suppliers, the largest area, as well as the flat panel display and advanced semiconductor packaging. The Company has a broad and growing range of products that serve these market areas.

### ***Semiconductor Products and Applications***

Photolithography scanners form the core of the semiconductor manufacturing process. These scanners image the patterns of stacked layers of circuitry that make up transistors. The photolithographic scanners image the circuitry onto both silicon wafers for microprocessors and memory chips and also flat panel displays for computers, televisions, and other displays. Several ZYGO products enable these scanners to image these circuit patterns reliably and with nanometer precision.

*Precision Positioning Systems:* The layers of circuit patterns must overlay on top of each other to nanometer precision. To achieve nanometer precision overlay, the silicon wafer must be repeatably positioned to one-tenth the overlay tolerance. Photolithography scanners, mask and reticle writers, and yield improvement metrology tools rely on displacement measuring interferometers (DMI) to provide precise feedback to control the position of the silicon wafer. ZYGO's ZMI 2000™ and ZMI 4000™ precision positioning feedback systems are designed primarily for photolithography scanners. They are also used in a broad range of semiconductor metrology and backend process tools.

*Optical Components:* Supporting both the projection lens and stage positioning systems, ZYGO supplies OEM optical components to leading photolithographic suppliers. The core of the wafer stage positioning system is the stage mirror. ZYGO manufactures stage mirror assemblies that are part of the stage positioning system, and also manufactures various OEM optical components for projection optical systems.

*Technology Development Projects:* Lithography scanners image the electronic circuit pattern through a precision projection lens. The optical performance of the lenses required for next-generation lithography scanners often exceeds the capabilities of commercially available measurement systems. ZYGO's expertise in optical interferometer technology, and the practical skills needed to apply this technology, makes us well suited to deliver custom solutions to leading photolithography equipment suppliers.

*Flat Panel Display (FPD):* Flat panel displays first were used in laptop computers and have now grown to be the display of choice for most computer monitors. Large screen televisions are now common and many are based on flat panel display technology. ZYGO systems, with ultra high precision measurement solutions, enable our customers to improve flat panel display manufacturing yields. The ZYGO One Shot™ and Sure Shot™ systems are in-line process control, yield enhancement tools. The FPD One Shot™ tool measures the topography and critical dimensions ("CD") of key color filter features prior to being combined with the thin-film-transistor panel in the "one drop fill" assembly process. This fully automated system incorporates the latest ZYGO Intellisensor™ optical profiler technology, integrated conveyors or robotics with motion stages, mini-clean room environmental enclosures, and factory floor command and control software. The system measures the height and width of key optical components, and predicts the fill volume to increase upstream manufacturing yields.

The Sure Shot™ FPD product provides overlay and CD metrology of the individual mask layers post lithography and helps identify process control problems that can lead to product failures and defects related to variances in illuminance (called MURA) in the finished display. The Sure Shot™ tool can be used as an off line process analysis device, or in-line in conjunction with closed loop lithography process control.

*Semiconductor Process Control:* Semiconductor processes used to manufacture computer, communications, and memory chips incorporate a large number of metrology steps in order to ensure adequate process control, and thereby obtain high yields. ZYGO recently introduced the Z3D-7000™ product to this market. The Z3D-7000™ precisely measures the physical dimensions of a wide variety of patterned chip features such as trenches, vias, and contact pads. Such features are created using carefully engineered sequences of lithographic, deposition, etch, and polishing processes, all of which must be carefully controlled. Competing products in this market are typically specially designed to be used only for certain process steps, and generally are capable of measuring only one or two number process variables such as film thickness, or step height. The Z3D-7000™ is distinguished by its applicability to a large number of process steps, and ability to measure a large number of process variables. This makes the Z3D-7000™ valuable to our customers since it enables them to reduce the number and cost of metrology systems required to effectively control their processes.

*Advanced Chip Packaging and Assembly:* During the manufacture of a semiconductor chip, after the chip making process is complete, the silicon wafer on which the chips are fabricated must be diced into individual chips and packaged for customer use. In advanced chip packaging fabrication facilities, the ZYGO CP 300i™ system measures patterned features and films on the surfaces of diced and un-diced chips, for process control and yield improvement. The system incorporates a specialized ZYGO NewView™ optical profiler and wafer positioning system with pattern recognition software. It can be configured for clean room or laboratory use.

*Semiconductor Customers include:*

Canon	KLA-Tencor Corporation
Chi Mei Optronics	Nikon
AU Optronics	Applied Materials
Intel	Zeiss SMT Semiconductor
SVA-NEC	IPS Alpha

## **Industrial Market**

ZYGO's industrial market covers all areas other than semiconductor. Products for automotive, consumer electronics, and other customers are measurement-based process control and yield enhancement systems. Products for defense and aerospace companies include optical components, optical systems, and measurement-based process control systems.

### ***Industrial Products and Applications***

#### ***Consumer Electronics***

Consumer electronics, including cell phones, digital cameras, DVD and CD players, and optical computer drives, all have significant optical content. Consumer electronic optics, which provide imaging and data storage, are manufactured in quantities in the hundreds of thousands to millions of components per year. These complex miniature optical systems require precise optical testing—from development to in-line process control—which our measurement-based process control and yield enhancement systems are designed to perform.

*GPI™ and VeriFire™ Systems:* The development of new optical systems for any application requires very flexible and easy to use test equipment. The ZYGO GPI™ and VeriFire™ systems are our latest products in an over 30 year old product family that has improved optical testing over those years and continues to evolve to meet changing requirements. Consumer electronics production applications for larger optics, greater than 25 mm diameter, and research and

development for any application rely on these products for critical developmental data and process control feedback in production. These products are widely used due to their configuration flexibility in both hardware set ups and ZYGO's MetroPro™ data analysis software.

*PTI 250™*: Consumer electronics typically contain small optics, less than 30 mm diameter. The PTI 250™ is a small bench top optical test system in the tradition of ZYGO's industry standard GPI™. The system meets the consumer market demand by combining high-quality optics with ZYGO's MetroPro™ data analysis software.

*DVD 400™*: BluRay and HD DVD, the next generation of systems DVD player and computer memories, use blue light at 405 nm wavelength to increase the amount of data on a DVD disk. ZYGO's DVD 400™ interferometer is used by the developers of these next generation systems. ZYGO's DVD 400P™ is our system for the production floor. ZYGO's 405 nm systems are an enabling technology for the next generation DVD players and computer memories.

### ***Automotive Industry***

The automotive industry is striving to improve fuel economy and decrease environmental pollution to meet customer demand and adhere to government regulation. Improving both requires more efficient engines, including the fuel injection system. Since high-pressure valves and sealing surfaces found in the fuel injection system must be manufactured to high precision, our measurement-based process control and yield-enhancement systems are used in the development and manufacture of these components.

*NewView™ 6200/6300 and Delta Systems*: Our high precision metrology equipment is well suited for fuel injector components, which are ground or lapped to tolerances of one-hundred billionths of a meter. ZYGO's patented "FDA" data acquisition system for the NewView™ optical profiler meets this high-precision measurement requirement. We recently introduced the NewView 6200™ and NewView 6300™ for these applications, offering increased speed and better performance at a lower price point. The NewView Delta™ is a production floor packaged system, also targeted to this growing market.

### ***Defense/Aerospace***

Defense/aerospace companies use optical technology in a broad range of applications. One application is the enhancement of human sight through imaging systems, such as telescopes, that are used in satellite and airborne reconnaissance, fire-control systems, and hand-held viewers. Nuclear research for both weapons maintenance programs and the development of nuclear fusion energy sources also use very large optical lasers at a number of worldwide facilities, including the National Ignition Facility (NIF). In addition, projection systems in computer-based flight and battlefield simulation use sophisticated optical systems. Several of our products support these and other defense/aerospace programs.

*Optical Components*: The ability to process optics with flat surfaces is a manufacturing core competency at ZYGO. We have the capability to machine, polish, and final-coat optical components with flat surfaces ranging in size from a centimeter to a meter. This capability meets the requirements for several defense/aerospace programs. For example, ZYGO has a dedicated production facility to carry out a multi-year program for NIF laser optics used at Lawrence Livermore National Laboratory, as well as other laser fusion research projects in the United States and other countries. Other significant manufacturing programs have included the manufacture of precision sapphire windows, telescope optics, and prismatic reflectors.

*Optical System Group*: Defense/aerospace optical systems often push the state of the art in optical design and manufacturing technologies. ZYGO's Optical Systems Group has two locations—one in Costa Mesa, California and the other in Tucson, Arizona. These facilities are focused on designing and manufacturing leading edge optical systems. Key development and manufacturing programs include or have included: Helmet-mounted immersive display for flight training simulation, optical subassemblies for the NIF program, laser surgery beam delivery systems, and custom imaging systems.

*GPI™ and VeriFire™ Systems*: Developing state-of-the-art optical designs and manufacturing technology for the defense/aerospace market also requires leading metrology systems for

manufacturing process control and development. Our industry standard GPI™ and VeriFire™ optical interferometers test both the optical components and systems for design compliance. During the last two years, we introduced and marketed the GPI XP/D™ and GPI FlashPhase™ systems. The GPI FlashPhase™ system operates on the production floor where standard interferometers cannot measure or do not meet the demanding requirements of the defense/aerospace market. With our proprietary data acquisition, GPI FlashPhase™ can measure in the turbulent and vibrating environments that are often found in defense/aerospace applications. ZYGO is also active in designing and manufacturing custom systems for defense/aerospace applications, especially interferometers that operate at infrared wavelengths, which are unique to this market.

*Industrial Customers include:*

AWE  
Caterpillar  
Bosch  
IntraLase

Lawrence Livermore National Laboratory  
Northrop Grumman  
Sandia National Laboratories  
University of Rochester

## **Competition**

The industries in which we participate are intensely competitive and are characterized by price pressure and rapid technological change. Furthermore, these markets are dominated by a few market leaders. We are one of a limited number of companies that develop and market yield-enhancement solutions. Our primary yield enhancement competitors include Agilent's Laser Interferometer Positioning Systems Division, Veeco's Metrology Division, SNU Precision, and Rank Taylor Hobson. The principal factors upon which we compete are performance, flexibility, value, on-time delivery, responsive customer service and support, and breadth of product line.

## **Research and Development and Engineering Operations**

We operate in industries that are subject to rapid technological change and engineering innovation. As such, we dedicate substantial resources to research and development. At June 30, 2006, we employed 135 individuals or approximately 24% of our workforce within our research and development and engineering operations. Our strategy is to form close technical working relationships with customers and OEM suppliers in our markets to ensure that our products are commercially relevant. We also maintain a close working relationship with various research groups and academic institutions in the United States and abroad. We have been recognized as an innovator in commercializing technology, as evidenced by our numerous achievement awards, including R&D 100 Awards, Photonics Spectra Circle of Excellence Awards, and others. We believe that continued enhancement, development, and commercialization of new and existing products and systems are essential to maintaining and improving our leadership position.

## **Patents and Other Intellectual Property**

Our success and ability to compete depend substantially on our technology. We have been developing a portfolio of intellectual property for over 30 years, and we rely on a combination of patent, copyright, trademark, and trade secret laws, and license agreements to establish and protect our proprietary rights for our products.

Since we introduced the first optical interferometer in 1972, we have had approximately 220 United States patents issued, of which approximately 170 are currently active, and approximately 90 foreign patents issued, of which approximately 70 are active, and we have approximately 70 United States and approximately 140 foreign patent applications pending. In addition, we have a number of registered and unregistered trademarks.

While we rely on patent, copyright, trademark, and trade secret laws to protect our technology, we also believe that the technological and creative skills of our personnel, new product developments, frequent product enhancements, and reliable product maintenance are essential to establishing and maintaining a technology leadership position.

## BACKLOG

Backlog at June 30, 2006 was \$80.8 million, an increase of \$14.2 million, or 21%, as compared with \$66.6 million at June 30, 2005. The fiscal 2006 year-end backlog consisted of \$42.9 million, or 53%, in the semiconductor segment and \$37.9 million, or 47%, in the industrial segment. Orders for the fiscal year ended June 30, 2006 totaled \$182.3 million and consisted of \$107.1 million, or 59%, in the semiconductor segment and \$75.2 million, or 41%, in the industrial segment.

## MARKETING AND SALES

Our sales and marketing strategy is to establish and/or solidify strategic relationships with leading OEMs and end-users in targeted sectors within our markets. The selling process for our products is performed through our worldwide sales organization operating out of regional sales offices in California, Connecticut, Germany, Japan, Singapore, Taiwan, China, and Korea. Supporting this core sales team are business development, marketing, service, and engineering specialists representing our various optics and metrology units in Connecticut, Arizona, California, and Florida. Product promotion is done through trade shows, printed and e-business advertising, and industry technical organizations.

The following table sets forth the percentage of our total sales by region (including sales delivered through distributors) during the past three years:

	<u>Fiscal Year Ended June 30,</u>		
	<u>2006</u>	<u>2005</u>	<u>2004</u>
Domestic .....	<u>35%</u>	<u>34%</u>	<u>29%</u>
Far East:			
Japan .....	<u>45%</u>	<u>43%</u>	<u>53%</u>
Pacific Rim .....	<u>11%</u>	<u>12%</u>	<u>11%</u>
Total Far East .....	<u>56%</u>	<u>55%</u>	<u>64%</u>
Europe .....	<u>9%</u>	<u>11%</u>	<u>7%</u>
Total .....	<u>100%</u>	<u>100%</u>	<u>100%</u>

Customer service is an essential part of our business since product up time is critical given its effect on our customers' production efficiency. As of June 30, 2006, our global sales customer support and service organization consisted of 91 people skilled in sales, marketing, optical and electro component repair, software, application and system integration, diagnostics, and problem-solving capabilities.

## MANUFACTURING, RAW MATERIALS, AND SOURCES OF SUPPLY

Our principal manufacturing activities are conducted at our facilities in Middlefield, Connecticut and Tucson, Arizona. We also perform manufacturing activities in our Delray Beach, Florida facility and utilize a third-party assembly operation in Taiwan for our FPD systems.

We maintain an advanced optical components manufacturing facility in Middlefield, Connecticut, specializing in the fabrication, polishing, and coating of plano, or flat, optics for sales to third parties, as well as the manufacturing of a wide variety of optics that are used in our metrology products. Our manufacturing activities for our metrology products consist primarily of assembling and testing components and sub-assemblies supplied by us and third-party vendors, and then integrating these components and sub-assemblies into our finished products.

Our optical assembly manufacturing activities are conducted in our Tucson, Arizona, facility. We integrate ZYGO optics, optics from third party vendors, and mechanical sub-systems utilizing ZYGO metrology in this facility.

Certain components and sub-assemblies incorporated into our systems are obtained from a limited group of suppliers. We routinely monitor limited source supply parts, and we endeavor to ensure that adequate inventory is available to maintain manufacturing schedules should the supply of any part be interrupted. Although we seek to reduce our dependence on limited source suppliers, we have not qualified a second source for some of these products and the partial or complete loss of certain of these sources could have a negative impact on our results of operations and damage customer relationships.

## AVAILABLE INFORMATION

We make available free of charge through our website, [www.zygo.com](http://www.zygo.com), our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements, and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission (“SEC”). These reports may also be obtained without charge by contacting Investor Relations, Zygo Corporation, Corporate Headquarters, Laurel Brook Road, Middlefield, Connecticut 06455-1291, phone: 860-347-8506. Our Internet website and the information contained therein or incorporated therein are not intended to be incorporated into this Annual Report on Form 10-K. In addition, the public may read and copy any materials we file with the SEC’s Public Reference Room at 100 F Street, NE, Room 1580, Washington, DC 20549 or may obtain information by calling the SEC at 800-SEC-0330. Moreover, the SEC maintains an Internet site that contains reports, proxy, and information statements, or other information regarding reports that we file electronically with them at <http://www.sec.gov>.

## EMPLOYEES

At June 30, 2006, we employed 533 people and 37 temporary agency and independent contractors worldwide. We employed 262 in manufacturing, 135 in research and development, 91 in sales and marketing, and 82 in management and administration. Our employees are not represented by a labor union or a collective bargaining agreement. We regard our employee relations as good.

## EXECUTIVE OFFICERS OF THE REGISTRANT

### **J. Bruce Robinson—age 64—Chairman, President, and Chief Executive Officer**

Mr. Robinson has served as our Chairman, President, and Chief Executive Officer since November 2000, as President and Chief Executive Officer from November 1999 to November 2000, and as President from February 1999 to November 1999. Previously, he spent 25 years with The Foxboro Company, where his most recent positions were President Worldwide Operations from 1996 to 1998 and President of European Operations from 1990 to 1996.

Mr. Robinson has served as an executive officer of ZYGO since February 1999 and is also a director of ZYGO.

### **Walter A. Shephard—age 52—Vice President, Finance, Chief Financial Officer, and Treasurer**

Mr. Shephard has served as Vice President, Finance, Chief Financial Officer, and Treasurer since February 2004. Previously, he was a Principal with the Loftus Group, LLC, a management consulting firm, from November 2002 to January 2004. From 1983 to 2001, Mr. Shephard served in various capacities with GenRad, Inc., including Vice President Finance and Chief Financial Officer, Vice President of Investor Relations, and Treasurer.

Mr. Shephard has served as an executive officer of ZYGO since February 2004.

### **William H. Bacon—age 56—Vice President, Corporate Quality and Support Services**

Mr. Bacon has served as Vice President, Corporate Quality and Support Services since March 2003. Previously, he served as our Vice President, Manufacturing from April 2002 to March 2003, Vice President, Metrology Manufacturing from April 2000 to April 2002, and Vice President, Corporate Quality from January 1996 to April 2000. From November 1993 to January 1996, Mr. Bacon was Director of Total Quality and also served as Manager of Instrument Manufacturing from June 1987 to November 1993.

Mr. Bacon has served as an executive officer of ZYGO since January 1996.

### **Douglas J. Eccleston—age 57—Vice President, Precision Positioning Systems**

Mr. Eccleston has served as Vice President, Precision Positioning Systems since March 2003. Previously, from 1977 to 2002, he held various management positions with Corning Incorporated, including most recently as a Business General Manager for the Photonic Technologies division.

Mr. Eccelston has served as an executive officer of ZYGO since July 2004.

**Brian J. Monti—age 50—Vice President, Worldwide Sales and Marketing**

Mr. Monti has served as Vice President, Worldwide Sales and Marketing since July 1999. Previously, he served as Vice President, Sales, Service and Marketing for Radiometric Corporation from 1998 to 1999. From 1984 to 1998, Mr. Monti held various positions for Honeywell Measurex including Vice President, Sales, Service and Marketing.

Mr. Monti has served as an executive officer of ZYGO since July 1999.

**David J. Person—age 58—Vice President, Human Resources**

Mr. Person has served as Vice President, Human Resources since September 1998. Previously, he served in a number of senior human resource management positions with Digital Equipment Corporation from 1972 to September 1998.

Mr. Person has served as an executive officer of ZYGO since September 1998.

**Robert J. Stoner—age 43—Vice President, Metrology**

Dr. Stoner has served as Vice President of Metrology since 2004. Previously, he served as Vice President of Metrology and Optical Systems from 2003 to 2004 and Vice President of Business Development from 2002 to 2003. From 2000 to 2002, Dr. Stoner was President of Vinestone Corporation, a software company, and from 1995 to 2000 he was President of Cooper Mountain Corporation, a technology consulting firm.

Dr. Stoner has served as an executive officer of ZYGO since July 2004.

**Carl A. Zanoni—age 65—Senior Vice President, Technology**

Dr. Zanoni has served as Senior Vice President, Technology since November 2001. Previously, he served as our Vice President, Technology from June 1998 to November 2001, and Vice President, Research, Development and Engineering from April 1992 to June 1998.

Dr. Zanoni is a co-founder of our company and has served as an executive officer of ZYGO since its inception in 1970. He is also a director of ZYGO.

Under the By-laws, executive officers serve for a term of one year and until their successors are chosen and qualified unless earlier removed.

## **Item 1A. Risk Factors**

### **We are dependent on the semiconductor industry, which, as a whole, is volatile.**

Our business is significantly dependent on capital expenditures and component requirements for manufacturers in the semiconductor industry. This industry is cyclical and has historically experienced periods of oversupply, resulting in significantly reduced demand for capital equipment, including the products manufactured and marketed by us. For the foreseeable future, our operations will continue to be dependent on the capital expenditures in this industry, which in turn is largely dependent on the market demand in the semiconductor markets.

### **We have been dependent on sales to one large customer; the loss of this customer or reduction in orders from this customer could materially affect our sales.**

During fiscal 2006, 2005, and 2004, sales to Canon, our largest customer in those periods, accounted for 36%, 37%, and 49% of our net sales, respectively. We expect that sales to Canon will continue to represent a significant percentage of our net sales for the foreseeable future. Canon is an original investor in our company, the owner at June 30, 2006 of approximately 7% of our outstanding shares of common stock, and is a distributor of certain of our products in the Japanese market. A reduction or delay in orders from this customer, including reductions or delays due to market, economic, or competitive conditions in the industries in which we serve, could have a material adverse effect upon our results of operations. Our customers, including Canon, generally do not enter into long-term agreements obligating them to purchase our products.

### **We have generated significant revenues from development agreements which are nearing completion and may not be able to replace those revenues.**

During fiscal 2006, 2005, and 2004, we recorded revenues from development services of \$20.0 million, \$15.6 million, and \$16.1 million, respectively. The existing development services agreements are expected to be completed in fiscal 2007 with expected revenues of approximately \$4.0 million recorded in fiscal 2007. Presently, we have no plans and know of no plans from our customers that would increase our development services revenue in fiscal 2007 or continue them beyond fiscal 2007. To the extent that we are unable to replace these revenues with revenues from another source, our earnings could be adversely affected.

### **Our substantial international sales are subject to risk.**

We sell our products internationally, primarily to customers in Japan and throughout the Pacific Rim. Net sales to customers outside the United States accounted for approximately 65%, 66%, and 71% of our net sales in each of the fiscal years ended June 30, 2006, 2005, and 2004, respectively, and are expected to continue to account for a substantial percentage of our net sales.

International sales and foreign operations are subject to inherent risks. These risks include the economic conditions in these various foreign countries and their trading partners, political instability, longer payment cycles, greater difficulty in accounts receivable collection, compliance with foreign laws, changes in regulatory requirements, tariffs or other barriers, difficulties in obtaining export licenses, staffing and managing foreign operations, exposure to currency exchange fluctuations, transportation delays, and potentially adverse tax consequences.

Our sales and costs are negotiated and paid primarily in U.S. dollars. However, changes in the values of foreign currencies relative to the value of the U.S. dollar can render our products comparatively more expensive to the extent locally produced alternative products are available. Such conditions could negatively affect international sales of our products and foreign operations, as would changes in the general economic conditions in those markets. For our sales that are based in local currency, we are exposed to foreign exchange fluctuations from the time customers are invoiced in local currency until collection occurs. For fiscal 2006, approximately 18% of our sales were denominated in foreign currencies. In the third quarter of fiscal 2005, we began hedging certain intercompany transactions by entering into forward contracts to reduce the impact of adverse fluctuations on earnings associated with foreign currency exchange rate changes. We do not enter into any derivative transactions for speculative purposes. These contracts are entered into for periods consistent with the currency transaction exposures, generally three to six months.

Generally, any gains and losses on the fair value of these contracts are expected to be largely offset by gains and losses on the underlying transactions. There can be no assurance that risks inherent in international sales and foreign operations will not have a material adverse effect on our results of operations in the future.

**Future acquisitions may entail certain operational and financial risks.**

Our growth strategy includes expanding our products and services, and we may seek acquisitions to strategically expand our business. We regularly review potential acquisitions of businesses, technologies, or products complementary to our business and periodically engage in discussions regarding such possible acquisitions. Acquisitions involve numerous risks, including some or all of the following: substantial cash expenditures and capital investments; potentially dilutive issuance of equity securities; incurrence of debt and contingent liabilities; amortization of certain intangible assets; difficulties in assimilating the operations and products of the acquired companies; diverting our management's attention away from other business concerns; risks of entering markets in which we have limited or no direct experience; the inability to manage the growth expected for various acquisitions; potential loss of key employees of the acquired companies in the process of integrating personnel with disparate business backgrounds; and combining different corporate cultures.

We cannot assure you that any acquisition will result in long-term benefits to us or that our management will be able to effectively manage the acquired businesses. We may also incorrectly judge the value or worth of an acquired company or business. We have recently disposed or divested ourselves of several companies or lines of business that were acquired by us in the past few years, at a significant net loss to us.

**Our quarterly operating results fluctuate and may continue to fluctuate in the future.**

Our quarterly and annual operating results have varied in the past and may vary significantly in the future depending on factors such as: the effect of our acquisitions and consequent integration; budgeting cycles of our customers; the size, timing, and recognition of revenue from significant orders; increased competition; our ability to develop innovative products; the timing of new product releases by us or our competitors; market acceptance of our products; changes in our and our competitors' pricing policies; changes in operating expenses and personnel changes; changes in our business strategy; and general economic factors.

Due to these and other factors, we believe that quarter-to-quarter comparisons of our operating results may not be meaningful. You should not rely on our results for one quarter as any indication of our future performance. In future periods, our operating results may be below the expectations of public market analysts or investors. If this occurs, the price of our common stock would likely decrease.

Current conditions in the domestic and global economies are extremely uncertain. As a result, it is difficult to estimate the level of growth for the economy as a whole or of capital expenditures in the semiconductor and industrial markets. Because all of the components of our budgeting and forecasting are dependent on estimates of spending within these markets, the prevailing economic uncertainty renders estimates of future revenue and expenses even more difficult than usual to make.

**Our scheduled backlog may not result in future sales.**

We schedule the production of our systems based in part upon order backlog. Due to possible customer changes in delivery schedules and cancellations of orders, our backlog at any particular date is not necessarily indicative of actual sales for any succeeding period. There can be no assurance that amounts included in backlog will ultimately result in future sales. A reduction in backlog during any particular period, or the failure of our backlog to result in future sales could adversely affect our results of operations.

**Our lengthy sales cycle could affect our manufacturing schedule and cause us to incur expenses without realizing sales.**

Our lengthy and variable qualification and sales cycle makes it difficult to predict the timing of a sale or whether a sale will be made, which may cause us to have excess manufacturing capacity or inventory and negatively affect our operating results. As is typical in the industry, our customers generally expend significant efforts in evaluating and qualifying our products and manufacturing process. This evaluation and qualification process frequently results in a lengthy sales cycle, typically ranging from three to six months and sometimes longer. While our customers are evaluating our products and before they place an order with us, we may incur substantial sales, marketing, and research and development expenses, expend significant management efforts, increase manufacturing capacity and order long-lead-time supplies prior to receiving an order. Even after this evaluation process, it is possible that a potential customer will not purchase our products. In addition, product purchases are frequently subject to unplanned processing and other delays, particularly with respect to larger customers for which our products represent a very small percentage of their overall purchase activity.

If we increase capacity and order supplies in anticipation of an order that does not materialize, our gross margins may be negatively impacted, and we may have to carry or write off excess inventory. Even if we receive an order, the additional manufacturing capacity that we add to service the customer's requirements may be underutilized in a subsequent quarter. Either situation could cause our results of operations to be adversely affected. Our long sales cycles also may cause our revenues and operating results to vary significantly and unexpectedly from quarter to quarter.

**We face risks associated with manufacturing forecasts.**

If we fail to predict our manufacturing requirements accurately, we could incur additional costs or experience manufacturing delays, which could cause us to lose orders or customers and result in lower net sales. We currently use a rolling 12-month forecast based primarily on our anticipated product orders and our product order history to help determine our requirements for components and materials. It is very important that we accurately predict both the demand for our products and the lead-time required to obtain the necessary components and raw materials. Lead times for materials and components that we order vary significantly and depend on factors such as the specific supplier, the size of the order, contract terms, and demand for each component at a given time. If we underestimate our requirements, we may have inadequate manufacturing capacity or inventory, which could interrupt manufacturing of our products and result in delays in shipments and net sales. If we overestimate our requirements, we could have excess inventory of parts. In addition, delays in the manufacturing of our products could cause us to lose orders or customers.

**Our stock price may fluctuate significantly due to a variety of risks.**

We believe that factors such as the announcement of new products or technologies by us or our competitors, market conditions in the semiconductor and industrial markets, and quarterly fluctuations in financial results are expected to cause the market price of our common stock to vary substantially. Further, our net sales or results of operations in future quarters may be below the expectations of public market securities analysts and investors. In such event, the price of the common stock would likely decline. In addition, historically the stock market has experienced price and volume fluctuations that have particularly affected the market prices for many high technology companies and which often have been unrelated to the operating performance of such companies. The market volatility may adversely affect the market price of shares of our common stock.

**We operate in a highly competitive industry.**

We face competition from a number of companies in all our markets, many of which have greater manufacturing and marketing capabilities, and greater financial, technological, and personnel resources. In addition, we compete with the internal development efforts of our current and prospective customers, some of which may attempt to become vertically integrated. Our competitors can be expected to continue to improve the design and performance of their products and to introduce new products with competitive price/performance characteristics. Competitive

pressures may necessitate price reductions, which can adversely affect results of operations. Although we believe that we have certain technical and other advantages over some of our competitors, maintaining such advantages will require a continued high level of investment by our company in research and development and sales, marketing, and service. There can be no assurance that we will have sufficient resources to continue to make such investments or that we will be able to make the technological advances necessary to maintain such competitive advantages. In addition, there can be no assurance that the bases of competition in the industries in which we compete will not shift.

**We may not anticipate and keep pace with rapidly changing technological developments in the markets in which we operate which could have a material adverse effect on our business.**

The market for our products is characterized by rapidly changing technology. Our future success will continue to depend upon our ability to enhance our current products and to develop and introduce new products that keep pace with technological developments and evolving industry standards, respond to changes in customer requirements, and achieve market acceptance. The development of new technologically advanced products is a complex and uncertain process requiring high levels of innovation, as well as the accurate anticipation of technological and market trends.

We commit significant financial and personnel resources on a continuous basis to redesign and enhance our instruments, systems, and components and upgrade our proprietary software technology incorporated in our products. Any failure by us to anticipate or respond adequately to technological developments and customer requirements, or any significant delays in product development or introduction, could have a material adverse effect on our business and impact our close relationships with customers. This could have an impact on customers' willingness to share proprietary information about their requirements and participate in collaborative efforts with us. There can be no assurance that our customers will continue to provide us with timely access to such information, that we will be successful in developing and marketing new products and services or product and service enhancements on a timely basis, or respond effectively to technological changes or new product announcements by others. In addition, there can be no assurance the new products and services or product enhancements, if any, which we developed will achieve market acceptance.

**We may be unable to enforce or defend our ownership and use of proprietary technology.**

Our success is heavily dependent upon our proprietary technology. There can be no assurance that the steps taken by us to protect our proprietary technology will be adequate to prevent misappropriation of our technology by third parties or will be adequate under the laws of some foreign countries, which may not protect our proprietary rights to the same extent as do laws of the United States. In addition, there remains the possibility that others will "reverse engineer" our products in order to determine their method of operation and introduce competing products or that others will develop competing technology independently. Any such adverse circumstances could have a material adverse effect on our results of operations.

**Our business depends on management and technical personnel who are in great demand.**

Our success depends in large part upon the continued services of many of our highly skilled personnel involved in management, research, development and engineering, sales and marketing, manufacturing, and support and upon our ability to attract and retain additional highly qualified employees. Our employees may voluntarily terminate their employment with us at any time. Competition for these individuals from a variety of employers, including our competitors and companies in computer or technology-related industries, at times is intense. We cannot assure you that we will be able to retain our existing personnel or attract and retain additional personnel.

**We are exposed to significant delays and additional costs if we do not receive adequate or timely supplies of raw materials and other supplies upon which we depend.**

We are dependent on suppliers for raw materials and various electrical, mechanical, and optical supplies. Although we enter, either directly or through our contract manufacturers, into purchase orders with our suppliers based on our forecasts, we do not have any guaranteed supply

arrangements with these suppliers. Moreover, as our demand for supplies increases, we may not be able to obtain these supplies in a timely manner. If any relationship with a key supplier is terminated or if a supplier fails or is unable to provide reliable services or equipment and we are unable to reach suitable alternative solutions quickly, we may experience significant delays and additional costs in the manufacturing of our products. If our key suppliers cease manufacturing the supplies we require, if their manufacturing operations are interrupted for any significant amount of time, or if they are unable or unwilling to supply us for any other reason, including capacity constraints, then we may be at least temporarily unable to obtain these supplies, thus exposing us to significant delays and additional costs. Currently there are only a limited number of companies that are capable of supplying optical materials in the quantity and of the quality we require.

We recently began to assemble our FPD systems in Taiwan through a third party. We are dependent on the third party to assemble the systems accurately and on a timely basis. To the extent the quality of work, including any individual unit, causes delays or cancellations in shipments to our customers, our results could be adversely affected.

**Our products may contain defects that are undetected until after our products are installed which may lead to a loss of reputation and customers.**

Our products are deployed in large and complex systems and may contain defects that are not detected until after our products have been installed, which could damage our reputation and cause us to lose customers. We design some of our products for deployment in large and complex optical networks. Because of the nature of these products, they can only be fully tested for reliability when deployed in networks for long periods of time. Our customers may discover defects in our products only after they have been fully deployed and operated under peak stress conditions. In addition, our products are combined with products from other vendors. As a result, should problems occur, it might be difficult to identify the source of the problem. These conditions increase the risk that we could experience, among other things: loss of customers; damage to our brand reputation; failure to attract new customers or achieve market acceptance; diversion of development and engineering resources; and legal actions by our customers. The occurrence of any one or more of the foregoing factors could cause us to experience losses, incur liabilities, and cause our net sales to decline.

**We may be unprepared for changes to environmental laws and regulations and may have liabilities arising from environmental matters.**

Environmental regulations applicable to our manufacturing operations could limit our ability to expand or subject us to substantial costs. We are subject to a variety of environmental regulations relating to the use, storage, discharge, and disposal of hazardous chemicals used during our manufacturing processes. Any failure by us to comply with present and future regulations could subject us to future liabilities or the suspension of production. In addition, such regulations could restrict our ability to expand our facilities or could require us to acquire costly equipment or to incur other significant expenses to comply with environmental regulations.

**Item 1B. Unresolved Staff Comments**

We have received no written comments regarding our periodic or current reports from the staff of the SEC that were issued 180 days or more preceding the end of our fiscal year 2006 that remain unresolved.

**Item 2. Properties**

Our principal manufacturing facility and corporate headquarters is located on Laurel Brook Road in Middlefield, Connecticut. The Middlefield facility consists of one 153,500-square-foot building on approximately 13 acres.

<u>Operation/Location</u>	<u>Square Footage</u>		<u>Owned/Leased Expiration Date</u>
	<u>Manufacturing</u>	<u>Total</u>	
Corporate Headquarters, Eastern Regional Sales Office, and Instrument and Optics Manufacturing Middlefield, Connecticut .....	89,000	153,500	Owned
Flat Panel Display Engineering & Manufacturing Delray Beach, Florida .....	4,286	10,323	Leased—06/30/07
Zygo—Laser Technology (R&D) Watsonville, California .....	0	1,452	Leased—04/14/08
Zygo—Optical Systems Tucson, Arizona .....	14,560	22,560	Leased—08/31/11
Zygo—Optical Systems Costa Mesa, California .....	0	13,714	Leased—10/18/07
Western Regional Sales Office and R&D Center Sunnyvale, California .....	0	7,390	Leased—10/31/08
Semiconductor Process Metrology Office Beaverton, Oregon .....	0	2,496	Leased—09/01/07
Office Franklin, Massachusetts .....	0	400	Leased—07/01/07
Zygo PTE Ltd Singapore .....	0	1,550	Leased—12/27/06
Zygo Taiwan Sales Office .....	0	3,961	Leased—12/31/06
Service Office .....	0	2,772	Leased—04/30/07
ZygoLOT Germany .....	0	3,702	Leased—10/01/06
Zygo KK Japan .....	0	1,775	Leased—10/31/06
Zygo China China .....	0	1,610	Leased—08/15/07
Zygo Korea Korea .....	0	1,507	Leased—04/12/07
Total	<u>107,846</u>	<u>228,712</u>	

**Item 3. Legal Proceedings**

From time to time, we are subject to certain legal proceedings and claims that arise in the normal course of our business. In the opinion of management, we are not party to any litigation that we believe could have a material effect on our business.

**Item 4. Submission of Matters to a Vote of Security Holders**

None.

## PART II

### Item 5. Market for the Registrant's Common Equity and Related Stockholder Matters

Our shares of common stock are traded over-the-counter and are quoted on the NASDAQ/National Market under the symbol "ZIGO." The following table provides information about the high and low sales prices of the Company's common stock by quarter for fiscal 2006 and 2005.

	<u>Fiscal Year Ended June 30, 2006</u>		<u>Fiscal Year Ended June 30, 2005</u>	
	<u>High</u>	<u>Low</u>	<u>High</u>	<u>Low</u>
First quarter .....	\$15.72	\$ 9.65	\$12.00	\$8.46
Second quarter .....	\$16.44	\$12.95	\$12.67	\$9.75
Third quarter .....	\$18.83	\$13.93	\$14.48	\$9.96
Fourth quarter .....	\$19.75	\$14.05	\$13.30	\$9.20

These over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not necessarily represent actual transactions.

The number of record holders of our common stock at June 30, 2006 was 460. Our closing stock price as of June 30, 2006 was \$16.39.

We have never declared or paid a cash dividend on our capital stock and do not anticipate paying any cash dividends in the foreseeable future.

Information required with respect to "Securities Authorized for Issuance Under Equity Compensation Plans" will be included under the caption "Equity Compensation Plan Information" in the proxy statement to be filed pursuant to Regulation 14A for use in connection with our company's 2006 Annual Meeting of Stockholders (the "Proxy Statement") and is incorporated herein by reference.

### Item 6. Selected Consolidated Financial Data

The financial data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operation" and with our Consolidated Financial Statements and notes thereto included elsewhere in this Form 10-K.

	<u>Fiscal Year Ended June 30,</u>				
	<u>2006</u>	<u>2005</u>	<u>2004</u>	<u>2003</u>	<u>2002(1)</u>
<b>(Thousands, except for per share and ratio amounts)</b>					
Net sales .....	\$168,137	\$141,349	\$116,276	\$102,221	\$ 80,060
Gross profit .....	\$ 65,771	\$ 53,290	\$ 42,680	\$ 35,069	\$ 27,245
% of sales .....	39%	38%	37%	34%	34%
Earnings (loss) from continuing operations ...	\$ 14,485	\$ 9,350	\$ 4,226	\$ 1,363	(\$ 4,071)
% of sales .....	9%	7%	4%	1%	(5%)
Earnings (loss) per share from continuing operations:					
Basic .....	\$ 0.80	\$ 0.52	\$ 0.24	\$ 0.08	(\$ 0.23)
Diluted .....	\$ 0.79	\$ 0.52	\$ 0.23	\$ 0.08	(\$ 0.23)
Net earnings (loss) .....	\$ 14,485	\$ 8,984	(\$ 3,429)	(\$ 10,782)	(\$ 11,525)
Net earnings (loss) per share:					
Basic .....	\$ 0.80	\$ 0.50	(\$ 0.19)	(\$ 0.61)	(\$ 0.66)
Diluted .....	\$ 0.79	\$ 0.50	(\$ 0.19)	(\$ 0.61)	(\$ 0.66)
Weighted average number of shares:					
Basic .....	18,054	17,950	17,802	17,539	17,414
Diluted .....	18,367	18,140	18,221	17,696	17,414
Research, development, and engineering .....	\$ 15,901	\$ 13,377	\$ 13,011	\$ 12,659	\$ 17,696
Capital expenditures .....	\$ 7,441	\$ 9,987	\$ 7,585	\$ 5,037	\$ 11,381
Depreciation and amortization .....	\$ 6,214	\$ 5,880	\$ 5,717	\$ 5,623	\$ 6,098

	June 30,				
	2006	2005	2004	2003	2002(1)
Working capital .....	\$ 81,914	\$ 63,379	\$ 58,504	\$ 66,920	\$ 65,936
Current ratio .....	2.8	2.3	3.5	3.3	5.2
Total assets .....	\$206,183	\$190,182	\$156,133	\$161,546	\$169,385
Long-term debt (including current portion)...	\$ —	\$ —	\$ —	\$ 11,374	\$ 12,211
Stockholders' equity .....	\$158,938	\$141,153	\$131,352	\$130,403	\$140,238
Price-earnings ratio .....	21	20	N/A	N/A	N/A
Number of employees at year-end.....	570	526	476	477	537
Sales per employee—average.....	\$ 295	\$ 269	\$ 244	\$ 214	\$ 149
Book value per share .....	\$ 8.78	\$ 7.85	\$ 7.34	\$ 7.41	\$ 8.04
Market price per share at year-end.....	\$ 16.39	\$ 9.80	\$ 11.19	\$ 8.00	\$ 8.05

(1) The selected consolidated financial data for the period ended June 30, 2002 has been reclassified to conform with the fiscal 2006, 2005, 2004, and 2003 presentation of the discontinued operations and loss on disposal of our former TeraOptix unit.

## **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

### **CRITICAL ACCOUNTING POLICIES, SIGNIFICANT JUDGMENTS, AND ESTIMATES**

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, and expenses, and related disclosures at the date of our consolidated financial statements. On an on-going basis, management evaluates its estimates and judgments, including those related to bad debts, inventories, marketable securities, share-based compensation, warranty obligations, self-insured healthcare claims, income taxes, and long-lived assets. Management bases its estimates and judgments on historical experience and current market conditions and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We consider certain accounting policies related to revenue recognition and allowance for doubtful accounts, inventory valuation, valuation of marketable securities, share-based compensation, warranty costs, self-insured health insurance costs, accounting for incomes taxes, and valuation of long-lived assets to be critical policies due to the estimates and judgments involved in each.

### **Revenue Recognition and Allowance for Doubtful Accounts**

We recognize revenue based on guidance provided in SEC Staff Accounting Bulletin ("SAB") No. 104, "Revenue Recognition" and in accordance with the Emerging Issues Task Force ("EITF") Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, our price is fixed or determinable, and collectibility is reasonably assured. We recognize revenue on our standard products when title passes to the customer upon shipment. While our standard products generally require installation, the installation is considered a perfunctory performance obligation. Standard products do not have customer acceptance criteria. Generally, software is a component of our standard product and, as such, is not separately recognized as revenue. We have standard rights of return that we account for as a warranty provision under Statement of Financial Accounting Standards ("SFAS") No. 5, "Accounting for Contingencies." We do not have any price protection agreements or other post shipment obligations. For custom equipment where customer acceptance is part of the sales agreement, revenue is recognized when the customer has accepted the product. In cases where custom equipment does not have customer

acceptance as part of the sales agreement, we recognize revenue upon shipment as long as the system meets the specifications as agreed upon with the customer. Certain transactions have multiple deliverables, with the deliverables clearly defined. To the extent that the secondary deliverables are other than perfunctory, we recognize the revenue on each deliverable, if separable, or on the completion of all deliverables, if not separable, all in a manner consistent with SAB No. 104 and EITF 00-21. Standalone software products are recognized as revenue when they are shipped. Revenue generated from development contracts are recorded on a cost-plus basis in the period services are rendered.

We maintain an allowance for doubtful accounts based on a continuous review of customer accounts, payment patterns, and specific collection issues. We perform on-going credit evaluations of our customers and do not require collateral from our customers. For many of our international customers, we require an irrevocable letter of credit from our customer before a shipment is made. If the financial condition of our customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances would be required.

### **Inventory Valuation**

Inventories are valued at the lower of cost or market, cost being determined on a first-in, first-out basis. Management evaluates the need to record adjustments for impairment of inventory on a monthly basis. Our policy is to assess the valuation of all inventories, including raw materials, work-in-process, and finished goods. Obsolete inventory or inventory in excess of management's estimated future usage is written down to its estimated market value, if less than its cost. Contracts with fixed prices are evaluated to determine if estimated total costs will exceed revenues. A loss provision is recorded when the judgment is made that actual costs incurred plus estimated costs remaining to be incurred based on management's estimates will exceed total revenues from the contract. Inherent in the estimates of market value are management's estimates related to current economic trends, future demand for our products, and technological obsolescence. Management estimates future product sales, service requirements, and evaluates technological changes and other possible uses to determine if inventory is excess or obsolete. If actual market conditions are different than those projected by management, additional inventory write-downs and loss accruals may be required.

### **Other Than Temporary Impairment of Marketable Securities**

Marketable securities have been classified as held-to-maturity, which requires them to be carried at amortized cost. Management evaluates the need to record adjustments for impairment of marketable securities on a quarterly basis. Marketable securities with unrealized depreciation in fair value for twelve or more consecutive months and other securities with unrealized losses are reviewed to determine whether the decline in fair value is other than temporary. Investment ratings, company-specific events, general economic conditions, and other reasons are evaluated in determining if the decline in fair value is other than temporary. If it is judged that a decline in fair value is other than temporary, the marketable security is valued at the current fair value and an impairment charge is reflected in earnings.

### **Share-Based Compensation**

We calculate share-based compensation expense in accordance with SFAS 123(R), "Share-Based Payment (as amended)" using the Black-Scholes option-pricing model to calculate the fair value of share-based awards. The key assumptions for this valuation method include the expected term of an option grant, and the stock price volatility, risk-free interest rate, dividend yield, and forfeiture rate. The determination of these assumptions is based on past history and future expectations, and is subject to a high level of judgment. To the extent any of the assumptions were to change from year to year, the fair value of new option grants may vary significantly.

### **Warranty Costs**

We provide for the estimated cost of product warranties at the time revenue is recognized. We consider historical warranty costs actually incurred and specifically identified circumstances to establish the warranty liability. The warranty liability is reviewed on a quarterly basis. Should actual costs differ from management's estimates, revisions to the estimated warranty liability would

be required. A one percent change in actual costs would have an impact of approximately \$20,000 on our financial condition and results of operations.

### **Accounting for Income Taxes**

Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective income tax bases, and operating loss and tax credit carryforwards. SFAS No. 109, "Accounting for Income Taxes," requires the establishment of a valuation allowance to reflect the likelihood of the realization of deferred tax assets. We record a valuation allowance to reduce our deferred tax assets to an estimated realizable amount based on historical and forecasted results. While management has considered future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for the valuation allowance, in the event management were to determine that it would be able to realize its deferred tax assets in the future in excess of its net recorded amount, an adjustment to the valuation allowance would increase income in the period such determination was made. Likewise, should management determine that it would not be able to realize all or part of its net deferred tax asset in the future, an adjustment to the valuation allowance would be charged to income in the period such determination was made. Our effective tax rate may vary from period to period based on changes to the valuation allowance, changes in pre-tax income between jurisdictions that have higher or lower tax rates, changes to federal, state, or foreign tax laws, and deductibility of certain costs and expenses by jurisdiction.

### **Valuation of Long-Lived Assets**

In accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," the carrying value of intangible assets and other long-lived assets is reviewed on a regular basis for the existence of facts or circumstances, both internally and externally, that may suggest impairment. Some factors we consider important, which could trigger the impairment review, include a significant decrease in the market value of an asset, a significant change in the extent or manner in which an asset is used, a significant adverse change in the business climate that could affect the value of an asset, an accumulation of costs for an asset in excess of the amount originally expected, a current period operating loss or cash flow decline combined with a history of operating loss or cash flow uses or a projection that demonstrates continuing losses, and a current expectation that, it's more likely than not, a long-lived asset will be disposed of at a loss before the end of its estimated useful life.

If one or more of such facts or circumstances exist, we evaluate the carrying value of long-lived assets to determine if impairment exists based upon estimated undiscounted future cash flows over the remaining useful life of the assets and comparing that value to the carrying value of the assets. If the carrying value of the assets is greater than the estimated future cash flows, the assets are written down to the estimated fair value. We determine the estimated fair value of the assets based on a current market value of the assets. If a current market value is not readily available, a projected discounted cash flow method is applied using a discount rate determined by management to be commensurate with the risk inherent in the current business model. Our cash flow estimates contain management's best estimates, using appropriate and customary assumptions and projections at the time.

### **Health Insurance**

Beginning in January 2004, we became self-insured for the majority of our group health insurance. We rely on claims experience in determining an adequate liability for claims incurred, but not reported. To the extent actual claims exceed estimates, we may be required to record additional expense. A one percent change in actual claims would have an impact of approximately \$25,000 on our financial condition and results of operations.

## RESULTS OF OPERATIONS

Zygo Corporation is a worldwide supplier of optical metrology instruments, precision optics, and electro-optical design and manufacturing services, serving customers in the semiconductor capital equipment and industrial markets. Optical instruments products encompass non-contact optical measurement instruments. Optics products consist of high performance macro-optics components, optical coatings, and optical system assemblies. We conduct the majority of our manufacturing in our 153,500 square foot facility in Middlefield, Connecticut and our 22,560 square foot facility in Tucson, Arizona.

We also perform development services, which have produced a significant amount of our revenue over the past four years. In December 2004, we signed an amendment with Canon Inc. for additional add-on work to our existing development agreement originally executed in fiscal 2003. In February 2005, we signed two additional new development agreements with Canon Inc. These development services contracts with Canon Inc. are expected to be completed during the first half of fiscal 2007. In fiscal 2006, we recognized \$20.0 million on these development services contracts and expect approximately \$4 million to be recognized in fiscal 2007. Our future period over period comparable sales may be adversely affected by the completion of the development services contracts in the first half of fiscal 2007 resulting in lower development services revenues than in prior fiscal years. However, increases in overall sales and new product sales growth is expected to partially, if not entirely, offset the decrease in the development services revenue.

On July 1, 2005, we adopted SFAS No. 123(R) using a modified prospective method resulting in the recognition of share-based compensation expense for the fiscal year ended June 30, 2006 of \$1.7 million, and related tax benefits of \$0.6 million. Under this application, we are required to record compensation expense for all awards granted after the date of adoption and for the unvested portion of previously granted awards that remain outstanding at the date of adoption. For fiscal 2006, share-based compensation expense increased our cost of sales by \$0.4 million, selling, general, and administrative expenses by \$1.0 million, and research, development, and engineering expenses by \$0.3 million.

Overall, sales to Canon Inc. and Canon Sales Co., Inc. (collectively, "Canon"), our single largest customer, represented 36% of our total net sales in fiscal 2006 as compared with 37% in fiscal 2005. This represented an increase of \$9.5 million in sales in fiscal 2006 as compared with fiscal 2005, with an increase in development services revenue accounting for \$4.4 million of the increase. Sales to Canon as the end user were \$9.3 million in fiscal 2006, an increase of \$0.9 million over fiscal 2005. Sales to Canon for distribution to other customers were \$32.0 million in fiscal 2006, an increase of \$4.2 million over fiscal 2005. Despite the Canon sales increase, Canon as a percentage of total net sales decreased slightly as our overall sales increased by \$26.8 million.

We believe the semiconductor segment contains our best sales growth opportunities in the near future. As such, we are focusing our research and development efforts on specific semiconductor initiatives, most notably in the display and packaging markets. During the past year, we opened an office in Oregon to house our semiconductor process metrology group to take advantage of opportunities in the semiconductor segment. In addition, during fiscal 2006, we announced our first shipment of a new front-end semiconductor metrology tool, the Z3D 7000™, to a leading tier one semiconductor manufacturer. The Z3D 7000™ optical metrology tool performs high-resolution surface topography measurements on bare and patterned 200mm and 300mm semiconductor wafers. It provides high measurement precision at throughputs exceeding those achievable with existing mechanical profiling techniques, such as atomic force microscopy. This tool is for in-line use in manufacturing, demonstrating our ability to move from our traditional lab environment to the production floor. This accomplishment indicates significant progress in the implementation of our strategic initiatives and is expected to increase revenues and margins over time.

An area of continued revenue growth expected in fiscal 2007 is in our optical systems solutions product line. Our optical systems group, located in Tucson, Arizona and Costa Mesa, California, provides contract optical-mechanical manufacturing, electro-optical system design and prototyping utilizing lean manufacturing technology. These operations enable us to deliver

integrated optical solutions, from design to delivery, primarily to the defense and aerospace markets. These products and services typically yield a lower margin than our standard metrology systems. In fiscal 2006, we announced that the Optical Systems Group had been awarded the first production order for its next-generation Advanced Helmet Mounted Display (AHMD). The AHMD is a high-resolution, optical see-through display system that overlays computer-generated battlefield scenery on the real-world environment. In addition, our Laser Fusion Optics Group received another production contract for its Laser Fusion Program which was valued at \$1.0 million, with provisions for optional orders running through 2013 resulting in a total potential value of \$45.0 million.

Our backlog at June 30, 2006 was \$80.8 million, an increase of \$14.2 million from June 30, 2005. Orders were \$48.6 million in the fourth quarter of fiscal 2006 as we experienced continued strength across our product lines and regions. Our semiconductor backlog of \$42.9 million includes \$16.1 million related to future flat panel shipments. Bookings in the first quarter of our fiscal year tend to be lower than the fourth quarter of the previous year and we expect the first quarter of fiscal 2007 to continue that trend.

We discontinued our telecommunications TeraOptix business unit during fiscal 2003. Accordingly, the results of TeraOptix have been presented as a separate line item on the Consolidated Statements of Operations as “Discontinued TeraOptix operations, net of tax,” for all periods presented. In addition, the “Charges on the disposal of TeraOptix, net of tax”, have been recorded as a separate line item for all periods presented. All continuing operations line items presented exclude TeraOptix results. During fiscal 2004, we recorded impairment charges on our former Westborough telecommunications facility in the second and fourth fiscal quarters. The total impairment charges recorded in fiscal 2004 were \$6.4 million, net of tax of \$3.4 million. In fiscal 2005, we recorded an additional impairment charge and adjustments of \$0.1 million, net of tax of \$43,000 to reflect the fair value based on final negotiations of a pending sale. The sale of the facility was completed in March 2005 for \$1.9 million, net of selling expenses.

## Fiscal 2006 Compared with Fiscal 2005

### Net Sales

	Twelve Months Ended			
	June 30, 2006	Net Sales %	June 30, 2005	Net Sales %
	(Dollars in millions)			
<b>Segment</b>				
Semiconductor .....	\$ 93.0	55%	\$ 79.0	56%
Industrial .....	<u>75.1</u>	<u>45%</u>	<u>62.3</u>	<u>44%</u>
<b>Total</b> .....	<u>\$168.1</u>	<u>100%</u>	<u>\$141.3</u>	<u>100%</u>

Net sales in the semiconductor segment increased 18% in fiscal 2006 as compared with the prior year. The increase in net sales of \$14.0 million within the semiconductor segment was primarily due to an increase in net sales to our lithography customers of \$7.8 million, development services of \$4.4 million, and product sales for the in-line semiconductor market of \$2.0 million.

Net sales in the industrial segment increased 21% in fiscal 2006 as compared with the prior year. The increase in net sales of \$12.8 million within the industrial segment was primarily due to an increased volume of optical system assemblies of \$7.4 million and increased demand in the Pacific Rim and Japan markets of \$4.0 million. We opened offices in China and Korea in the past two years and have seen a steady increase in sales activity from those markets.

Approximately 82% of all fiscal 2006 net sales were denominated in U.S. dollars. Significant changes in the values of foreign currencies relative to the value of the U.S. dollar can influence the sales of our products in export markets, as would changes in the general economic conditions in those markets.

## Gross Profit

Segment	Twelve Months Ended			
	June 30, 2006	Net Sales %	June 30, 2005	Net Sales %
	(Dollars in millions)			
Semiconductor .....	<u>\$37.0</u>	<u>40%</u>	\$30.1	38%
Industrial .....	<u>28.8</u>	<u>38%</u>	<u>23.2</u>	<u>37%</u>
<b>Total</b> .....	<u><b>\$65.8</b></u>	<u><b>39%</b></u>	<u><b>\$53.3</b></u>	<u><b>38%</b></u>

Gross profit in the semiconductor segment as a percentage of net sales increased by two percentage points in fiscal 2006 as compared with the prior year. The increased gross profit as a percentage of net sales was primarily due to our concentrated effort to utilize new low-cost, high-quality vendors. Margins on development services remained flat year over year at 29%. Gross profit in the industrial segment as a percentage of sales increased by one percentage point for fiscal 2006 as compared with the prior year. This increase was also attributable to the use of new low-cost, high quality vendors. In fiscal 2006, share-based compensation expenses decreased overall gross profit by \$0.4 million.

## Selling, general, and administrative expenses (“SG&A”)

	Twelve Months Ended			
	June 30, 2006	Net Sales %	June 30, 2005	Net Sales %
	(Dollars in millions)			
	<u>\$31.2</u>	<u>19%</u>	<u>\$24.9</u>	<u>18%</u>

SG&A in fiscal 2006 as compared with fiscal 2005 included increases in sales and marketing of \$2.8 million primarily due to increases in technical support and service personnel and increases in marketing activities in Japan and Korea, and in optical systems worldwide. In addition, employee benefits cost increased \$2.2 million and outside services increased \$0.4 million related to computer infrastructure costs. In fiscal 2006, share-based compensation expenses related to SG&A were \$1.0 million.

## Research, development, and engineering expenses (“RD&E”)

	Twelve Months Ended			
	June 30, 2006	Net Sales %	June 30, 2005	Net Sales %
	(Dollars in millions)			
	<u>\$15.9</u>	<u>9%</u>	<u>\$13.4</u>	<u>9%</u>

RD&E costs in fiscal 2006 were primarily driven by semiconductor initiatives of \$1.5 million, metrology projects of \$1.4 million, and costs associated with the newly opened Oregon office of \$0.9 million. In fiscal 2006, share-based compensation expense related to RD&E was \$0.3 million.

## Income tax expense

	Twelve Months Ended			
	June 30, 2006	Tax Rate %	June 30, 2005	Tax Rate %
	(Dollars in millions)			
	<u>\$5.8</u>	<u>28%</u>	<u>\$5.7</u>	<u>36%</u>

Income tax expense in fiscal 2006 increased slightly by 2% as compared with the prior year. The overall tax rate, however, decreased by eight percentage points when compared to the prior year primarily due to the redetermination of our fiscal 2005 and 2004 extraterritorial income exclusion (“EIE”). Due to this redetermination, the company recorded an aggregate tax benefit of \$1.2 million in the current fiscal year, related to fiscal 2005 and 2004.

## Net Earnings

Twelve Months Ended			
June 30, 2006	Sales %	June 30, 2005	Sales %
(Dollars in millions)			
<u>\$14.5</u>	<u>9%</u>	<u>\$9.0</u>	<u>6%</u>

Net earnings in fiscal 2006 increased by 61% as compared with the prior year. Net earnings per diluted share were \$0.79 for fiscal 2006, as compared with \$0.50 per diluted share for fiscal 2005. The increased earnings were primarily the result of increased net sales, increased gross profits as a percentage of sales due in part to the effects of our cost control initiatives and the effect of the EIE credit related to fiscal 2005 and 2004. The net earnings for fiscal 2005 included losses of \$0.3 million, net of tax, related to the operations of our discontinued TeraOptix unit and charges of \$0.1 million, net of tax, related to the disposal of our discontinued TeraOptix unit. The charge related to the disposal of our discontinued TeraOptix unit was primarily due to the sale of our vacant facility in Westborough, Massachusetts in the third quarter of fiscal 2005. The earnings from continuing operations for fiscal 2006 was \$14.5 million, or \$0.79 per diluted share, as compared with earnings from continuing operations of \$9.4 million, or \$0.52 per diluted share, for fiscal 2005.

## Backlog

Backlog at June 30, 2006 totaled \$80.8 million, an increase of \$14.2 million, or 21%, from \$66.6 million at June 30, 2005. The year-end fiscal 2006 backlog consisted of \$42.9 million, or 53%, in the semiconductor segment and \$37.9 million, or 47%, in the industrial segment. Orders for fiscal 2006 totaled \$182.3 million. Orders by segment for fiscal 2006 consisted of \$107.1 million, or 59%, in the semiconductor segment and \$75.2 million, or 41%, in the industrial segment. The increase in the backlog is reflective of strength across all segments especially lithography related orders.

## Fiscal 2005 Compared with Fiscal 2004

Net sales of \$141.3 million for fiscal 2005 increased by \$25.0 million, or 22%, from the comparable prior year period sales of \$116.3 million. Net sales by segment and geographic regions follow:

### Net Sales By Segment and Geographic Regions

	Twelve Months Ended			
	June 30, 2005	Net Sales %	June 30, 2004	Net Sales %
(Dollars in millions)				
<b>Segment</b>				
Semiconductor .....	\$ 79.0	56%	\$ 66.8	57%
Industrial .....	<u>62.3</u>	<u>44%</u>	<u>49.5</u>	<u>43%</u>
<b>Total</b> .....	<u>\$141.3</u>	<u>100%</u>	<u>\$116.3</u>	<u>100%</u>
<b>Geographic</b>				
Domestic .....	\$ 48.0	34%	\$ 33.9	29%
Europe .....	15.0	11%	8.4	7%
Japan .....	61.1	43%	61.1	53%
Pacific Rim .....	<u>17.2</u>	<u>12%</u>	<u>12.9</u>	<u>11%</u>
<b>Total</b> .....	<u>\$141.3</u>	<u>100%</u>	<u>\$116.3</u>	<u>100%</u>

For fiscal 2005, net sales in the semiconductor segment were \$79.0 million, or 56% of total net sales, as compared with \$66.8 million, or 57%, in the prior year period. The increase in net sales of \$12.2 million within the semiconductor segment was primarily due to an increase in net sales to the Pacific Rim of \$5.3 million, primarily driven by flat panel sales of \$3.3 million and increased

metrology volume from China and Taiwan. In addition, sales in Europe for this segment increased \$5.8 million, primarily due to optics sales. Net sales for fiscal 2005 and 2004 included \$15.6 million and \$16.1 million, respectively, from development services agreements. In fiscal 2005, we signed two development agreement amendments with Canon for additional add-on work to our existing development agreement originally executed in fiscal 2003. In February 2005, we also signed a new development agreement with Canon. These new contracts totaled approximately \$41.0 million of which \$14.2 million was recognized as revenue in the fiscal 2005. It is expected that the remaining revenue will be recognized during fiscal 2006 and the first half of fiscal 2007.

For fiscal 2005, net sales in the industrial segment were \$62.3 million, or 44% of total net sales, as compared with \$49.5 million, or 43%, in the prior year period. The increase in net sales of \$12.8 million within the industrial segment was primarily due to an increase in domestic sales of \$12.3 million and Europe sales of \$0.8 million. The increase in domestic sales was primarily due to increases in the optical assembly-manufacturing unit of \$10.3 million for laser eye surgery systems, increased engineering services, and optics services for NIF. Increased sales in Europe was primarily related to an increase in automotive related sales.

Approximately 82% of all fiscal 2005 sales were denominated in U.S. dollars. Significant changes in the values of foreign currencies relative to the value of the U.S. dollar can impact the sales of our products in export markets, as would changes in the general economic conditions in those markets. The impact of changes in foreign currency values on our sales cannot be measured. Management believes the percentage of sales in foreign currencies may increase in the coming year due to an increase in sales denominated in yen to Japanese customers.

Gross profit for fiscal 2005 totaled \$53.3 million, an increase of \$10.6 million, or 25%, from \$42.7 million in the prior fiscal year. Gross profit as a percentage of sales for fiscal 2005 and 2004 was 38% and 37%, respectively. The increased margin was primarily due to product mix with increases in sales on higher margin products and increased margins on the development services revenue, in which the newer contracts carry a slightly higher margin than did the original agreement.

Selling, general, and administrative expenses ("SG&A") in fiscal 2005 amounted to \$24.9 million, an increase of \$0.3 million, or 1%, from fiscal 2004. SG&A as a percentage of net sales in fiscal 2005 was 18%, as compared with 21% in fiscal 2004. SG&A in fiscal 2005 included increases in profit sharing accruals of \$1.0 million, and professional services of \$0.8 million, partially offset by several one-time adjustments aggregating to \$0.8 million, reduced bad debt expense of \$0.5 million, and decreases of domestic commissions of \$0.2 million.

Research, development, and engineering expenses ("RD&E") in fiscal 2005 increased by \$0.4 million, or 3%, to \$13.4 million from \$13.0 million in the comparable prior year period. RD&E as a percentage of net sales in fiscal 2005 was 9%, as compared with 11% in fiscal 2004. RD&E costs in 2005 were primarily driven within the Precision Positioning System products with headcount additions to meet redesign projects and the flat panel area with continued development of next generation tools.

Our operating profit in fiscal 2005 was \$15.0 million, as compared with an operating profit of \$5.1 million in fiscal 2004. Operating profit as a percentage of sales in fiscal 2005 was 11%, as compared with the operating profit as a percentage of sales of 4% in fiscal 2004.

The income tax expense from continuing operations in fiscal 2005 totaled \$5.7 million, or 36% of pretax profits, which compares with an income tax expense of \$1.7 million, or 27% of pretax profits, in fiscal 2004. The increase in the tax rate was primarily due to the diminished effect of certain tax credits on a higher income base and more income associated with higher tax jurisdictions. The overall effective tax rate, including the tax effect of the discontinued operations, for fiscal 2005 was 35%, as compared with an income tax benefit of 42% in fiscal 2004.

We recorded net earnings of \$9.0 million for fiscal 2005 as compared with a net loss of \$3.4 million for fiscal 2004. On a diluted per share basis, the net income was \$0.50 per share for fiscal 2005 as compared with a net loss of \$0.19 per share for fiscal 2004. The net earnings for fiscal 2005 included losses of \$0.3 million, net of tax, related to the operations of our discontinued

TeraOptix unit and charges of \$0.1 million, net of tax, related to the disposal of our discontinued TeraOptix unit. The charge related to the disposal of our discontinued TeraOptix unit was primarily due to the sale of our vacant facility in Westborough, Massachusetts in the third quarter of fiscal 2005. The net loss for fiscal 2004 included losses of \$1.3 million, net of tax, related to the operations of our discontinued TeraOptix unit and charges of \$6.4 million, net of tax, related to the disposal of our discontinued TeraOptix unit reflecting changes in the fair value of the Westborough facility. The earnings from continuing operations for fiscal 2005 was \$9.4 million, or \$0.52 per diluted share, as compared with earnings from continuing operations of \$4.2 million, or \$0.23 per diluted share, for fiscal 2004.

Backlog at June 30, 2005 totaled \$66.6 million, an increase of \$11.7 million, or 21%, from \$54.9 million at June 30, 2004. The year-end fiscal 2005 backlog consisted of \$28.8 million, or 43%, in the semiconductor segment and \$37.8 million, or 57%, in the industrial segment. Orders for fiscal 2005 totaled \$153.9 million. Orders by segment for fiscal 2005 consisted of \$75.4 million, or 49%, in the semiconductor segment and \$78.5 million, or 51%, in the industrial segment. The increase in the backlog is primarily related to an increase in domestic region orders. Domestic orders were driven by large custom optics and optical assembly orders, as well as an increase in orders received by our applied optics group.

### **TRANSACTIONS WITH STOCKHOLDER**

Sales to Canon, a stockholder, customer, and distributor of certain of our products in Japan amounted to \$61.4 million (36% of net sales), \$51.9 million (37% of net sales), and \$57.3 million (49% of net sales), for the years ended June 30, 2006, 2005, and 2004, respectively. Selling prices of products sold to Canon are based, generally, on the normal terms customarily given to distributors. Revenues generated from a development contract with Canon are recorded on a cost-plus basis. At June 30, 2006 and 2005, there was in the aggregate, \$6.0 million and \$4.0 million, respectively, of trade accounts receivable from Canon.

In September 2002, we entered into a contract with Canon related to the development of certain interferometers. In March 2004, we signed a preliminary agreement to begin further add-on work; the definitive agreement for this additional work was signed in December 2004. In February 2005, we entered into two additional agreements with Canon related to the development of prototype production tools and accessories. During the twelve months ended June 30, 2006, we recognized revenue of \$20.0 million under these Canon development services contracts compared with \$15.6 million for the comparable prior period.

### **LIQUIDITY AND CAPITAL RESOURCES**

At June 30, 2006, cash and marketable securities was \$65.5 million, an increase of \$8.6 million from the \$56.9 million at June 30, 2005. The increase in cash was primarily attributable to cash generated from our operating activities, partially offset by an increase in inventory and capital expenditures. This increase in inventory was primarily attributable to an increase in inventory for flat panel display systems and to a lesser extent, for other product lines to support the backlog.

Cash flows from operating activities was \$16.0 million for fiscal 2006 as compared with \$31.8 million in fiscal 2005. The decrease was primarily due to progress payments received in late fiscal 2005 related to our development services agreements. In fiscal 2006, the utilization of the development services progress payments was partially offset by increased progress payments on flat panel systems and other customer orders.

Acquisitions of property, plant, and equipment was \$7.4 million in fiscal 2006 as compared with \$10.0 million for fiscal 2005. The decrease was due primarily to the completion of construction on an 18,000 square foot addition to our Middlefield facility that occurred in fiscal 2005 which had associated capitalized cost of \$2.7 million.

There were no borrowings outstanding under our \$3.0 million bank line of credit agreement at June 30, 2006 and 2005. The agreement contains certain financial covenants which, among others, relate to debt service and consolidated debt ratios. Although cash requirements will fluctuate based

on the timing and extent of various factors, management believes that cash generated from operations, together with the liquidity provided by existing cash balances and borrowing capability, will be sufficient to satisfy our liquidity requirements for the next 12 months.

### CONTRACTUAL OBLIGATIONS

The following table summarizes our significant contractual obligations at June 30, 2006, and the effect such obligations are expected to have on our liquidity and cash flows in future periods.

	Payments Due By Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
	(Dollars in millions)				
Operating leases.....	\$2.3	\$1.1	\$1.2	\$—	\$—
Purchase obligations.....	4.5	3.0	1.5	—	—
Total.....	<u>\$6.8</u>	<u>\$4.1</u>	<u>\$2.7</u>	<u>\$—</u>	<u>\$—</u>

### OFF-BALANCE SHEET ARRANGEMENTS

We have not created, and are not party to, any special-purpose or off-balance sheet entities for the purpose of raising capital, incurring debt, or operating parts of our business that are not consolidated into our financial statements. We have not guaranteed any obligations of a third party.

#### Item 7A. Quantitative and Qualitative Disclosures about Market Risks

The following discussion about our market risk involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. We are exposed to market risk related to changes in interest rates and foreign currency exchange rates. We do not use derivative financial instruments for speculative or trading purposes.

#### Interest Rate Sensitivity

We maintain a portfolio of cash equivalents and marketable securities including institutional money market funds (which may include commercial paper, certificates of deposit, and U.S. treasury securities), government agency securities, and corporate bonds. Our interest income is sensitive to changes in the general level of U.S. interest rates, particularly on our short-term instruments. The table below presents investment amounts and related weighted average interest rates by year of maturity for our investment portfolio.

Fair value of investments as of June 30, 2006 maturing in:

	2007	2008	2009	2010
	(Dollars in millions)			
Marketable securities				
Fixed rate investments .....	\$21.3	\$11.2	\$10.1	\$2.0
Weighted average interest rate .....	4.3%	3.9%	4.7%	5.5%

On June 30, 2006, the Company had variable interest rate money market accounts valued at \$8.7 million.

#### Exchange Rate Sensitivity

Approximately 82% of our fiscal 2006 net sales were denominated in U.S. dollars. At June 30, 2006, our backlog included orders in U.S. dollars of \$76.6 million, or 95% of the total backlog. Substantially all of our costs are negotiated and paid in U.S. dollars. Significant changes in the values of foreign currencies relative to the value of the U.S. dollar can impact sales of our products in export markets as would changes in the general economic conditions in those markets. For our sales that are based in local currency, we are exposed to foreign exchange fluctuations from the time customers are invoiced in local currency until collection occurs.

In the third quarter of fiscal 2005, we began hedging certain intercompany transactions by entering into forward contracts to reduce the impact of adverse fluctuations on earnings associated with foreign currency exchange rate changes. We do not enter into any derivative transactions for speculative purposes. These contracts are entered into for periods consistent with the currency transaction exposures, generally three to six months. Generally, any gains and losses on the fair value of these contracts are expected to be largely offset by gains and losses on the underlying transactions. The majority of our foreign currency transactions and foreign operations are denominated in the euro and Japanese yen. In the absence of a substantial increase in sales orders in currencies other than U.S. dollars, we believe a 10% appreciation or depreciation of the U.S. dollar against the euro and yen would have an immaterial impact on our consolidated financial position and results of operations.

**Item 8. *Financial Statements and Supplementary Data***

Financial statements and supplementary data required pursuant to this Item begin on Page F-1 of this Annual Report on Form 10-K.

**Item 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

**Item 9A. *Controls and Procedures***

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, carried out an evaluation, as of the end of the period covered by this report, of the effectiveness of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Based upon their evaluation the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of such period, our disclosure controls and procedures were effective in recording, processing, summarizing and reporting on a timely basis, information required to be disclosed by ZYGO in the reports that it files or submits under the Exchange Act and were effective in ensuring that information required to be disclosed by ZYGO in the reports that it files or submits under the Exchange Act is accumulated and communicated to our management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

During our third quarter of fiscal 2006, in connection with conducting an internal review of our tax return, we determined that inadvertent accounting errors were made in the consolidation of our inter-company revenues from certain of our foreign operations. The errors are the result of our failure to identify and eliminate certain inter-company revenues attributed to our Singapore and Taiwan offices, which resulted in our overstating reported revenues, from fiscal 2001 through the second quarter of fiscal 2006.

In response to this material weakness, we implemented remedial measures to address the identified material weakness. We improved procedures related to the recording and reporting of our inter-company transactions, including dedicating additional resources to our consolidation process and the procedures and controls surrounding the consolidation process, and increased our review and approval controls by senior financial personnel over the personnel that perform the consolidation. These procedures included ensuring that the inter-company activity is properly identified and eliminated in consolidation. In our fourth quarter and in connection with the preparation of our fiscal 2006 financial statements, we completed the implementation and testing of the remedial measures put in place to address the material weakness. In connection with this testing, and in connection with the evaluation described below (“Report of Management on Zygo Corporation’s Internal Control Over Financial Reporting”), management has determined that the material weakness has been remediated as of June 30, 2006. Management considers the remediation of the material weakness during our quarter ended June 30, 2006 to represent a change that has materially affected, or is reasonably likely to affect, our internal control over financial reporting.

**Report of Management on Zygo Corporation’s Internal Control Over Financial Reporting**

We, as members of management of Zygo Corporation (the “Company”), are responsible for establishing and maintaining adequate internal control over financial reporting, as such term is identified in Exchange Act Rule 13a-15(f). The Company’s internal control over financial reporting is a process designed to provide reasonable assurance to the Company’s management and Board of Directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America. Internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles in the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company’s assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies and procedures may deteriorate.

Under the supervision and with the participation of management, including our principal executive and financial officers, we assessed the Company’s internal control over financial reporting as of June 30, 2006, based on criteria for effective internal control over financial reporting established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, we concluded that the Company maintained effective internal control over financial reporting as of June 30, 2006 based on the specified criteria.

Deloitte & Touche LLP, the independent registered public accounting firm that also audited the Company’s consolidated financial statements included in this Form 10-K, audited management’s assessment and the operating effectiveness of internal control over financial reporting and issued their reports which are included on page F-2.

**Zygo Corporation**

By: /s/ J. BRUCE ROBINSON  
J. Bruce Robinson  
Chairman, President and Chief Executive Officer

September 11, 2006

By: /s/ WALTER A. SHEPHARD  
Walter A. Shephard  
Vice President, Finance, Chief Financial Officer, and Treasurer

September 11, 2006

**Item 9B. Other Information**

None.

### **PART III**

#### **Item 10. *Directors and Executive Officers of the Registrant***

Except for the information concerning executive officers which is set forth in Part I of this Annual Report, information required by this item will be included under the captions “Election of Board of Directors”, “Committees of the Board of Directors”, and “Other Agreements and Other Matters” in our Proxy Statement to be filed pursuant to Regulation 14A for use in connection with our company’s 2006 Annual Meeting of Stockholders and is incorporated herein by reference.

#### **Item 11. *Executive Compensation***

Information required by this item will be included in our 2006 Proxy Statement under the caption “Executive Compensation” and is incorporated herein by reference.

#### **Item 12. *Security Ownership of Certain Beneficial Owners and Management***

Information required by this item will be included in our 2006 Proxy Statement under the captions “Election of Board of Directors,” “Equity Compensation Plan Information,” and “Principal Stockholders” and is incorporated herein by reference.

#### **Item 13. *Certain Relationships and Related Transactions***

Information required by this item will be included in our 2006 Proxy Statement under the caption “Certain Relationships and Related Transactions” and is incorporated herein by reference.

#### **Item 14. *Principal Accountant Fees and Services***

Information required by this item will be included in our 2006 Proxy Statement under the caption “Relationship with Independent Public Accountants” and is incorporated herein by reference.

## PART IV

### Item 15. Exhibits, Financial Statement Schedules, and Reports on Form 8-K

(a) The following documents are filed as part of this report:

1. and 2. Financial Statements and Financial Statement Schedules:

An index to the financial statements and financial statement schedules filed is located on page F-1.

3. —Exhibits

3.(i) —Restated Certificate of Incorporation of the Company and amendments thereto (Exhibit 3.(i) to the Company's Annual Report on Form 10-K for its year ended June 30, 1993)\*

3.(ii) —Certificate of Amendment of Certificate of Incorporation, filed June 3, 1996 (Exhibit 3.(ii) to the Company's Annual Report on Form 10-K 405 for its year ended June 30, 1996)\*

3.(iii) —By-laws of the Company (Exhibit (3)(b) to Registration No. 2-87253 on Form S-1 hereinafter "Registration No. 2-87253")\*

10.1 —Confidentiality and Non-Competition Agreement dated October 25, 1983, between the Company and Carl A. Zanoni (Exhibit (10)(b) to Registration No. 2-87253)\*

10.2 —Agreement dated November 20, 1980, between the Company and Canon Inc. regarding exchange of information (Exhibit (10)(y) to Registration No. 2-87253)\*

10.3 —Amended and Restated Zygo Corporation Profit Sharing Plan (Exhibit 10.15 to the Company's Annual Report on Form 10-K 405 for its year ended June 30, 1995)\*

10.4 —Canon/ZYGO Confidentiality Agreement dated March 7, 1990, between the Company and Canon Inc. regarding confidential technical information received from each other (Exhibit 10.42 to the Company's Annual Report on Form 10-K for its year ended June 30, 1991)\*

10.5 —Non-Competition Agreement dated August 26, 1993, between the Company and Paul F. Forman (Exhibit 10.27 to the Company's Annual Report on Form 10-K for its year ended June 30, 1993)\*

10.6 —Zygo Corporation Amended and Restated Non-Qualified Stock Option Plan ratified and approved by the Company's Stockholders on November 19, 1992 (Exhibit 10.30 to the Company's Annual Report on Form 10-K for its year ended June 30, 1993)\*

10.7 —Zygo Corporation Non-Employee Director Stock Option Plan ratified and approved by the Company's Stockholders on November 17, 1994 (Exhibit 10.30 to the Company's Annual Report on Form 10-K 405 for its year ended June 30, 1996)\*

10.8 —Employment agreement dated January 15, 1999, between Zygo Corporation and J. Bruce Robinson (Exhibit 10.34 to the Company's Annual Report on Form 10-K 405 for its year ended June 30, 1999)\*

10.9 —Zygo Corporation Amended and Restated Non-Employee Director Stock Option Plan ratified and approved by the Company's Stockholders on November 17, 1999 (Exhibit to the Company's Definitive Proxy Statement for its year ended June 30, 1999)\*

10.10 —Employment agreement dated July 1, 1999, between Zygo Corporation and Brian J. Monti (Exhibit 10.22 to the Company's Annual Report on Form 10-K 405 for its year ended June 30, 2000)\*

10.11 —Subcontract B519044 between The Regents of The University of California Lawrence Livermore National Laboratory and Zygo Corporation dated January 14, 2002 (Exhibit 10.25 to the Company's Annual Report on Form 10-K for its year ended June 30, 2002)\*

10.12 —Development Agreement dated September 11, 2002, between Zygo Corporation and Canon, Inc. (Exhibit 99.2 to the Company's Current Reports on Form 8-K dated September 17, 2002)\*

10.13 —Development and Manufacturing Support Services Agreement effective December 1, 2001, between Zygo Corporation and Philips Electronics North America Corporation. (Exhibit 99.1 to the Company's Current Reports on Form 8-K dated October 22, 2002)\*

- 10.14 —Offer Letter dated February 10, 2004 between Zygo Corporation and Walter Shephard. (Exhibit 10.30 to the Company's Annual Report on Form 10-K for its year ended June 30, 2004)\*
- 10.15 —Development Agreement Amendment dated December 20, 2004, between Zygo Corporation and Canon Inc. (Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended December 31, 2004)\*
- 10.16 —Development Agreement Amendment dated February 26, 2005, between Zygo Corporation and Canon Inc. (Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended March 31, 2005)\*
- 10.17 —Development Agreement dated February 23, 2005, between Zygo Corporation and Canon Inc. (Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended March 31, 2005)\*
- 10.18 —Zygo Corporation 2002 Equity Incentive Plan Restricted Stock Agreement. (Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended September 30, 2005).
- 10.19 —Zygo Corporation 2002 Equity Incentive Plan Stock Option Agreement. (Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended September 30, 2005).
- 4.1 —Zygo Corporation Code of Ethics (Exhibit 14.1 to the Company's Quarterly Report on Form 10-Q for its quarterly period ended March 26, 2004)\*
- 21. —Subsidiaries of Registrant
- 23.1 —Consent of Independent Registered Public Accounting Firm
- 23.2 —Consent of Independent Registered Public Accounting Firm
- 24. —Power of Attorney (included in the signature page)
- 31.1 —Certification Pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2 —Certification Pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32.1 —Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 —Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Exhibit numbers 10.3, 10.6, 10.7, 10.8, 10.9, 10.10, 10.14, 10.18 and, 10.19 are management contracts, compensatory plans or compensatory arrangements.

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\* Incorporated herein by reference.



<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ ROBERT B. TAYLOR</u> <b>Robert B. Taylor</b>	Director	September 12, 2006
<u>/s/ CAROL WALLACE</u> <b>Carol P. Wallace</b>	Director	September 12, 2006
<u>/s/ BRUCE W. WORSTER</u> <b>Bruce W. Worster</b>	Director	September 12, 2006

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**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS AND SCHEDULE**

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**CONSOLIDATED SCHEDULE**

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All other schedules have been omitted since the required information is not present or not present in amounts sufficient to require submission of the schedules or the information required is included in the consolidated financial statements or notes thereto.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders  
ZYGO CORPORATION  
Middlefield, Connecticut

We have audited the accompanying consolidated balance sheet of Zygo Corporation and subsidiaries (the “Company”) as of June 30, 2006, and the related consolidated statement of operations, stockholders’ equity, and cash flows for the year ended June 30, 2006. We have also audited management’s assessment, included in the accompanying Management’s Report on Internal Control over Financial Reporting in Item 9A, that the Company maintained effective internal control over financial reporting as of June 30, 2006, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on these financial statements, an opinion on management’s assessment, and an opinion on the effectiveness of the Company’s internal control over financial reporting based on our audit.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, evaluating management’s assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinion.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and the board of directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of June 30, 2006, and the results of their operations and their cash flows for the year ended June 30, 2006, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion,

management's assessment that the Company maintained effective internal control over financial reporting as of June 30, 2006, is fairly stated, in all material respects, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of June 30, 2006, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

As discussed in Notes 1 and 13 to the consolidated financial statements, the Company changed its method of accounting for stock options as of July 1, 2005.

/s/ Deloitte & Touche LLP

Hartford, Connecticut  
September 12, 2006

## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors and Stockholders

ZYGO CORPORATION:

We have audited the accompanying consolidated balance sheet of Zygo Corporation and subsidiaries (the "Company") as of June 30, 2005, and the related consolidated statements of operations, stockholders' equity, and cash flows for the years ended June 30, 2005 and 2004. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Zygo Corporation and subsidiaries as of June 30, 2005, and the results of their operations and their cash flows for the years ended June 30, 2005 and 2004, in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP

Stamford, Connecticut

September 7, 2005, except as to note 2 to the consolidated financial statements which is as of June 20, 2006

**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	<u>June 30,</u> <u>2006</u>	<u>June 30,</u> <u>2005</u>
<b>(Thousands of dollars, except share amounts)</b>		
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ <b>20,318</b>	\$ 20,949
Marketable securities (note 4) .....	<b>21,415</b>	17,242
Receivables, net of allowance for doubtful accounts of \$588 and \$663, respectively (notes 5 and 17) .....	<b>33,759</b>	28,124
Inventories (note 6).....	<b>38,082</b>	33,727
Prepaid expenses .....	<b>2,106</b>	2,126
Deferred income taxes (note 15).....	<b>11,959</b>	8,895
Total current assets .....	<u><b>127,639</b></u>	<u>111,063</u>
Marketable securities (note 4).....	<b>23,743</b>	18,711
Property, plant, and equipment, net (note 7) .....	<b>32,631</b>	31,420
Deferred income taxes (note 15) .....	<b>15,433</b>	22,333
Intangible assets, net (note 8) .....	<b>5,925</b>	5,638
Other assets .....	<b>812</b>	1,017
Total assets .....	<u><b>\$206,183</b></u>	<u>\$190,182</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable .....	\$ <b>13,987</b>	\$ 13,510
Accrued progress payments (note 17).....	<b>17,031</b>	21,713
Accrued salaries and wages .....	<b>8,445</b>	6,220
Other accrued expenses (note 10) .....	<b>4,258</b>	4,731
Income taxes payable .....	<b>2,004</b>	1,510
Total current liabilities .....	<u><b>45,725</b></u>	<u>47,684</u>
Other long-term liabilities .....	<b>101</b>	96
Minority interest .....	<b>1,419</b>	1,249
Commitments and contingencies (notes 10 and 11)		
Stockholders' equity (notes 13, 14 and 15):		
Common stock, \$.10 par value per share:		
40,000,000 shares authorized; 18,552,684 shares issued (18,423,026 in 2005); 18,105,479 shares outstanding (17,975,821 in 2005) .....	<b>1,855</b>	1,842
Additional paid-in capital .....	<b>145,225</b>	142,111
Retained earnings.....	<b>17,052</b>	2,567
Accumulated other comprehensive income (loss):		
Currency translation effects.....	<b>74</b>	(112)
Net unrealized gain on marketable securities (note 4) .....	<b>19</b>	32
Total stockholders' equity .....	<u><b>164,225</b></u>	<u>146,440</u>
Less treasury stock, at cost; 447,205 common shares .....	<b>5,287</b>	5,287
Total stockholders' equity .....	<u><b>158,938</b></u>	<u>141,153</u>
Total liabilities and stockholders' equity.....	<u><b>\$206,183</b></u>	<u>\$190,182</u>

See accompanying notes to consolidated financial statements.

**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Fiscal Year Ended June 30,		
	2006	2005	2004
<b>(Thousands except per share amounts)</b>			
Net sales (note 17):			
Products .....	<b>\$148,123</b>	\$125,732	\$100,219
Development services .....	<b>20,014</b>	15,617	16,057
	<b>168,137</b>	141,349	116,276
Cost of goods sold:			
Products .....	<b>88,119</b>	76,921	61,063
Development services .....	<b>14,247</b>	11,138	12,533
	<b>102,366</b>	88,059	73,596
Gross profit .....	<b>65,771</b>	53,290	42,680
Selling, general, and administrative expenses .....	<b>31,125</b>	24,905	24,595
Research, development, and engineering expenses .....	<b>15,901</b>	13,377	13,011
Operating profit .....	<b>18,745</b>	15,008	5,074
Other income:			
Interest income .....	<b>2,119</b>	885	795
Miscellaneous income (expense), net .....	<b>262</b>	(98)	352
Total other income .....	<b>2,381</b>	787	1,147
Earnings from continuing operations before income tax expense and minority interest .....	<b>21,126</b>	15,795	6,221
Income tax expense (note 15) .....	<b>(5,849)</b>	(5,694)	(1,660)
Minority interest .....	<b>(792)</b>	(751)	(335)
Earnings from continuing operations .....	<b>14,485</b>	9,350	4,226
Discontinued TeraOptix operations, net of tax (note 3) .....	—	(242)	(1,263)
Charges related to the disposal of TeraOptix, net of tax (note 3) ..	—	(124)	(6,392)
Loss from discontinued operations .....	—	(366)	(7,655)
Net earnings (loss) .....	<b>\$ 14,485</b>	\$ 8,984	\$ (3,429)
Basic—Earnings (loss) per share:			
Continuing operations .....	<b>\$ 0.80</b>	\$ 0.52	\$ 0.24
Discontinued operations .....	—	(0.02)	(0.43)
Net earnings (loss) .....	<b>\$ 0.80</b>	\$ 0.50	\$ (0.19)
Diluted—Earnings (loss) per share:			
Continuing operations .....	<b>\$ 0.79</b>	\$ 0.52	\$ 0.23
Discontinued operations .....	—	(0.02)	(0.42)
Net earnings (loss) .....	<b>\$ 0.79</b>	\$ 0.50	\$ (0.19)
Weighted average number of shares:			
Basic .....	<b>18,054</b>	17,950	17,802
Diluted .....	<b>18,367</b>	18,140	18,221

See accompanying notes to consolidated financial statements.

**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**

	<u>Total</u>	<u>Compre- hensive Income (Loss)</u>	<u>Retained Earnings (Deficit)</u>	<u>Accumulated Other Compre- hensive Income (Loss)</u>	<u>Common Stock</u>	<u>Treasury Stock</u>	<u>Paid-In Capital</u>
<b>(Thousands of dollars)</b>							
Balance at June 30, 2003 .....	\$130,403		\$(2,988)	\$(1,459)	\$1,804	\$(5,287)	\$138,333
Comprehensive income (loss):							
Net loss .....	(3,429)	<u>\$(3,429)</u>	(3,429)				
Other comprehensive income (loss), net of tax:							
Unrealized loss on marketable securities	(74)	(74)					
Reclassification adjustment for loss on swap agreement included in net loss .....	914	914					
Foreign currency translation effect .....	691	<u>691</u>					
Other comprehensive income .....		<u>1,531</u>		1,531			
Comprehensive loss .....		<u>\$(1,898)</u>					
Non-cash compensation charges related to stock options .....	269						269
Tax benefit for deductible expenses charged to equity .....	474						474
Employee stock purchase .....	578				9		569
Exercise of employee stock options and related tax effect .....	<u>1,526</u>				<u>20</u>		<u>1,506</u>
Balance at June 30, 2004 .....	<u>131,352</u>		<u>(6,417)</u>	<u>72</u>	<u>1,833</u>	<u>(5,287)</u>	<u>141,151</u>
Comprehensive income (loss):							
Net earnings .....	8,984	<u>\$ 8,984</u>	8,984				
Other comprehensive income (loss), net of tax:							
Unrealized loss on marketable securities	(30)	(30)					
Foreign currency translation effect .....	(122)	<u>(122)</u>					
Other comprehensive loss .....		<u>(152)</u>		(152)			
Comprehensive income .....		<u>\$ 8,832</u>					
Non-cash compensation charges related to stock options .....	76						76
Employee stock purchase .....	667				7		660
Exercise of employee stock options and related tax effect .....	<u>226</u>				<u>2</u>		<u>224</u>
Balance at June 30, 2005 .....	<u>141,153</u>		<u>2,567</u>	<u>(80)</u>	<u>1,842</u>	<u>(5,287)</u>	<u>142,111</u>
Comprehensive income (loss):							
Net earnings .....	14,485	<u>\$14,485</u>	14,485				
Other comprehensive income (loss), net of tax:							
Unrealized loss on marketable securities .....	(13)	(13)					
Foreign currency translation effect .....	186	<u>186</u>					
Other comprehensive income .....		<u>173</u>		173			
Comprehensive income .....		<u>\$14,658</u>					
Non-cash compensation charges related to stock options .....	1,698						1,698
Employee stock purchase .....	492				5		487
Exercise of employee stock options and related tax effect .....	<u>937</u>				<u>8</u>		<u>929</u>
Balance at June 30, 2006 .....	<u>\$158,938</u>		<u>\$17,052</u>	<u>\$ 93</u>	<u>\$1,855</u>	<u>\$(5,287)</u>	<u>\$145,225</u>

See accompanying notes to consolidated financial statements.

**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Fiscal Year Ended June 30,		
	2006	2005	2004
<b>(Thousands of dollars)</b>			
Cash provided by (used for) operating activities:			
Net earnings (loss) .....	<b>\$14,485</b>	\$ 8,984	\$ (3,429)
Adjustments to reconcile net earnings (loss) to cash provided by (used for) operating activities:			
Loss from discontinued operations .....	—	366	7,655
Depreciation and amortization .....	<b>6,214</b>	5,880	5,717
Loss on disposal and impairment of assets .....	<b>266</b>	209	525
Deferred income taxes .....	<b>3,836</b>	5,333	(436)
Compensation cost related to share-based payments arrangements .....	<b>1,698</b>	—	—
Excess tax benefits from share-based payment arrangements .....	<b>(128)</b>	—	—
Other .....	<b>5</b>	97	191
Changes in operating accounts:			
Receivables .....	<b>(5,438)</b>	(1,630)	(13,401)
Inventories .....	<b>(3,959)</b>	(11,650)	(2,796)
Prepaid expenses .....	<b>20</b>	(202)	(122)
Accounts payable, accrued expenses, and taxes payable .....	<b>(1,773)</b>	24,109	7,513
Minority interest .....	<b>792</b>	751	335
Net cash provided by continuing operations .....	<b>16,018</b>	32,247	1,752
Net cash used for discontinued operations .....	—	(423)	(1,944)
Net cash provided by (used for) operating activities .....	<b>16,018</b>	31,824	(192)
Cash provided by (used for) investing activities:			
Additions to property, plant, and equipment .....	<b>(7,441)</b>	(9,987)	(7,585)
Purchase of marketable securities .....	<b>(31,336)</b>	(28,389)	(25,433)
Additions to intangibles and other assets .....	<b>(816)</b>	(1,332)	(1,138)
Proceeds from the sale of marketable securities and other assets .....	<b>9</b>	55	1,001
Proceeds from maturity of marketable securities .....	<b>22,000</b>	17,556	40,025
Net cash provided by (used for) continuing operations .....	<b>(17,584)</b>	(22,097)	6,870
Net cash provided by discontinued operations .....	—	1,918	80
Net cash provided by (used for) investing activities .....	<b>(17,584)</b>	(20,179)	6,950
Cash provided by (used for) financing activities:			
Dividend payments to minority interest .....	<b>(622)</b>	(751)	(235)
Employee stock purchase .....	<b>492</b>	667	578
Excess tax benefits from share-based payment arrangements .....	<b>128</b>	—	—
Exercise of employee stock options .....	<b>937</b>	226	1,526
Net cash provided by continuing operations .....	<b>935</b>	142	1,869
Net cash used for discontinued operations .....	—	—	(11,374)
Net cash provided by (used for) financing activities .....	<b>935</b>	142	(9,505)
Net increase (decrease) in cash and cash equivalents .....	<b>(631)</b>	11,787	(2,747)
Cash and cash equivalents, beginning of year .....	<b>20,949</b>	9,162	11,909
Cash and cash equivalents, end of year .....	<b>\$20,318</b>	\$ 20,949	\$ 9,162

See accompanying notes to consolidated financial statements.

# ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

June 30, 2006, 2005, and 2004

(Dollars in thousands, except for per share amounts)

### Note 1: Summary of Significant Accounting Policies

#### *Description of Operations and Principles of Consolidation*

Zygo Corporation is a worldwide supplier in optical metrology instruments, precision optics, and electro-optical design and manufacturing services, serving customers in the semiconductor capital equipment and industrial markets. The accompanying consolidated financial statements include the accounts of Zygo Corporation and its subsidiaries (“ZYGO,” “we,” “us,” “our” or “Company”). All material transactions and accounts with the subsidiaries have been eliminated from the consolidated financial statements.

#### *Cash and Cash Equivalents*

We consider cash and investments in securities with maturities at the date of purchase of three months or less to be cash and cash equivalents.

#### *Marketable Securities*

We consider investments in securities with maturities at the date of purchase in excess of three months as marketable securities. Marketable securities consist primarily of corporate bonds and government agency securities. All securities held by us at June 30, 2006 and 2005, were classified as held to maturity and recorded at amortized cost.

#### *Inventories*

Inventories are stated at the lower of cost (determined on a first-in, first-out basis) or market.

#### *Property, Plant, and Equipment*

Property, plant, and equipment are stated at cost. Maintenance and repairs are charged to expense as incurred. Management evaluates, on an ongoing basis, the carrying value of our property, plant, and equipment and makes adjustments when impairments are identified. Depreciation is based on the estimated useful lives of the various classes of assets and is computed using the straight-line method.

#### *Intangible Assets*

Intangible assets include patents, trademarks, and license agreements. The cost of intangible assets is amortized on a straight-line basis, over estimated useful lives ranging from 5-17 years.

#### *Valuation of Long-Lived Assets*

In accordance with Statement of Financial Accounting Standards (“SFAS”) No. 144, “Accounting for the Impairment or Disposal of Long-Lived Assets,” the carrying value of intangible assets and other long-lived assets is reviewed on a regular basis for the existence of facts or circumstances, both internally and externally, that may suggest impairment. Some factors considered important, which could trigger an impairment review, include a significant decrease in the market value of an asset, a significant change in the extent or manner in which an asset is used, a significant adverse change in the business climate that could affect the value of an asset, an accumulation of costs for an asset in excess of the amount originally expected, a current period operating loss or cash flow decline combined with a history of operating losses or cash flow uses

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or a projection that demonstrates continuing losses, and a current expectation that, it's more likely than not, a long-lived asset will be disposed of at a loss before the end of its estimated useful life.

If any such facts or circumstances exist, the carrying value of long-lived assets are evaluated to determine if impairment exists based upon estimated undiscounted future cash flows over the remaining useful life of the assets and comparing that value to the carrying value of the assets. If the carrying value of the assets is greater than the estimated future cash flows, the assets are written down to the estimated fair value. The estimated fair value of the assets is based on a current market value of the assets. If a current market value is not readily available, a projected discounted cash flow method is applied using a discount rate determined by management to be commensurate with the risk inherent in the current business model. Our cash flow estimates contain management's best estimates, using appropriate and customary assumptions and projections at the time.

#### *Income Taxes*

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. Income tax contingencies are evaluated on the criteria in SFAS No. 5 based on their probability of occurring.

#### *Revenue Recognition*

We recognize revenue based on guidance provided in Securities and Exchange Commission ("SEC") Staff Accounting Bulletin ("SAB") No. 104, "Revenue Recognition," and in accordance with Emerging Issues Task Force ("EITF") Issue No. 00-21, "Revenue Arrangements with Multiple Deliverables." We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, our price is fixed or determinable, and collectibility is reasonably assured. We recognize revenue on our standard products when title passes to the customer upon shipment. While our standard products generally require installation, the installation is considered a perfunctory performance obligation. The standard products do not have customer acceptance criteria. Generally, software is a component of our standard product and, as such, is not separately recognized as revenue. Standalone software products are recognized as revenue when they are shipped. We have standard rights of return that we account for as a warranty provision under SFAS No. 5, "Accounting for Contingencies." We do not have any price protection agreements or other post shipment obligations. For custom equipment where customer acceptance is part of the sales agreement, revenue is recognized when the customer has accepted the product. In cases where custom equipment does not have customer acceptance as part of the sales agreement, we recognize revenue upon shipment, as long as the system meets the specifications as agreed upon with the customer. Certain transactions have multiple deliverables, with the deliverables clearly defined. To the extent that the secondary deliverables are other than perfunctory, we recognize the revenue on each deliverable, if separable, or on the completion of all deliverables, if not separable. Revenue generated from development contracts are recorded on a cost-plus basis in the period services are rendered.

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#### *Research and Development*

Research and development costs are expensed as incurred. Reimbursements from customers for research and development costs are recorded as offsets to the expenses. In fiscal 2006 and 2004, reimbursements totaled \$1,176 and \$12, respectively.

There were no reimbursements from customers for research and development costs in fiscal 2005.

#### *Earnings Per Share*

Basic and diluted earnings per share are calculated in accordance with SFAS No. 128, “Earnings Per Share.”

The following table sets forth the reconciliation of weighted average shares outstanding and diluted weighted average shares outstanding:

	<u>June 30,</u> <u>2006</u>	<u>June 30,</u> <u>2005</u>	<u>June 30,</u> <u>2004</u>
Weighted average shares outstanding . . . . .	<b>18,053,596</b>	17,950,423	17,801,588
Dilutive effect of stock options and restricted stock . . . . .	<b>313,470</b>	189,750	419,782
Diluted weighted average shares outstanding	<b><u>18,367,066</u></b>	<u>18,140,173</u>	<u>18,221,370</u>

#### *Share-Based Compensation*

We have two share-based compensation plans, which are described in note 12. In December 2004, the Financial Accounting Standards Board (“FASB”) issued SFAS 123(R), “Share-Based Payment (as amended).” SFAS No. 123(R) eliminates the alternative to use the intrinsic value method of accounting that was provided in SFAS No. 123, which generally resulted in no compensation expense recorded in the financial statements related to the issuance of equity awards to employees and directors to the extent issued at fair market value. SFAS No. 123(R) requires that the cost resulting from all share-based payment transactions be recognized in the financial statements. SFAS No. 123(R) establishes fair value as the measurement objective in accounting for share-based payment arrangements and requires all companies to apply a fair-value-based measurement method in accounting generally for all share-based payment transactions with employees. SFAS 123(R) does not require the recording of compensation expense in periods prior to the date of adoption.

On July 1, 2005, we adopted SFAS No. 123(R) using a modified prospective method resulting in the recognition of share-based compensation expense for the fiscal year ended June 30, 2006 of \$1,698, and a related tax benefit of \$608. Share-based compensation expense for fiscal 2006 increased cost of sales by \$419, selling, general, and administration by \$1,023, and research, development, and engineering by \$256. Under this application, we are required to record compensation expense for all awards granted after the date of adoption and for the unvested portion of previously granted awards that remain outstanding at the date of adoption. In addition, we made changes to our employee stock purchase plan for periods beginning after July 1, 2005, which rendered the plan non-compensatory in accordance with SFAS No. 123(R).

Prior to the adoption of SFAS No. 123(R), we applied Accounting Principles Board (“APB”) Opinion No. 25, “Accounting for Stock Issued to Employees,” and related interpretations in accounting for our plans. The following table details the effect on net earnings and earnings per

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share had compensation expense for the employee share-based awards been recorded for fiscal years ended June 30, 2005 and 2004 based on the fair value method under SFAS No. 123.

	<u>June 30, 2005</u>	<u>June 30, 2004</u>
Net earnings (loss), as reported .....	\$ 8,984	\$(3,429)
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects .....	(2,519)	(5,786)
Pro forma net earnings (loss) .....	<u>\$ 6,465</u>	<u>\$(9,215)</u>
Net earnings (loss) per share		
Basic—as reported .....	<u>\$ 0.50</u>	<u>\$ (0.19)</u>
Basic—pro forma .....	<u>\$ 0.36</u>	<u>\$ (0.52)</u>
Diluted—as reported .....	<u>\$ 0.50</u>	<u>\$ (0.19)</u>
Diluted—pro forma .....	<u>\$ 0.36</u>	<u>\$ (0.51)</u>

The above pro forma information is based on historical activity and may not represent future trends.

#### ***Fair Value of Financial Instruments***

SFAS No. 107, “Disclosures about Fair Value of Financial Instruments,” requires that reporting entities provide, to the extent practicable, the fair value of financial instruments, both assets and liabilities. The carrying amounts of cash, accounts receivable, accounts payable, and accrued expenses approximate fair value because they are short-term in nature.

#### ***Use of Estimates***

Management has made a number of estimates and assumptions relating to the reporting of assets, liabilities, revenues and expenses, and the disclosure of contingent assets and liabilities to prepare these consolidated financial statements in conformity with accounting principles generally accepted in the United States of America. On an ongoing basis, management evaluates its estimates and judgments, including those related to bad debts, inventories, long-lived assets, share-based compensation, income taxes, and warranty obligations. Actual results could differ from those estimates.

#### ***Recently Issued Accounting Pronouncements***

In May 2005, the FASB issued SFAS No. 154, “Accounting Changes and Error Corrections,” which primarily changes the requirements for the accounting for and reporting of a change in accounting principle for all voluntary changes or when an accounting pronouncement does not include specific transition provisions. This applies to any future accounting changes beginning in fiscal 2007.

In November 2005, the FASB issued FASB Staff Positions (“FSP”) SFAS 115-1 and SFAS 124-1, “The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments.” FSP SFAS 115-1 and SFAS 124-1 address the determination as to when an investment is considered impaired, whether that impairment is other than temporary, and the measurement of an impairment loss. They also include accounting considerations subsequent to the recognition of an other-than-temporary impairment and require certain disclosures about unrealized losses that have not been recognized as other-than-temporary impairments. We will be adopting

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FSP SFAS 115-1 and SFAS 124-1 beginning in fiscal 2007 and expect the effect on our consolidated financial statements to be immaterial.

In February 2006, the FASB issued SFAS No. 155, "Accounting for Certain Hybrid Financial Instruments—an amendment of FASB Statements No. 133 and 140" which is effective for fiscal years beginning after September 15, 2006. The statement was issued to clarify the application of FASB Statement No. 133 to beneficial interests in securitized financial assets and to improve the consistency of accounting for similar financial instruments, regardless of the form of the instruments. Currently, we do not invest in hybrid instruments or securitized financial assets and would expect any effect on our consolidated financial statements in the future to be immaterial.

In June 2006, the FASB issued FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" ("FIN 48"). FIN 48 clarifies the accounting for uncertainty in income taxes recognized in our financial statements in accordance with FASB Statement No. 109, "Accounting for Income Taxes". The provisions of FIN 48 are effective for our fiscal year beginning July 1, 2007. We are currently evaluating the impact of the provisions of FIN 48.

#### **Note 2: Restatement of Financial Statements**

The consolidated financial statements for fiscal years 2005 and 2004 have been restated for corrections in the accounting of intercompany transactions from certain of our foreign operations. The fiscal 2005 adjustments reduced revenues by \$818; earnings from continuing operations by \$825; and earnings per diluted share from continuing operations and net income per diluted share by \$0.04. The fiscal 2004 adjustments reduced revenues by \$366; earnings from continuing operations by \$23; and had no effect on earnings per diluted share from continuing operations or net loss per diluted share.

#### **Note 3: Divestitures and Discontinued Operations**

In September 2002, we committed to a planned disposition of our TeraOptix business unit ("TeraOptix") which included recording impairment charges for the facility and equipment. During fiscal 2004, we recorded additional impairment charges on the facility in the second and fourth fiscal quarters. In the second quarter of fiscal 2004, the impairment charge was based on the then current fair value based on an appraisal from an independent third party. During the fourth quarter of fiscal 2004, management changed the marketing of the facility to a general purpose manufacturing facility from clean room space. We received offers on the building during the fourth quarter of fiscal 2004 from two separate independent third parties. Based on the offers, management determined that the fair value of the vacant facility was \$2,012 and an additional impairment charge was recorded. The total impairment charges recorded in fiscal 2004 were \$6,392, net of tax of \$3,425. In fiscal 2005, we recorded an additional impairment charge and adjustments of \$124, net of tax of \$43, to reflect the fair value based on final negotiations of a pending sale. The sale of the facility was completed in March 2005 for \$1,918, net of selling expenses.

In fiscal 2004, we paid off the mortgage debt of \$10,955 on the facility. The mortgage debt had carried interest at 7.5% per annum at the time of repayment, and required monthly principal payments of \$70, plus interest, until April 2007 and a balloon payment of \$8,200 in May 2007. In connection with the debt repayment, we also paid the balance of a related interest rate swap agreement of \$1,109. This payment resulted in an additional charge to discontinued TeraOptix operations, recorded net of tax. Prior to the payment, in accordance with SFAS No. 133, as amended, the swap liability was recorded with a corresponding debit, net of tax, to stockholders' equity. The aggregate payment of \$12,064 on the mortgage debt (\$10,955) and swap agreement (\$1,109) was funded from our available cash and marketable securities.

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The results and loss on disposal of the TeraOptix business unit have been presented as separate line items in the accompanying consolidated statements of operations as discontinued operations, net of tax, for all periods presented. The components of cash flow from discontinued operations are as follows:

	<u>June 30,</u> <u>2005</u>	<u>June 30,</u> <u>2004</u>
Cash flow from operating activities from discontinued operations:		
Loss from discontinued operations .....	\$ (366)	\$ (7,655)
Loss on sale and impairment of assets .....	94	9,817
Deferred income taxes .....	(128)	(4,104)
Prepaid expenses .....	<u>(23)</u>	<u>(2)</u>
Net cash used for operating activities from discontinued operations.....	<u>(423)</u>	<u>(1,944)</u>
Cash flow from investing activities from discontinued operations:		
Proceeds from sale of assets .....	<u>1,918</u>	<u>80</u>
Net cash provided by investing activities from discontinued operations .....	<u>1,918</u>	<u>80</u>
Cash flow from financing activities from discontinued operations:		
Payments of long-term debt.....	<u>—</u>	<u>(11,374)</u>
Net cash used for financing activities from discontinued operations.....	<u>—</u>	<u>(11,374)</u>
Net cash provided by (used for) discontinued operations .....	<u>\$1,495</u>	<u>\$(13,238)</u>

#### Note 4: Marketable Securities

Marketable securities consisted primarily of corporate bonds and government agency securities for fiscal 2006 and 2005. Marketable securities at June 30, 2006 and 2005 are reported at cost. Straight-line amortization related to marketable securities was \$131, \$107, and \$142 in fiscal 2006, 2005 and 2004, respectively.

As of June 30, 2003, we transferred our marketable securities from available-for-sale to held-to-maturity. Accordingly, the gross unrealized gains, net of tax, of \$19 in stockholders' equity remaining as of June 30, 2006 will continue to be amortized over the remaining life of the securities. Amortization, net of tax, related to the unrealized gain was \$13, \$30, and \$97 in fiscal 2006, 2005, and 2004, respectively.

Dividend and interest income is recognized when earned. Realized gains and losses are included in earnings and are derived using the specific identification method for determining the cost of securities sold.

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The amortized cost, gross unrealized gains (losses), and fair value of held-to-maturity securities at June 30, 2006 and 2005 were as follows:

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
<b>At June 30, 2006</b>				
<b>Corporate, federal, state and local municipal bonds</b> .....	<u>\$45,158</u>	<u>\$—</u>	<u>\$592</u>	<u>\$44,566</u>
<b>At June 30, 2005</b>				
Corporate, federal, state and local municipal bonds .....	<u>\$35,953</u>	<u>\$10</u>	<u>\$188</u>	<u>\$35,775</u>

Maturities of investment securities classified as held-to-maturity at June 30 2006 and 2005 were as follows:

	<u>June 30, 2006</u>		<u>June 30, 2005</u>	
	<u>Amortized Cost</u>	<u>Fair Value</u>	<u>Amortized Cost</u>	<u>Fair Value</u>
Due within one year .....	<u>\$21,415</u>	<u>\$21,261</u>	\$17,242	\$17,205
Due after one year through five years...	<u>23,743</u>	<u>23,305</u>	18,711	18,570
	<u>\$45,158</u>	<u>\$44,566</u>	<u>\$35,953</u>	<u>\$35,775</u>

The following table shows our investments' gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position at June 30, 2006 and 2005.

	<u>Fiscal Year 2006</u>			
	<u>Less than 12 months</u>		<u>More than 12 months</u>	
	<u>Market Value</u>	<u>Gross Unrealized Losses</u>	<u>Market Value</u>	<u>Gross Unrealized Losses</u>
Corporate and other .....	<u>\$21,149</u>	<u>\$(174)</u>	<u>\$18,718</u>	<u>\$(359)</u>
US Government Agencies .....	<u>2,985</u>	<u>(16)</u>	<u>1,714</u>	<u>(43)</u>
	<u>\$24,134</u>	<u>\$(190)</u>	<u>\$20,432</u>	<u>\$(402)</u>
	<u>Fiscal Year 2005</u>			
	<u>Less than 12 months</u>		<u>More than 12 months</u>	
	<u>Market Value</u>	<u>Gross Unrealized Losses</u>	<u>Market Value</u>	<u>Gross Unrealized Losses</u>
Corporate and other .....	\$25,984	\$ (26)	\$ 5,577	\$(109)
US Government Agencies .....	2,725	(23)	1,489	(30)
	<u>\$28,709</u>	<u>\$ (49)</u>	<u>\$ 7,066</u>	<u>\$(139)</u>

In determining whether investment holdings are other than temporarily impaired, we consider the nature, cause, severity and duration of the impairment. We and our investment advisors use analyst reports, credit ratings and other items as part of our review. No investments were considered to be other than temporarily impaired at June 30, 2006 and 2005.

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**Note 5: Accounts Receivable**

At June 30, 2006 and 2005, accounts receivable were as follows:

	<b>June 30, 2006</b>	<b>June 30, 2005</b>
Trade (note 16).....	<b>\$33,429</b>	\$28,018
Other.....	<b>918</b>	769
	<u><b>34,347</b></u>	<u>28,787</u>
Allowance for doubtful accounts.....	<b>(588)</b>	(663)
	<u><b>\$33,759</b></u>	<u>\$28,124</u>

**Note 6: Inventories**

At June 30, 2006 and 2005, inventories were as follows:

	<b>June 30, 2006</b>	<b>June 30, 2005</b>
Raw materials and manufactured parts .....	<b>\$17,536</b>	\$14,320
Work in process .....	<b>17,321</b>	15,927
Finished goods.....	<b>3,225</b>	3,480
	<u><b>\$38,082</b></u>	<u>\$33,727</u>

**Note 7: Property, Plant, and Equipment**

At June 30, 2006 and 2005, property plant, and equipment, at cost, were as follows:

	<b>June 30, 2006</b>	<b>June 30, 2005</b>	<b>Estimated Useful Life (Years)</b>
Land .....	<b>\$ 615</b>	\$ 615	—
Building and improvements .....	<b>16,848</b>	15,759	15–40
Machinery, equipment, and office furniture .....	<b>49,889</b>	45,501	3–8
Leasehold improvements .....	<b>772</b>	715	1–5
Construction in progress .....	<b>2,916</b>	2,997	—
	<u><b>71,040</b></u>	<u>65,587</u>	
Less accumulated depreciation .....	<b>(38,409)</b>	(34,167)	
	<u><b>\$ 32,631</b></u>	<u>\$ 31,420</u>	

Depreciation expense for the fiscal years ended June 30, 2006, 2005, and 2004 was \$5,734, \$5,273, and \$5,225, respectively.

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#### Note 8: Intangible Assets

Intangible assets, at cost, at June 30, 2006 and 2005 were as follows:

	<u>June 30,</u> <u>2006</u>	<u>June 30,</u> <u>2005</u>	<u>Estimated</u> <u>Useful Life</u> <u>(Years)</u>
Patents and trademarks.....	\$ <b>7,042</b>	\$ 6,556	15–17
License agreements.....	<u>1,350</u>	<u>1,350</u>	5
	<b>8,392</b>	7,906	
Accumulated amortization .....	<u>(2,467)</u>	<u>(2,268)</u>	
Total.....	<u>\$ <b>5,925</b></u>	<u>\$ 5,638</u>	

Intangible amortization expense for the fiscal years ended June 30, 2006, 2005 and 2004 was \$362, \$530, and \$449, respectively. Amortization expense related to intangible assets is included in cost of goods sold in the consolidated statements of operations.

#### Note 9: Bank Line of Credit

We have a \$3,000 unsecured bank line of credit agreement bearing interest at our choice of either the prime rate (8.25% at June 30, 2006) or the one month LIBOR rate plus a variable interest rate of 1.0% to 2.5%, based on a pricing grid related to a certain debt ratio, adjusted quarterly. The agreement contains certain financial covenants which, among others, relate to debt service and consolidated debt ratios. The line of credit is available through November 17, 2006. At June 30, 2006 and 2005, no amounts were outstanding under the bank line of credit.

#### Note 10: Warranty

A limited warranty is provided on our products for periods typically ranging from 3 to 12 months and allowances for estimated warranty costs are recorded during the period of sale. The determination of such allowances requires management to make estimates of product return rates and expected costs to repair or replace products under warranty. If actual return rates or repair and replacement costs, or both, differ significantly from management's estimates, adjustments to recognize additional expense may be required.

The following is a reconciliation of the beginning and ending balances of our accrued warranty liability, which is included in the "Other accrued expenses" line item in the consolidated balance sheets:

	<u>June 30,</u> <u>2006</u>	<u>June 30,</u> <u>2005</u>
Beginning balance .....	\$ <b>1,396</b>	\$ 1,486
Reductions for payments made .....	<b>(882)</b>	(1,232)
Changes in accruals related to warranties issued in the current period.....	<b>1,541</b>	1,490
Changes in accrual related to pre-existing warranties .....	<u><b>(395)</b></u>	<u>(348)</u>
Ending balance .....	<u><b>\$ 1,660</b></u>	<u>\$ 1,396</u>

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#### Note 11: Leases

We lease certain manufacturing equipment and facilities under operating leases, some of which include cost escalation clauses, expiring on various dates through fiscal 2011. Total lease expense, net, charged to operations was \$1,663 in fiscal 2006, \$2,270 in fiscal 2005, and \$1,720 in fiscal 2004. At June 30, 2006, the minimum future lease commitments, including vacant facilities, under noncancellable leases payable over the remaining lives of the leases, net of sublease rentals, are as follows:

<u>Year Ending June 30,</u>	<u>Minimum Future Lease Commitments</u>
2007 .....	\$1,073
2008 .....	570
2009 .....	372
2010 .....	276
2011 .....	<u>11</u>
Total minimum lease payments.....	<u>\$2,302</u>

#### Note 12: Profit-Sharing Plan

We maintain a deferred profit-sharing plan under which substantially all full-time employees are eligible to participate. The profit-sharing plan consists of a cash distribution and a contribution to our 401(k) program. Profit-sharing contributions are determined annually at the discretion of the Board of Directors. We also maintain a 401(k) tax deferred payroll deduction program and an Employee Stock Ownership Program. Under the 401(k) program, employees may contribute a tax-deferred amount of up to 60% of their compensation, as defined. We may contribute to the 401(k) program an amount determined annually at the discretion of the Board of Directors. Under the Employee Stock Ownership Program, we may, at the discretion of the Board of Directors, contribute our own stock or contribute cash to purchase our own stock. The purchased stock's fair market value can not exceed the maximum amount of employee stock ownership credit as determined under Section 416 of the Internal Revenue Code. Our contribution expenses related to the plans for the years ended June 30, 2006, 2005, and 2004, amounted to \$2,847, \$2,070, and \$1,186, respectively.

#### Note 13: Share-Based Compensation Plans

##### *Share-Based Compensation Plans*

Zygo has two share-based compensation plans. The Zygo Corporation 2002 Equity Incentive Plan ("2002 Plan") permits the granting of stock options to purchase shares of common stock and the granting of restricted stock up to a total of 1,500,000 shares. The exercise price per share of common stock covered by an option may not be less than the par value per share on the date of grant, and in the case of an incentive stock option, the exercise price may not be less than the market value per share on the date of grant. These options generally vest over a four year period at a rate of 25% each year. Generally, restricted stock awards have 50% of their restrictions lapse after three years and the remaining 50% lapse after four years. The 2002 Plan will expire on August 27, 2012. Pursuant to the terms of the 2002 Plan, the Board of Directors may also amend the 2002 Plan to authorize the grant of other types of equity-based awards, without further action by our stockholders. Options issued to non-employee directors are now issued under this plan. Non-employee directors are granted fully exercisable options to purchase 6,000 shares of common

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stock on an annual basis and each new non-employee director is granted fully exercisable options to purchase 12,000 shares of common stock on his or her first day of service, in all instances at the market value per share on the date of grant. Effective with the 2006 annual meeting, as part of director's compensation for services to our company, non-employee directors will be granted 5,000 restricted shares, which will vest after one year, on an annual basis and each new non-employee director will be granted options to purchase 16,000 shares of common stock on his or her first day of service, at the market value per share on the date of grant. These options will vest over a four year period at a rate of 25% each year.

The Zygo Corporation Amended and Restated Non-Employee Director Stock Option Plan ("Director Plan") permits the granting of non-qualified options to purchase a total of 620,000 shares (adjusted for splits) of common stock at prices not less than the market value of the stock on the date of grant. Under the terms of the Director Plan, as amended on September 24, 1999, each new non-employee director (other than a person who was previously an employee of ZYGO or any of our subsidiaries) was granted an option to purchase 8,000 shares of common stock, generally, on his or her first day of service as a non-employee director; and each other non-employee director was granted an option to purchase 3,000 shares of common stock on an annual basis. All options were fully exercisable on the date of grant and had a 10-year term. The Director Plan, as amended, will expire on November 17, 2009. The Company ceased granting options under this plan in fiscal 2003 and does not intend to grant further options under the Director Plan.

On June 26, 2001, the Board of Directors granted a warrant to purchase 25,000 shares of our common stock to the Zetetic Institute, a non-profit organization that provides assistance to us in connection with certain research and development activities. The warrant has an exercise price of \$18.64 per share, the closing price of the common stock on the date of the grant, and vested in equal annual increments over the four-year period following the date of grant. The warrant will expire in fiscal 2011.

We use the Black-Scholes option-pricing model to calculate the fair value of stock option awards. The key assumptions for this valuation method include the expected term of the option, stock price volatility, risk-free interest rate, dividend yield, exercise price, and forfeiture rate. Under the assumptions indicated below, the weighted-average fair value of stock option grants for fiscal 2006, 2005, and 2004 were \$5.41, \$6.32 and \$6.55, respectively. The table below indicates the key assumptions used in the option valuation calculations for options granted in fiscal 2006, 2005, and 2004, and a discussion of our methodology for developing each of the assumptions used in the valuation model:

	<u>Fiscal Years Ended June 30,</u>		
	<u>2006</u>	<u>2005</u>	<u>2004</u>
Term .....	<b>4.1 Years</b>	4.5 Years	4.5 Years
Volatility .....	<b>52.9%</b>	64–80%	71–82%
Dividend yield.....	<b>0.0%</b>	0.0%	0.0%
Risk-free interest rate .....	<b>3.9–4.4%</b>	3.2–3.9%	2.5–3.5%
Forfeiture rate.....	<b>10.6%</b>	4.0%	0.0%

*Term*—This is the period of time over which the options granted are expected to remain outstanding. Options granted have a maximum term of ten years. An increase in the expected term will increase compensation expense.

*Volatility*—This is a measure of the amount by which a price has fluctuated or is expected to fluctuate. Volatilities are based on implied volatilities from traded options of ZYGO's shares, historical volatility of ZYGO's shares, and other factors, such as expected changes in volatility

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

**June 30, 2006, 2005, and 2004**

(Dollars in thousands, except for per share amounts)

arising from planned changes in ZYGO's business operations. An increase in the expected volatility will increase compensation expense.

*Risk-Free Interest Rate*—This is the U.S. Treasury rate for the week of the grant having a term equal to the expected term of the option. An increase in the risk-free interest rate will increase compensation expense.

*Dividend Yield*—We did not make any dividend payments during the last five fiscal years and we have no plans to pay dividends in the foreseeable future. An increase in the dividend yield will decrease compensation expense.

*Forfeiture Rate*—This is the estimated percentage of options granted that are expected to be forfeited or canceled before becoming fully vested. An increase in the forfeiture rate will decrease compensation expense.

#### **Stock Options**

Included in the information below are outstanding options from the Zygo Corporation Amended and Restated Non-Qualified Stock Option Plan which expired in fiscal 2003, to the extent the options remain available for exercise.

The following table summarizes information about our stock options granted under our share-based compensation plans for fiscal 2006, 2005, and 2004.

	June 30, 2006		June 30, 2005		June 30, 2004	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year .....	2,069,175	\$26.95	1,902,985	\$29.89	1,784,489	\$32.25
Granted .....	186,000	\$11.80	289,200	\$ 9.51	435,350	\$10.99
Exercised .....	(83,340)	\$ 9.07	(19,856)	\$ 7.26	(200,076)	\$ 4.59
Expired or cancelled.....	(89,199)	\$33.20	(103,154)	\$36.14	(116,778)	\$38.91
Options—Outstanding-end of year .....	2,082,636	\$26.03	2,069,175	\$26.95	1,902,985	\$29.89
Options—Exercisable-end of year .....	1,585,574	\$31.19	1,408,206	\$35.12	1,077,967	\$37.46

At June 30, 2006, outstanding options at the end of the year had an intrinsic value of \$8,862 with a weighted average remaining contractual life of 5.9 years. In addition, exercisable options at the end of the year had an intrinsic value of \$5,466 with a weighted average remaining contractual life of 5.3 years.

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2006, 2005, and 2004

(Dollars in thousands, except for per share amounts)

The following table summarizes information about our stock options granted under our share-based compensation plans as of the fiscal year ended June 30, 2006.

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding as of June 30, 2006	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable as of June 30, 2006	Weighted Average Exercise Price
\$ 5.20–\$ 7.67	271,045	6.1	\$ 6.50	207,133	\$ 6.52
\$ 7.90–\$11.75	838,700	6.8	\$10.00	423,800	\$10.22
\$12.29–\$18.40	346,813	6.4	\$14.15	330,063	\$14.06
\$18.64–\$27.00	194,310	4.4	\$19.04	192,810	\$19.04
\$28.31–\$42.44	5,050	4.3	\$35.18	5,050	\$35.18
\$42.94–\$45.50	27,200	4.1	\$43.50	27,200	\$43.50
\$65.69–\$90.82	399,518	4.2	\$85.36	399,518	\$85.36
<u>\$ 5.20–\$90.82</u>	<u>2,082,636</u>	<u>5.9</u>	<u>\$26.03</u>	<u>1,585,574</u>	<u>\$31.19</u>

As of June 30, 2006, there was \$1,996 of total unrecognized compensation cost related to stock options. These costs are expected to be recognized over a weighted average period of 1.9 years.

The total intrinsic value of stock options exercised was \$650 and the total fair value of stock awards vested was \$1,925 during the fiscal year ended June 30, 2006.

Cash received from stock option exercises and the associated tax benefit for the fiscal year ended June 30, 2006 was \$937.

### *Restricted Stock*

The following table summarizes information about restricted stock awards granted under share-based compensation plans for the fiscal year ended June 30, 2006:

	June 30, 2006	
	Shares	Weighted Average Exercise Price
Non vested balance at beginning of year .....	—	\$ —
Granted .....	154,800	\$11.462
Vested .....	—	\$ —
Forfeited .....	<u>(6,600)</u>	<u>\$10.400</u>
Non vested balance at end of year .....	<u>148,200</u>	<u>\$11.509</u>

As of June 30, 2006, there was \$1,484 of total unrecognized compensation costs related to restricted stock awards. These costs are expected to be recognized over a weighted average period of 3.04 years.

At June 30, 2006, an aggregate of 537,637 shares remained available for future grants under our share-based compensation plans, which cover stock awards and stock options. We issue shares to satisfy stock option exercises and restricted stock awards, as applicable.

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2006, 2005, and 2004

(Dollars in thousands, except for per share amounts)

#### Note 14: Employee Stock Purchase Plan

In November 2000, we adopted a non-compensatory Employee Stock Purchase Plan (“ESPP”). Under the ESPP, employees who elect to participate have the ability to purchase common stock at a 5% discount from the market value of such stock (15% discount from the market value for the period from November 2000 until June 30, 2005). The ESPP permits an enrolled employee to make contributions to purchase shares of common stock by having withheld from his or her salary an amount between 1% and 10% of compensation. The total number of shares of common stock that may be issued under the ESPP is 500,000. At June 30, 2006 and 2005, we had withheld \$163 and \$330, respectively, for the purchases of shares under this plan, and in July 2006 and 2005, we issued approximately 10,000 and 35,000 shares of common stock, respectively.

#### Note 15: Income Taxes

Total income tax expense (benefit) for each year is as follows:

	Fiscal Year Ended June 30,		
	2006	2005	2004
Earnings from continuing operations .....	\$5,849	\$5,694	\$ 1,660
Discontinued operations .....	—	(85)	(679)
Disposal of discontinued operations .....	—	(43)	(3,425)
Amounts charged to stockholders' equity.....	<u>(229)</u>	<u>(38)</u>	<u>(578)</u>
	<u>\$5,620</u>	<u>\$5,528</u>	<u>\$(3,022)</u>

The income tax expense (benefit) for operations listed above were provided on the following pre-tax book income amounts:

	Fiscal Year Ended June 30,		
	2006	2005	2004
Earnings from continuing operations—U.S. ....	\$17,759	\$11,926	\$ 4,502
Earnings from discontinued operations—U.S. ....	—	(494)	(11,759)
Earnings from foreign operations .....	<u>3,367</u>	<u>3,869</u>	<u>1,719</u>
	<u>\$21,126</u>	<u>\$15,301</u>	<u>\$(5,538)</u>

Income tax expense attributable to earnings from continuing operations consists of:

	Fiscal Year Ended June 30,		
	2006	2005	2004
Currently payable:			
Federal .....	\$ 382	\$ 215	\$ 797
State .....	158	111	160
Foreign .....	<u>1,264</u>	<u>1,467</u>	<u>539</u>
	<u>1,804</u>	<u>1,793</u>	<u>1,496</u>
Deferred:			
Federal .....	4,006	3,830	881
State .....	118	(72)	(614)
Foreign .....	<u>(79)</u>	<u>143</u>	<u>(103)</u>
	<u>4,045</u>	<u>3,901</u>	<u>164</u>
Income tax from continuing operations .....	<u>\$5,849</u>	<u>\$5,694</u>	<u>\$1,660</u>

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

**June 30, 2006, 2005, and 2004**

(Dollars in thousands, except for per share amounts)

Income tax payments, net of refunds, were \$1,316 and \$765 in fiscal 2006 and 2005, respectively. Income tax refunds, net of payments, were \$377 in fiscal 2004.

The total income tax expense differs from the amount computed by applying the applicable U.S. federal income tax rate of 35% in fiscal 2006, 2005, and 2004 to earnings before income taxes for the following reasons:

	<b>Fiscal Year Ended June 30,</b>		
	<b><u>2006</u></b>	<b><u>2005</u></b>	<b><u>2004</u></b>
Computed “expected tax expense” .....	<b>\$ 7,394</b>	\$5,529	\$2,177
Increases (reductions) in taxes resulting from:			
State taxes, net of federal income tax benefit .....	<b>179</b>	26	(295)
Export tax incentives .....	<b>(2,034)</b>	(347)	(111)
Research credit .....	—	—	(307)
Tax on foreign dividend .....	<b>326</b>	328	123
Change in federal valuation allowance .....	—	—	389
Change in estimate of future year taxes .....	—	(129)	(160)
Foreign tax differential .....	<b>(68)</b>	217	(185)
Other, net .....	<b>52</b>	70	29
	<b><u>\$ 5,849</u></b>	<b><u>\$5,694</u></b>	<b><u>\$1,660</u></b>

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities as of June 30, 2006 and 2005 are presented below:

	<b><u>June 30, 2006</u></b>	<b><u>June 30, 2005</u></b>
Deferred tax assets:		
Accounts receivable .....	<b>\$ 195</b>	\$ 221
Accrued liabilities .....	<b>1,216</b>	1,039
Inventory valuation .....	<b>2,729</b>	2,631
Deferred revenue .....	<b>625</b>	394
Stock option compensation .....	<b>592</b>	—
Intangibles .....	<b>30</b>	27
Federal, foreign, and state net operating loss carryforwards (“NOL”) and credits .....	<b>27,246</b>	31,783
Contributions .....	<b>60</b>	47
	<b><u>32,693</u></b>	<u>36,142</u>
Less valuation allowance .....	<b>1,630</b>	2,011
Deferred tax asset .....	<b><u>31,063</u></b>	<u>34,131</u>
Deferred tax liabilities:		
Prepaid expenses .....	<b>(301)</b>	(283)
Plant and equipment .....	<b>(3,363)</b>	(2,604)
Unrealized gain on marketable securities .....	<b>(7)</b>	(16)
Deferred tax liability .....	<b>(3,671)</b>	(2,903)
Net deferred tax asset .....	<b><u>\$27,392</u></b>	<b><u>\$31,228</u></b>

The net current deferred tax assets and net non-current deferred tax assets as recorded on the balance sheet as of June 30, 2006 and 2005 are as follows:

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2006, 2005, and 2004

(Dollars in thousands, except for per share amounts)

	<u>June 30, 2006</u>	<u>June 30, 2005</u>
Net current deferrred tax asset .....	\$11,959	\$ 8,895
Net noncurrent deferred tax asset .....	<u>15,433</u>	<u>22,333</u>
Net deferred tax asset .....	<u>\$27,392</u>	<u>\$31,228</u>

The deferred tax provisions for 2006 and 2005 do not reflect the tax benefit of \$229 and \$38, respectively, resulting from amounts charged to other comprehensive income and paid in capital, which includes \$189 and \$26 from the exercise of employee stock options in 2006 and 2005, respectively.

During 2006, we wrote off certain reserved R&D tax credits. This write-off is primarily responsible for the change in the valuation allowance, along with the utilization of certain fully reserved state net operating losses.

Management believes it is more likely than not that the remaining net deferred tax assets of \$27,392 will be realized as the results of future operations are expected to generate sufficient taxable income to do so.

At June 30, 2006, our share of the cumulative undistributed earnings of foreign subsidiaries was \$2,898. No provision has been made for U.S. or additional foreign taxes on the undistributed earnings of foreign subsidiaries because we intend to continue to reinvest these earnings. Determination of the amount of unrecognized deferred tax liability associated with these earnings is not practicable.

At June 30, 2006, we have federal, foreign, and state NOL carryforwards of approximately \$52,011, \$182, and \$50,829, respectively, and various state credit carryforwards of \$5,038. The federal NOL will expire from fiscal 2021 through fiscal 2025, while the state NOL and credits will expire from fiscal 2007 through fiscal 2025. The foreign NOL is carried forward until utilized. We also have federal general business credit carryforwards of approximately \$4,701, which are available to reduce federal income taxes, if any, through 2019 and begin to expire in 2012. In addition, the Company also has alternative minimum tax credit carryforwards of approximately \$350, which are available to reduce future federal regular income taxes, if any, over an indefinite period.

The Company has elected the alternative method of calculating its tax pool for FAS123(R) purposes.

During fiscal 2006, the Company completed a redetermination of its fiscal 2005 and 2004 Extraterritorial Income Exclusion (“EIE”). Due to this redetermination, the Company recorded a tax benefit of \$1,192. The Company’s tax rate for fiscal 2007 and years after will be negatively impacted by the repeal of the EIE. The Company will only be able to claim a benefit on foreign trading income from foreign sales through December 31, 2006. The Company does not expect any significant tax benefit from the Manufacturing Deduction as provided in IRC Sec. 199 due to its NOL position.

During fiscal 2006, the Company released a foreign tax reserve of \$328 upon the completion of the taxing authorities’ audit in the foreign jurisdiction.

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2006, 2005, and 2004

(Dollars in thousands, except for per share amounts)

#### Note 16: Segment Reporting

We operate in two principal business segments globally: Semiconductor and Industrial. The segment data is presented below in a manner consistent with management's internal measurement of the business.

	For Fiscal Year Ended June 30,		
	2006	2005	2004
<b>Semiconductor</b>			
Sales .....	\$ 92,992	\$ 79,036	\$ 66,751
Gross profit .....	36,959	30,140	23,420
Gross profit as a % of sales .....	40%	38%	35%
<b>Industrial</b>			
Sales .....	\$ 75,145	\$ 62,313	\$ 49,525
Gross profit .....	28,812	23,150	19,260
Gross profit as a % of sales .....	38%	37%	39%
<b>Total</b>			
Sales .....	\$168,137	\$141,349	\$116,276
Gross profit .....	65,771	53,290	42,680
Gross profit as a % of sales .....	39%	38%	37%

ZYGO's Metrology, which includes development services, Optical Systems Solutions, and Precision Positioning Systems ("PPS") product lines are sold into its two business segments. Supplementary sales and gross profit data for the last three years by product line is as follows:

	Fiscal Year Ended June 30,		
	2006	2005	2004
<b>Metrology</b>			
Sales .....	\$ 83,839	\$ 68,896	\$ 64,651
Gross profit .....	38,350	30,377	28,363
Gross profit as a % of sales .....	46%	44%	44%
<b>Optical Systems Solutions</b>			
Sales .....	\$ 42,257	\$ 36,928	\$ 19,324
Gross profit .....	8,953	6,848	3,041
Gross profit as a % of sales .....	21%	19%	16%
<b>PPS</b>			
Sales .....	\$ 42,041	\$ 35,525	\$ 32,301
Gross profit .....	18,468	16,065	11,276
Gross profit as a % of sales .....	44%	45%	35%
<b>Total</b>			
Sales .....	\$168,137	\$141,349	\$116,276
Gross profit .....	65,771	53,290	42,680
Gross profit as a % of sales .....	39%	38%	37%

Separate financial information by segment for total assets, capital expenditures, and depreciation and amortization is not available and is not evaluated by the chief operating decision-maker.

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

**June 30, 2006, 2005, and 2004**

(Dollars in thousands, except for per share amounts)

Substantially all of our operating results, assets, depreciation, and amortization are U.S. based. Sales by geographic area were as follows:

	Fiscal Year Ended June 30,		
	2006	2005	2004
Domestic .....	<b>\$ 58,446</b>	\$ 47,973	\$ 33,937
Far East:			
Japan .....	<b>76,595</b>	61,115	61,067
Pacific Rim .....	<b>18,233</b>	17,303	12,806
Total Far East.....	<b>94,828</b>	78,418	73,873
Europe .....	<b>14,863</b>	14,958	8,466
Total .....	<b>\$168,137</b>	\$141,349	\$116,276

#### **Note 17: Transactions with Stockholder**

Sales to Canon, Inc., a stockholder representing approximately 7% ownership at June 30, 2006, and Canon Sales Co., Inc., a distributor of certain of our products in Japan and a subsidiary of Canon Inc., amounted to \$61,366 (36% of net sales), \$51,887 (37% of net sales), and \$57,306 (49% of net sales), for the years ended June 30, 2006, 2005, and 2004, respectively. Selling prices of products sold to Canon, Inc. and Canon Sales Co., Inc. are based, generally, on the normal terms given to distributors. Revenues generated from development contracts are recorded on a cost-plus basis.

In September 2002, we entered into a contract with Canon Inc. related to the development of certain interferometers. In March 2004, we signed a preliminary agreement to begin further add-on work; the definitive agreement for this additional work was signed in December 2004. In February 2005, we entered into two additional agreements with Canon Inc. related to the development of prototype production tools and accessories. During fiscal 2006, 2005, and 2004, we recognized revenue in the semiconductor segment of \$20,014, \$15,617, and \$16,057, respectively, for the original contract and subsequent add-on work.

At June 30, 2006 and 2005, there were, in the aggregate, \$5,966 and \$3,951, respectively, of trade accounts receivable from Canon, Inc. and Canon Sales Co., Inc. In addition, Canon Inc. paid us progress payments in accordance with the terms of the development contract. The total progress payments related to the development contract remaining at June 30, 2006 was \$2,120.

#### **Note 18: Hedging Activities**

During the third quarter of fiscal 2005, we entered into foreign currency forward contracts to reduce the impact of adverse fluctuations on earnings associated with foreign currency exchange rate changes. We do not enter into any derivative transactions for speculative purposes. These contracts are not designated as cash flow, fair value, or net investment hedges under SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities," as amended, and therefore, are marked-to-market with changes in fair value recorded to earnings. These contracts are entered into for periods consistent with the currency transaction exposures, generally three to six months. Any gains and losses on the fair value of these contracts would largely offset corresponding losses and gains on the underlying transactions.

## ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

**June 30, 2006, 2005, and 2004**

(Dollars in thousands, except for per share amounts)

As of June 30, 2006, we had seven foreign currency forward contracts outstanding aggregating to \$6,197. Net losses recognized from foreign currency forward contracts for fiscal 2006 was \$27, and are included in other income in the consolidated statements of operations. These losses are substantially offset by foreign exchange gains on intercompany balances recorded by our subsidiaries. We did not enter into any derivative instruments to hedge foreign currency exposure prior to the third quarter of fiscal 2005.

#### **Note 19: Quarterly Results (Unaudited)**

The following table sets forth certain unaudited quarterly financial data:

	<b>For the Fiscal Year Ended June 30, 2006</b>			
	<u>September 30,</u>	<u>December 31,</u>	<u>March 31,</u>	<u>June 30,</u>
Net sales.....	<u>\$34,329</u>	<u>\$43,608</u>	<u>\$43,048</u>	<u>\$47,152</u>
Gross profit.....	<u>\$13,153</u>	<u>\$17,192</u>	<u>\$16,447</u>	<u>\$18,979</u>
Net earnings.....	<u>\$ 2,193</u>	<u>\$ 3,680</u>	<u>\$ 4,097</u>	<u>\$ 4,515</u>
Basic earnings per share.....	<u>\$ 0.12</u>	<u>\$ 0.20</u>	<u>\$ 0.23</u>	<u>\$ 0.25</u>
Diluted earnings per share.....	<u>\$ 0.12</u>	<u>\$ 0.20</u>	<u>\$ 0.22</u>	<u>\$ 0.24</u>
	<b>For the Fiscal Year Ended June 30, 2005</b>			
	<u>September 30,</u>	<u>December 31,</u>	<u>March 31,</u>	<u>June 30,</u>
Net sales.....	<u>\$27,420</u>	<u>\$35,795</u>	<u>\$33,417</u>	<u>\$44,717</u>
Gross profit.....	<u>\$10,944</u>	<u>\$13,040</u>	<u>\$12,903</u>	<u>\$16,403</u>
Earnings from continuing operations.....	<u>\$ 1,317</u>	<u>\$ 2,354</u>	<u>\$ 2,261</u>	<u>\$ 3,418</u>
Loss from discontinued operations.....	<u>(65)</u>	<u>(163)</u>	<u>(89)</u>	<u>(49)</u>
Net earnings.....	<u>\$ 1,252</u>	<u>\$ 2,191</u>	<u>\$ 2,172</u>	<u>\$ 3,369</u>
Basic earnings (loss) per share:				
Continuing operations.....	<u>\$ 0.07</u>	<u>\$ 0.13</u>	<u>\$ 0.12</u>	<u>\$ 0.19</u>
Discontinued operations.....	<u>—</u>	<u>(0.01)</u>	<u>—</u>	<u>(0.01)</u>
Net earnings.....	<u>\$ 0.07</u>	<u>\$ 0.12</u>	<u>\$ 0.12</u>	<u>\$ 0.18</u>
Diluted earnings (loss) per share:				
Continuing operations.....	<u>\$ 0.07</u>	<u>\$ 0.13</u>	<u>\$ 0.12</u>	<u>\$ 0.19</u>
Discontinued operations.....	<u>(0.01)</u>	<u>(0.01)</u>	<u>—</u>	<u>—</u>
Net earnings.....	<u>\$ 0.06</u>	<u>\$ 0.12</u>	<u>\$ 0.12</u>	<u>\$ 0.19</u>

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

Board of Directors and Stockholders  
ZYGO CORPORATION  
Middlefield, Connecticut

We have audited the consolidated financial statements of Zygo Corporation and subsidiaries (the "Company") as of June 30, 2006, and for the fiscal year ended June 30, 2006, management's assessment of the effectiveness of the Company's internal control over financial reporting as of June 30, 2006, and the effectiveness of the Company's internal control over financial reporting as of June 30, 2006, and have issued our report thereon dated September 12, 2006, (which expresses an unqualified opinion and includes an explanatory paragraph concerning the change in the Company's method of accounting for stock options); such consolidated financial statements and report is included elsewhere in this Form 10-K. Our audit also included the consolidated financial statement schedule of the Company listed on page F-1 of this Form 10-K. This consolidated financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audit. In our opinion, such consolidated financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ Deloitte & Touche LLP

Hartford, Connecticut  
September 12, 2006

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM  
ON SCHEDULE II**

The Board of Directors and Stockholders  
ZYGO CORPORATION:

Under date of September 7, 2005, except as to note 2 to the consolidated financial statements which is as of June 20, 2006, we reported on the consolidated balance sheet of Zygo Corporation and subsidiaries as of June 30, 2005, and the related consolidated statements of operations, stockholders' equity and cash flows for the years ended June 30, 2005 and 2004 as contained in the 2006 Annual Report on Form 10-K. In connection with our audit of the aforementioned consolidated financial statements, we also audited the related consolidated financial statement schedule listed in the accompanying index on page F-1. This financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion on this financial statement schedule based on our audit.

In our opinion, this financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

/s/ KPMG LLP

Stamford, Connecticut  
September 7, 2005, except as to note 2 to the consolidated  
financial statements which is as of June 20, 2006

**ZYGO CORPORATION AND CONSOLIDATED SUBSIDIARIES**

**SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS**

Years ended June 30, 2006, 2005, and 2004

<u>Description</u> (Thousands of dollars)	<u>Balance at Beginning of Period</u>	<u>Provision</u>	<u>Write-Offs and Other</u>	<u>Balance at End of Period</u>
Year Ended June 30, 2006				
Allowance for doubtful accounts.....	\$ 663	\$ 65	\$ 140	\$ 588
Valuation allowance on net deferred tax assets .....	\$2,011	\$ 416	\$ 797	\$1,630
Year Ended June 30, 2005				
Allowance for doubtful accounts.....	\$ 707	\$ (11)	\$ 33	\$ 663
Valuation allowance on net deferred tax assets .....	\$3,383	\$ —	\$1,372	\$2,011
Year Ended June 30, 2004				
Allowance for doubtful accounts.....	\$ 337	\$ 374	\$ 4	\$ 707
Valuation allowance on net deferred tax assets .....	\$1,820	\$1,563	\$ —	\$3,383

**EXHIBIT INDEX**

**Exhibit  
Table  
Number**

21 —Subsidiaries of Registrant .....

23.1 —Consent of Independent Registered Public Accounting Firm .....

23.2 —Consent of Independent Registered Public Accounting Firm .....

31.1 —Certification Pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002..

31.2 —Certification Pursuant to Rule 13A-14(a) or 15D-14(a) of the Securities Exchange Act of 1934, as adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002..

32.1 —Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.....

32.2 —Certification Pursuant to 18 U.S.C. Section 1350, As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.....

**SUBSIDIARIES OF ZYGO CORPORATION (DELAWARE)**

Technical Instrument Company (California)  
100% owned by Registrant (effective as of August 8, 1996)

Syncotec Neue Technologien und Instrumente GmbH  
100% owned by Technical Instrument Company (effective as of September 1, 1997)

NexStar Corporation (Colorado)  
100% owned by Registrant (effective as of September 12, 1996)

TechniStar Corporation (Delaware)  
25% owned by NexStar Corporation

Sight Systems, Inc. (California)  
100% owned by Registrant (effective as of August 19, 1997)

Zygo TeraOptix, Inc. (Delaware)  
100% owned by Registrant (effective as of May 5, 2000)

Zygo KK  
100% owned by Registrant (effective as of October 1, 1999)

Zygo PTE  
100% owned by Registrant (effective as of January 1, 1998)

ZygoLOT GmbH  
60% owned by Registrant (effective as of October 2, 1999)

Six Brookside Drive (Connecticut)  
100% owned by Registrant (effective as of January 9, 1998)

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statements No. 333-105180, No. 333-51990, No. 333-44333, No. 33-62087, No. 33-57060, No. 33-20880 and No. 33-34619 on Form S-8 of our report dated September 12, 2006, (which expresses an unqualified opinion and includes an explanatory paragraph concerning the change in the Company's method of accounting for stock options), relating to the financial statements of Zygo Corporation and subsidiaries, and management's report on the effectiveness of internal control over financial reporting appearing in the Annual Report on Form 10-K of Zygo Corporation and subsidiaries for the year ended June 30, 2006.

/s/ Deloitte & Touche LLP

Hartford, Connecticut  
September 12, 2006

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors  
ZYGO CORPORATION:

We consent to incorporation by reference in Registration Statements No. 333-105180, No. 333-51990, No. 333-44333, No. 33-62087, No. 33-57060, No. 33-20880, and No. 33-34619 on Forms S-8 of Zygo Corporation of our reports dated September 7, 2005, except as to note 2 to the consolidated financial statements which is as of June 20, 2006, with respect to the consolidated balance sheet of Zygo Corporation and subsidiaries as of June 30, 2005 and the related consolidated statements of operations, stockholders' equity, and cash flows and related schedule for the years ended June 30, 2005 and 2004, which reports appear in the June 30, 2006 Annual Report on Form 10-K of Zygo Corporation.

/s/ KPMG, LLP

Stamford, Connecticut  
September 12, 2006

**CERTIFICATION PURSUANT TO RULE 13A-14(a) OR 15D-14(a) OF THE SECURITIES  
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002**

I, J. Bruce Robinson, certify that:

- 1) I have reviewed this annual report on Form 10-K of Zygo Corporation;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 11, 2006

/s/ J. BRUCE ROBINSON  
J. Bruce Robinson  
*Chairman, President, and Chief Executive Officer*

**CERTIFICATION PURSUANT TO RULE 13A-14(a) OR 15D-14(a) OF THE SECURITIES  
EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002**

I, Walter A. Shephard, certify that:

- 1) I have reviewed this annual report on Form 10-K of Zygo Corporation;
- 2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4) The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5) The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: September 11, 2006

/s/ WALTER A. SHEPHARD  
Walter A. Shephard  
*Vice President, Finance, Chief Financial Officer*

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, J. Bruce Robinson, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Zygo Corporation on Form 10-K for the fiscal year ended June 30, 2006, as filed with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Zygo Corporation.

A signed original of this written statement required by Section 906 has been provided to Zygo Corporation and will be retained by Zygo Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: September 11, 2006

/s/ J. BRUCE ROBINSON

J. Bruce Robinson  
Chairman, President, and Chief Executive  
Officer of Zygo Corporation

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Walter A. Shephard, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Zygo Corporation on Form 10-K for the fiscal year ended June 30, 2006, as filed with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Zygo Corporation.

A signed original of this written statement required by Section 906 has been provided to Zygo Corporation and will be retained by Zygo Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

Dated: September 11, 2006

/s/ WALTER A. SHEPHARD

Walter A. Shephard  
Vice President, Finance, Chief Financial  
Officer of Zygo Corporation