

INTEVAC INC

FORM 10-K (Annual Report)

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Industry	Industrial Machinery & Equipment
Sector	Industrials
Fiscal Year	12/31

Table of Contents

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 December 31, 2002

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 0-26946

INTEVAC, INC.

(Exact name of registrant as specified in its charter)

California

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

94-3125814

*(I.R.S. Employer
Identification No.)*

3560 Bassett Street

Santa Clara, California 95054

(Address of principal executive office, including Zip Code)

**Registrant's telephone number, including area code:
(408) 986-9888**

Securities registered pursuant to Section 12(b) of the Act: None

Title of each class

Name of each Exchange on which registered

none

none

**Securities registered pursuant to Section 12(g) of the Act:
Common Stock (no par value)**

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 a 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 an accelerated filer (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of voting stock held by non-affiliates of the Registrant, as of June 29, 2002 was approximately \$11,299,000 (based on the closing price for shares of the Registrant's Common Stock as reported by the NASDAQ National Market System for the last trading day prior to that date). Shares of Common Stock held by each executive officer, director, and holder of 5% or more of the outstanding

Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On February 20, 2003 12,179,378 shares of the Registrant's Common Stock, no par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's Proxy Statement for the 2003 Annual Meeting of Shareholders are incorporated by reference into Part III. Such proxy statement will be filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

TABLE OF CONTENTS

PART I

- Item 1. Business
- Item 2. Properties
- Item 3. Legal Proceedings
- Item 4. Submission of Matters to a Vote of Security-Holders

EXECUTIVE OFFICERS AND DIRECTORS

PART II

- Item 5. Market for Registrant's Common Equity and Related Shareholder Matters
- Item 6. Selected Consolidated Financial Data
- Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
- Item 7A. Quantitative and Qualitative Disclosure About Market Risk
- Item 8. Financial Statements and Supplementary Data

CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF GRANT THORNTON LLP, INDEPENDENT AUDITORS

CONSOLIDATED BALANCE SHEETS (In thousands)

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (In thousands, except per share amounts)

CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY (In thousands)

CONSOLIDATED STATEMENTS OF CASH FLOWS (In thousands)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

SIGNATURES

EXHIBIT 4.3

EXHIBIT 21.1

EXHIBIT 23.1

EXHIBIT 99.1



Table of Contents

This Annual Report on Form 10-K contains forward-looking statements, which involve risks and uncertainties. Words such as "believes," "expects," "plans," "anticipates" and the like indicate forward-looking statements. These forward looking statements include comments related to projected customer requirements for new capacity and technology upgrades for our installed base of thin-film disk manufacturing equipment and the ability of our products to meet these requirements; the timing of delivery and/or acceptance of our backlog for revenue; the expected features, performance and competitive advantages of products we are developing including LIVAR®, low light level sensors and cameras, Threat Detection and Identification Systems and MDP-200 upgrade systems; and the cost of complying with government regulations. Intevac's actual results may differ materially from the results discussed in the forward-looking statements for a variety of reasons, including those set forth under "Certain Factors Which May Affect Future Operating Results."

PART I

Item 1. Business

Overview

Intevac, Inc.'s businesses are organized into three divisions:

Equipment Products Division ("EPD") — EPD designs, manufactures and sells complex capital equipment used to manufacture products such as thin-film disks for hard disk drives and flat panel displays.

Photonics Technology Division ("PTD") — PTD is developing extreme low light level sensors, cameras and systems for sale to military and government markets.

Commercial Imaging Division ("CID") — CID is developing commercial cameras and systems based on PTD technology.

Systems sold by the Equipment Products Division (previously referred to as the Memory and Flat Panel Display Divisions) are used to deposit highly engineered thin-films of material on a substrate. Products manufactured with these systems include disks for computer hard disk drives and flat panel displays for use in consumer electronics products. These systems generally utilize proprietary manufacturing techniques and processes and operate under high levels of vacuum. The systems are designed for high-volume continuous operation and use precision robotics, computerized controls and complex software programs to fully automate and control the production process. EPD recorded sales of \$27.1 million in 2002, a decrease from \$42.7 million in 2001 as a result of lower sales of flat panel display manufacturing equipment. EPD's rapid thermal processing product line, which accounted for \$7.1 million of EPD's 2002 sales, was sold to Photon Dynamics of San Jose, California in November 2002 for \$20 million, which includes \$2 million held in escrow. Release of the escrow is contingent upon the occurrence of certain conditions.

The Photonics Technology Division is developing electro-optical sensors, cameras and systems that permit highly sensitive detection of photons in the visible and infrared portions of the spectrum. Products include LIVAR® systems for detection and positive target identification at long range and extreme low light level sensors and cameras for use in military applications. PTD sales to date consist primarily of contract research and development and prototype products funded by the US government. PTD sales decreased to \$6.6 million in 2002 from \$8.8 million in 2001 due to a lower level of research and development contract funding in 2002.

The Commercial Imaging Division (formerly the Intensified Imaging Division) was formed in July 2002 with the charter of developing products based on PTD technology for sale to commercial markets. To date CID's activities have consisted of market and product development, and accounted for \$1.7 million, or 9%, of Intevac's 2002 operating expenses. CID also assumed responsibility from PTD for activities related to the development of photodiodes for use in high-speed fiber optic systems. Further development of these photodiodes, which accounted for \$0.5 million of CID's 2002 operating expenses, was suspended at the end of 2002 due to weak market conditions in the telecommunications industry.

Table of Contents

We were incorporated in October 1990 in California. Our principal executive offices are located at 3560 Bassett Street, Santa Clara, California 95054, and our phone number is (408) 986-9888. Our Internet home page is located at www.intevac.com; however the information in, or that can be accessed through, our home page is not part of this report. Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to such reports are available, free of charge, on or through our Internet home page as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission.

Equipment Products Division

Description of Business

The thin-film disk deposition equipment portion of the Equipment Products Division was acquired from Varian Associates of Palo Alto, California in 1991. EPD developed a system, the MDP-250, for the deposition of magnetic films and protective overcoats onto thin-film disks used in computer hard disk drives ("HDD's"). The MDP-250 gained wide acceptance and by the late 1990's was being used in the manufacture of approximately half of the disks used in HDD's worldwide. Sales of new MDP-250 systems peaked in 1997 and fell to zero by the middle of 1998 as the result of excess disk production capacity. Sales of MDP-250 systems for use in manufacturing remained depressed until the second half of 2002 when we received orders for 2 MDP-250 systems, which we delivered and recorded as revenue in 2002. Since the middle of 1998, our disk manufacturing equipment revenues have resulted primarily from the sale of R&D systems and technology upgrades, parts and service for the installed base of MDP-250 systems. We believe that there are approximately ninety MDP-250's currently in use in production and R&D applications. We have sold both new and used MDP-250 systems in varying configurations at prices ranging from \$1 million to greater than \$3 million.

The disk manufacturing industry has now consolidated into a small number of large manufacturers. We believe the majority of our active customers now utilize most of their capacity and that there is significant potential for these customers to both resume adding capacity and to upgrade the technical capability of their installed base to permit production of high density disks for perpendicular recording rather than the current longitudinal technology. However, we are not able to accurately predict when our customers will begin placing significant equipment orders again, or if they will place those orders with us, and this subjects Intevac to extreme uncertainty in projecting our 2003 revenue.

During 2002 EPD also offered two types of products for sale for use in the manufacture of flat panel displays ("FPD's"):

D-STAR® systems, which are used to apply thin-films onto substrates.

Rapid thermal processing systems, which are used to change the properties of a previously applied thin-film by thermally processing it at temperatures that would otherwise distort or destroy the underlying glass substrate.

During 2002 EPD recognized \$0.1 million in revenue from the sale of D-STAR® parts. As of December 31, 2002 EPD had installed upgrades on five D-STAR® systems installed in 2001 and installed one new D-STAR® system at customer factories in Japan, which had not yet been accepted by the customer or recognized as a sale by EPD. These systems accounted for \$9.9 million of the inventory and \$11.1 million of the backlog of orders we reported at December 31, 2002. EPD recognized \$7.1 million of revenue in 2002 from the sale of rapid thermal processing systems, prior to the sale of the rapid thermal processing product line to Photon Dynamics in November 2002.

Deposition Equipment for Disk Manufacturing

Intevac has delivered approximately 112 MDP-250 disk manufacturing systems to customers including Fuji Electric, Fujitsu Limited, Hitachi, Komag, Maxtor, Mitsubishi, Nippon Sheet Glass, Seagate Technology, Sony and Trace Storage Technology. Intevac's systems are used by disk manufacturers to apply thin layers of undercoats, magnetic alloys and protective overcoats to disks used in computer hard disk drives. We

Table of Contents

believe that Intevac systems are used to manufacture approximately half the worldwide supply of these disks. The mechanical design of the MDP-250 family has characteristics similar to the cluster tools widely used in semiconductor manufacturing in that each of the twelve process stations is separately vacuum pumped and vacuum isolated. The MDP-250 does not require a carrier or pallet to transport disks through the system. Rather, disks are automatically loaded into the system from cassettes, processed, and then automatically returned to the cassette. Intevac offers a number of process station options, including multiple options for the deposition of thin-films and carbon overcoats, heating stations, cooling stations and cleaning stations. Furthermore, these twelve process stations can be easily reconfigured to accommodate process changes.

The rapid increase in areal density in computer memory storage is requiring the thin-films deposited by our MDP-250 series of equipment to become more complex. This complexity and new technologies such as perpendicular recording, are leading to the need for both new process capabilities and a need for more than twelve process stations. To answer the need for more process stations, Intevac introduced the MDP-200 series of equipment, a modular add-on system that allows manufacturers to seamlessly integrate additional process stations onto their MDP-250 system. The MDP-200 provides the capability to process disks through process stations serially or in parallel, giving manufacturers flexibility to integrate process steps with different process times. Intevac has also developed a suite of system upgrades (MDP-250B+ upgrades) that allow manufacturers to upgrade the vacuum level, speed and control systems of their installed base of MDP-250 systems.

We have started development on a second generation stand-alone MDP-200, which is being developed to be compatible with existing media technology and next generation perpendicular media technology.

Deposition Equipment for Flat Panel Display Manufacturing

The manufacture of several types of flat panel displays, such as active matrix liquid crystal displays, require the deposition of thin-film layers of different materials onto a glass substrate. Intevac's D-STAR® sputtering systems are designed to uniformly coat thin-films on substrates up to approximately one-meter square. Deposition materials include metals such as aluminum and chromium (used as conductors), silicon (for transistor applications), indium tin oxide (used as a transparent conductor) and complex oxides of materials such as magnesium and tantalum. Process modules are positioned around a central handling module designed to provide high throughput. Up to four back-to-back modules, each containing two vacuum isolated chambers, can be attached directly to the central handler unit. Additional back-to-back modules may also be attached in series to provide further process flexibility and capacity. Typically one or two modules are devoted to load/unload and the remaining positions are configured as dedicated process stations. Substrates are loaded into the system by a robot and then held on edge in a vertical orientation as they are processed. Vertical substrate handling allows for a relatively small system footprint, optimizes particulate control and reduces flexing of the substrate.

Rapid Thermal Processing Equipment for Flat Panel Display Manufacturing

Intevac sold its rapid thermal processing ("RTP") product line to Photon Dynamics in November 2002. These RTP systems are used to rapidly modify the characteristics of thin-films deposited on glass substrates used in the manufacture of flat panel displays. The RTP systems employ rapid transient heating, which provides lower cost of ownership and higher throughput as compared to furnace and laser processing techniques. The RTP systems are typically used for thin-film activation after ion implant in the manufacture of low temperature polysilicon displays. Intevac's RTP system customers included Sanyo, Sharp, Sony, Toppoly, ERSO and a joint venture of Sony and Toyota.

Electron Beam Processing Equipment

In December 1999, Intevac implemented a plan to terminate its electron beam product line. The plan included the delivery of the three electron beam systems on order, closure of the Hayward facility where the systems were manufactured and a \$1.6 million charge related to the plan. In March 2000, we sold the electron beam business to Quemex Technology, Ltd. and Quemex assumed responsibility for Intevac's Hayward

Table of Contents

facility. Intevac retained rights to the three systems on order, which were subsequently sold during 2000 and 2001.

Distribution

Domestic equipment sales are made by EPD's direct sales force. International sales are made either by EPD's direct sales force, or by distributors and representatives that provide services such as sales, installation, warranty and customer support. Intevac also has a subsidiary in Singapore to support EPD's customers in Southeast Asia. Through the second quarter of 2000, we marketed our flat panel manufacturing equipment to the Far East through its Japanese joint venture, IMAT. During the third quarter of 2000 Intevac and its joint venture partner, Matsubo, transferred IMAT's activities and employees to Matsubo, which became a distributor of EPD's flat panel products, and shut down the operations of IMAT.

The selling process for EPD's products is a multi-level and long-term process involving individuals from marketing, engineering, operations, customer service and senior management. The process involves making samples for the prospective customer and responding to individual needs for moderate levels of machine customization. Installing and integrating new equipment requires a substantial investment by a customer. Sales of EPD's systems depend, in significant part, upon the decision of a prospective customer to replace obsolete equipment or to increase manufacturing capacity by upgrading or expanding existing manufacturing facilities or constructing new manufacturing facilities, all of which typically involve a significant capital commitment. Therefore, customers often require a significant number of product presentations and demonstrations before making a purchasing decision. Accordingly, EPD's systems typically have a lengthy sales cycle, during which EPD may expend substantial funds and management time and effort with no assurance that a sale will result.

Competition

The principal competitive factors affecting the markets for EPD's products include price, product performance and functionality, integration and manageability of products, customer support and service, reputation and reliability. EPD's products experience intense competition worldwide from competitors including Anelva Corporation, Ulvac Japan, Ltd. and Unaxis Holdings, Ltd., each of which have sold substantial numbers of systems worldwide. Anelva, Ulvac and Unaxis all have substantially greater financial, technical, marketing, manufacturing and other resources than Intevac. There can be no assurance that EPD's competitors will not develop enhancements to, or future generations of, competitive products that offer superior price or performance features or that new competitors will not enter EPD's markets and develop such enhanced products.

Given the lengthy sales cycle and the significant investment required to integrate equipment into the manufacturing process, Intevac believes that once a manufacturer has selected a particular supplier's equipment for a specific application, that manufacturer generally relies upon that supplier's equipment and frequently will continue to purchase any additional equipment for that application from the same supplier. Accordingly, competition for customers in the equipment industry is intense, and suppliers of equipment may offer substantial pricing concessions and incentives to attract new customers or retain existing customers.

Backlog

EPD's backlog was \$15.0 million and \$26.5 million at December 31, 2002 and December 31, 2001, respectively. Sales of RTP systems in 2002 and the sale of the rapid thermal processing product line accounted for \$7.4 million of the decrease. The balance of the decrease resulted from a lower backlog of disk manufacturing equipment. The majority of this backlog is scheduled for delivery and/or acceptance during the first half of 2003. \$11.1 million of the backlog at December 31, 2002 relates to a D-STAR® system and a number of D-STAR® upgrades that are installed at the customer's site and undergoing final installation and acceptance testing. The balance of the backlog consists of parts and upgrades for disk manufacturing equipment. Intevac includes in its backlog only those customer orders for which it has accepted signed purchase orders with assigned delivery dates. The equipment requirements of Intevac's customers cannot be

Table of Contents

determined with accuracy, and therefore our backlog at any certain date may not be indicative of future demand for Intevac's products.

Customer Support

EPD provides process and applications support, customer training, installation, start-up assistance and emergency service support to its customers. Process and applications support is provided by EPD's equipment process engineers, who also visit customers at their plants to assist in process development projects. Intevac conducts training classes for process engineers, machine operators and machine service personnel. Additional training is also given during the machine installation.

EPD generally provides a one-year warranty on its equipment. During this warranty period any necessary non-consumable parts are supplied and installed. Intevac employees provide field service support primarily in the United States, Singapore and Malaysia. In other countries, field service support is provided by Intevac's distributors and sales representatives, supplemented by Intevac factory support. Intevac and its distributors stock consumables and spare parts to support the installed base of systems. These parts are generally available on a 24-hour per day basis.

Manufacturing

All of Intevac's EPD manufacturing is conducted at its facility in Santa Clara, California. EPD's manufacturing operations include electromechanical assembly, mechanical and vacuum assembly, fabrication of the sputter sources and system assembly, alignment and testing. Intevac makes extensive use of the infrastructure serving the semiconductor equipment business. EPD purchases vacuum pumps, valves, instrumentation and fittings, power supplies, printed wiring board assemblies, computers and control circuitry and custom mechanical parts made by forging, machining and welding. Until its closure in September 2002, EPD's fabrication center manufactured a portion of the fabricated parts used in EPD products and also fabricated parts for commercial customers. We plan during 2003 to replace the fabrication center with a smaller model shop that will support Intevac's engineering departments and make some of the parts used in Intevac products.

Working Capital

The production of large complex systems requires EPD to make significant investments in inventory both to fulfil customer orders and to maintain adequate supplies of spare parts to service previously shipped systems. EPD typically requires its customers to pay for systems in three installments, with a portion of the system price billed upon receipt of an order, a portion of the system price billed upon shipment, and the balance of the system price and any sales tax due upon completing installation and acceptance of the system at the customer's factory. All customer product payments are recorded as customer advances pending revenue recognition. EPD also maintains an inventory of spare parts at our Singapore subsidiary to support our customers in Singapore and Malaysia. EPD's inventories at December 31, 2002 and December 31, 2001, respectively, were \$15.1 million and \$21.0 million. EPD's accounts receivable at December 31, 2002 and December 31, 2001, respectively, were \$3.3 million and \$6.4 million. EPD's customer advances at December 31, 2002 and December 31, 2001, respectively, were \$12.3 million and \$13.5 million.

Photonics Technology Division

Description of Business

The Photonics Technology Division's products have been developed by a team that initially began working together in the 1980's in the Varian central research labs and night vision business unit. When Intevac was formed in 1991, it acquired Varian's night vision business, and the related Varian central research lab activities and technology. The central research lab group became part of the R&D department for Intevac's night vision business and continued to develop Intevac's photocathode technology. In 1995, Intevac sold its night vision business to Litton Industries. However, the technical team remained at Intevac and formed PTD. Since 1995 PTD has been further developing its technology, with the majority of its activities being funded by

Table of Contents

R&D contracts from the United States Government and its contractors. During this period PTD has also worked collaboratively with other research organizations, including Stanford University, Lawrence Livermore National Laboratory and The Charles Stark Draper Laboratory. PTD is developing electro-optical sensors, cameras and systems that permit highly sensitive detection of photons in the visible and infrared portions of the spectrum. Products include LIVAR® systems for positive target identification at long range and extreme low light level sensors and cameras for use in military applications.

LIVAR® Sensor Technology

PTD develops and manufactures compact electro-optical sensors that permit highly sensitive detection of photons in the visible and infrared portions of the spectrum. One of these sensors is an Electron Bombarded Charge Coupled Device (“EBCCD”) which was originally developed under a cost-sharing Technology Development Agreement with the Defense Advanced Research Projects Agency (“DARPA”) from 1996 to 1998. The sensor consists of a photocathode integrated with a charge-coupled device (“CCD”) imager. When photons strike the photocathode, electrons are emitted and electrically accelerated. The electrons then illuminate the CCD imager, which in turn outputs a high resolution, low noise video signal. These devices are extraordinarily sensitive to infrared light with wavelengths just beyond the visible spectrum and are used in PTD’s LIVAR® target identification system.

EBAPS® Sensor Technology

A second type of sensor incorporates the same basic technology described above; however, the module contains a Complementary Metal-Oxide-Semiconductor (“CMOS”) imager instead of a CCD chip. This Electron Bombarded Active Pixel Sensor (“EBAPS®”) imager development was initially funded under a cost sharing project awarded to Intevac by the National Institute of Standards and Technology. This EBAPS® imager has comparable sensitivity to generation three night vision technology, but in a more compact package that offers video rate digital output, rather than the direct view “green glow” image provided by traditional night vision tubes. PTD’s objective is to reduce the cost of the EBAPS® sensor to significantly less than the cost of a traditional generation three night vision device. At this cost we believe that large available markets for military head mounted displays, homeland defense, law enforcement and commercial security applications can be addressed. Late in 2002 PTD was awarded an \$860,000 contract from Science Application International Corporation (“SAIC”) to develop a prototype miniature camera based on its EBAPS® technology for head mounted display applications for the US Army.

LIVAR® System Technology

Intevac integrated its EBCCD sensor with a laser illuminator to create its Laser Illuminated Viewing and Ranging system (“LIVAR®”). The LIVAR® system is similar to RADAR, but with a number of improvements. The illuminator is an eye safe laser, rather than a microwave source, and the reflected signal is displayed as a digital video image, rather than as a blip. This enables real time, high-resolution imagery for target identification at much longer ranges than was previously possible.

The potential benefit of the LIVAR® system is clear for military conflicts like those in Kosovo and Afghanistan. In such conflicts, casualties to US servicemen are politically unacceptable, and it is preferable for aircraft to operate at high altitudes where they are relatively safe from ground launched missile attacks. It is also unacceptable to inflict collateral damage to the other sides’ civilians or to other untargeted assets. However, these goals are mutually exclusive unless capability exists for positively identifying potential targets from long ranges.

Currently the military uses several means for target location and identification including forward-looking infrared systems and RADAR. While these systems can detect targets at relatively long ranges, the resolution is poor, and positive identification is difficult, or impossible. The LIVAR® system complements existing FLIR and RADAR technology and enables long-range target identification in addition to target detection.

Table of Contents

LIVAR® Products

The first military program planning the widespread deployment of LIVAR® was approved late in 2001. PTD is under contract for the development phase of the program, and limited production is expected to commence in late 2003.

Early in 2002 PTD delivered a manportable LIVAR® demonstrator unit to the US Army. Later in 2002 PTD announced the LIVAR 2200 product line which was derived from the original Army prototype system. The LIVAR 2200 is a man-portable, tripod mounted system.

PTD is also under contract from DRS Sensor Systems, Inc. to integrate LIVAR® into the Army's Cost Effective Targeting System ("CETS"). CETS is an autonomous gimbal-mounted sensor suite for unmanned ground vehicles.

PTD cameras utilizing LIVAR® technology have been designed into the Airborne Laser ("ABL") system being developed by a team consisting of the US Air Force, Boeing, Lockheed Martin and TRW. The ABL is an airborne system designed to shoot down missiles at ranges of up to 200 kilometers with high power lasers. Each ABL system includes three Intevac LIVAR® cameras, which are used to provide targeting data to the laser. The first ABL-equipped prototype flew in 2002, and field deployment of the ABL system is currently scheduled for 2008.

Customers

PTD's contracts are generally issued by a government agency or by companies working under government contract. PTD's customers include Advanced Scientific Concepts, DRS Sensors Systems, Lockheed Martin, Northrop Grumman, Raytheon, SAIC and the US Army Communications-Electronics Command ("CECOM"). PTD's customers generally develop systems, which incorporate PTD's products, over very long periods of time, generally a number of years, after which they begin production, provided the system development is successful and production is funded by the contracting agency. PTD's primary objective is to secure production subcontracts once its customers' products have reached the production stage. Long term growth in PTD revenues and profits is dependent on PTD developing a production business in which the majority of revenue is derived from the sale of products, rather than from contract research and development.

Distribution

PTD markets directly to its customers and its selling process involves the solicitation of contracts and subcontracts from government agencies and from government contractors and subcontractors. A majority of contracts are bid at cost plus a fee, other contracts are bid at a fixed price, and some contracts are bid on a cost-sharing basis. The sales process involves government procurement regulations and sales are dependent on the continuing availability of government funding for our research programs. Future production orders for Intevac's military products are dependent on future government funding of weapons systems that utilize Intevac products such as LIVAR®.

Competition

Competitors exist for our products and a number of these competitors have greater resources than Intevac. For example, ITT Industries and Northrop Grumman, who are large and well-established defense contractors, are the primary U.S. manufacturers of generation three night vision devices and their derivative products. Our extreme low light level cameras are intended to displace some generation three night vision based products and we expect that ITT Industries and Northrop Grumman will continue to enhance the performance of their products and aggressively promote continued sales of their products. There are also a number of international companies that manufacture night vision devices and products with a varying range of performance and price that may compete with our products. Furthermore, Raytheon, Lockheed Martin, FLIR Systems and Wescam manufacture cooled infrared systems. Our LIVAR® target identification products will compete with these cooled infrared systems and target detection and identification systems offered by these and other manufacturers. In order to effectively compete with these manufacturers, Intevac will need to

Table of Contents

develop products on a cost-effective and timely basis that will offer attractive features and pricing relative to the products offered by our competitors.

Additionally, we expect that the sales of most of our products will be made through subcontracts to primary contractors. The degree of gross profit that can be generated under a subcontract is a function of the relative proportion of the primary contractor's end product that we manufacture under our subcontract. This relative proportion is negotiated on a contract by contract basis. For example, in a LIVAR® system, if we only provide the LIVAR® sensor and related electronics, then our revenue and gross profit will be less than if we provide the sensor and related electronics, the laser illuminator, the lens, the display and the integration of these and any other necessary components.

Backlog

PTD's backlog was \$3.2 million and \$4.1 million at December 31, 2002 and December 31, 2001, respectively. PTD's backlog consists primarily of research contracts. Many of PTD's research contracts are multiyear programs, which are released in multiple phases. PTD only includes in backlog the portion of each program that has been funded, and whose funding has been released to PTD by the contracting agency. The majority of PTD's backlog at December 31, 2002 is scheduled for completion during the first half of 2003.

Manufacturing

PTD's research and manufacturing operations are located in approximately 26,000 square feet of space at Intevac's Santa Clara headquarters. Laboratories and clean room facilities account for approximately 15,000 square feet of this space. PTD's manufacturing operations include the manufacture of advanced photocathodes and sensors, lasers, cameras and integrated camera systems. PTD makes extensive use of advanced manufacturing techniques and equipment, and its operations include vacuum, electromechanical and optical system assembly. PTD makes use of the infrastructure serving the semiconductor, camera and optics manufacturing industries. In manufacturing its sensors, PTD purchases wafers, components, processing supplies and chemicals. In manufacturing its camera systems, PTD purchases printed circuit boards, electromechanical components and assemblies, mechanical components and enclosures, optical components and computers.

Working Capital

PTD generally invoices its R&D customers either as costs are incurred, or as program milestones are achieved, depending upon contract terms. As a government contractor, PTD invoices customers using estimated annual rates approved by the Defense Contracts Audit Agency ("DCAA"). A majority of PTD's contracts are Cost Plus Fixed Fee ("CPFF") contracts. 15% of the "Fee" on any CPFF contract is withheld pending completion of the program and DCAA's annual audit of Intevac's actual rates. The withheld portion of the Fee is included in accounts receivable and totaled \$157,000 as of December 31, 2002 and \$125,000 as of December 31, 2001. PTD's accounts receivable at December 31, 2002 and December 31, 2001, respectively, were \$1.7 million and \$1.7 million. PTD's inventory consists of component parts used in the manufacture of its sensors, material, labor and overhead charged to research and development contracts that has not yet been billed to the customer and LIVAR® parts and assemblies. PTD's inventories at December 31, 2002 and December 31, 2001, respectively, were \$0.8 million and \$0.7 million.

Commercial Imaging Division

Description of Business

The Commercial Imaging Division (formerly the Intensified Imaging Division) was formed in July 2002 with the charter of developing commercial products based on PTD technology. CID's initial product offerings will include low light level video cameras and Threat Detection and Identification Systems ("TDIS").

To date CID's activities have consisted of market and product development and accounted for \$1.7 million, or 9%, of Intevac's 2002 operating expenses. CID also assumed responsibility from PTD for

Table of Contents

activities related to the development of photodiodes for use in high-speed fiber optic systems. Future development of these photodiodes, which accounted for \$0.5 million of CID's 2002 operating expenses, was suspended at the end of 2002 due to weak market conditions in the telecommunications industry. Existing photodiode products remain available for sale to customers.

Products

CID expects to begin the manufacture and sale of commercial products in the second half of 2003. During 2002 CID began development efforts on core camera modules that will serve as the basis for CID products. Starting with low light level compact video cameras targeting closed circuit television ("CCTV") systems, CID plans to offer generation III capability at a significantly lower price. In addition, networked cameras will be introduced to leverage communication infrastructure, providing customers with remote monitoring.

Building on PTD's LIVAR® technology, CID plans to announce its Threat Detection and Identification Systems product line later in 2003. CID's TDIS systems plan to harness the long-range capabilities of active eye safe imaging developed by PTD, coupled with the latest digital processing and communication developments. The TDIS systems plan to offer scaleable solutions to government and private industry customers that require surveillance for large outdoor areas and perimeters, such as borders, ports, airports and water districts. These systems are expected to offer cost benefits over today's conventional CCTV solutions. CID is developing systems for medium-range applications (up to one kilometer) to very long-range applications (up to 3 kilometers) which are expected to allow customers to identify threats with high-resolution imagery while minimizing false alarms.

Distribution

CID plans to distribute its products through direct sales, value-added resellers and by teaming with complementary large companies that have established distribution networks in place. CID's near term focus targets direct sales to government agencies responsible for securing the nation's infrastructure and transportation systems. To date, CID has directly approached several agencies that report to the Department of Homeland Security with proposals to act as the primary contractor for medium to large area surveillance systems.

Competition

Well established competitors exist for CID's products and a number of these competitors have greater resources than Intevac. CID's products will sell in competition with products derived from military night vision tube technology and produced by companies such as ITT Industries, with uncooled forward looking infrared cameras and other target detection and identification systems produced by companies such as FLIR Systems and Wescam, with products based on electron multiplied charge coupled devices manufactured by companies such as E2V and Texas Instruments, and with color CCTV cameras offered by numerous manufacturers that are less expensive, but offer significantly less low light capability. In order to effectively compete with these manufacturers, CID will need to develop products on a cost-effective and timely basis that will offer attractive features and pricing relative to the products offered by our competitors.

Backlog

CID had no backlog as of December 31, 2002.

Manufacturing

The EPD and PTD manufacturing organizations will initially manufacture CID's products.

Working Capital

CID had no inventory, accounts receivable or customer advances at December 31, 2002.

Table of Contents

Research and Development

Intevac's products serve markets characterized by rapid technological change and evolving industry standards. Intevac routinely invests substantial amounts in research and development and expects to continue an active development program. Our research and development expenses were \$10.8 million, \$14.5 million and \$10.6 million, respectively, in 2002, 2001, and 2000. Research and development expenses represented 32%, 28% and 29%, respectively, of net revenues in 2002, 2001 and 2000. Research and development spending declined during 2002 as the result of the completion during 2001 of the design activities related to development of the D-STAR®, RTP and MDP-200 platforms, partially offset by an increase in CID and PTD research and development.

Research and development expenses do not include costs of \$5.2 million, \$8.0 million and \$6.0 million in 2002, 2001 and 2000, respectively, related to PTD contract research and development which are included in cost of goods sold. Research and development expenses also do not include costs of \$0.3 million, \$0.5 million and \$0.7 million incurred by EPD in 2002, 2001 and 2000, respectively, and reimbursed under the terms of research and development cost sharing agreements related to development of disk and flat panel manufacturing equipment.

Customer Concentration

Historically, a significant portion of our revenue in any particular period has been attributable to sales to a limited number of customers. In 2002, Seagate, Toppoly, and the US Army Communications-Electronics Command each accounted for more than 10% of Intevac's consolidated revenues, and in aggregate accounted for 74% of net revenue. In 2001, equipment sales through Matsubo, our Japanese distributor, accounted for 49% of net revenues. In 2000, MMC Technology, Seagate, Westt and Matsubo each accounted for more than 10% of Intevac's consolidated revenues and in aggregate accounted for 56% of net revenues. Intevac's largest customers change from period to period, and it is expected that sales of its products to relatively few customers will continue to account for a high percentage of its net revenues in the foreseeable future.

Foreign sales accounted for 52% of revenues in 2002, 73% of revenues in 2001, and 27% of revenues in 2000. The majority of Intevac's foreign sales are to companies in the Far East and we anticipate that sales to customers in the Far East will continue to be a significant portion of our EPD revenues.

Patents and Licensing

Intevac currently holds 28 patents issued in the United States and 26 patents issued in foreign countries, and has patent applications pending in the United States and foreign countries. Of the 28 U.S. patents, 15 relate to disk and flat panel equipment and 13 relate to photonics. Of the foreign patents, 13 relate to disk equipment and flat panel equipment and 13 relate to photonics. In addition, Intevac has the right to utilize certain patents under licensing arrangements with Litton Industries, Stanford University, Lawrence Livermore Laboratories and Alum Rock Technology.

Employees

At December 31, 2002, Intevac had 136 employees, including 4 contract employees. 71 of these employees were in research and development, 33 in manufacturing, and 32 in administration, customer support and marketing. Of the 136 employees, 69 were in EPD, 38 were in PTD, 13 were in CID and 16 were in Corporate.

Compliance with Environmental Regulations

We are subject to a variety of governmental regulations relating to the use, storage, discharge, handling, emission, generation, manufacture, treatment and disposal of toxic or otherwise hazardous substances, chemicals, materials or waste. We treat the cost of complying with government regulations and operating a safe workplace as a normal cost of business and allocate the cost of these activities to all functions, except where the cost of those activities can be isolated and charged to a specific function. We believe the

Table of Contents

environmental standards and regulations promulgated by government agencies in Santa Clara, California are rigorous and set a high standard of compliance for Intevac. We believe our costs of compliance with these regulations and standards are comparable to other companies operating similar facilities in Santa Clara, California.

Certain Factors Which May Affect Future Operating Results

Revenue generated by our businesses during 2003 may not provide sufficient gross profit to cover operating and interest expenses.

A significant increase in the sales of disk manufacturing equipment and/or deposition equipment for the manufacture of flat panel displays and/or photonics-based revenues will be necessary for Intevac to be able to generate sufficient gross profit to offset expected operating and net interest expenses during 2003. The majority of our revenues and gross profit have historically been derived from sales of disk manufacturing equipment and deposition and rapid thermal processing equipment for the manufacture of flat panel displays. Our sales of disk manufacturing equipment have been severely depressed since the middle of 1998. While we believe that the disk manufacturing industry will need to make substantial investments to upgrade its productive capacity, the timing of this investment is uncertain and there can be no assurance that it will happen, or that we will be selected to provide these upgrades. We sold our rapid thermal processing product line to Photon Dynamics in November 2002, a product line which accounted for \$7.1 million of our net revenues during 2002. Additionally, other than for products that are already shipped and undergoing installation and acceptance testing, we have no current backlog of orders for deposition products for the manufacture of flat panel displays. PTD has yet to earn an annual profit. Failure to generate sufficient net revenues and gross profit in 2003 to offset operating and interest expenses would have an adverse effect on our business, net worth and cash.

We sell our equipment products to a small number of large customers. Competition is intense and loss of one of those customers would significantly reduce potential future revenues.

We experience intense competition in EPD. For example, our disk and flat panel products experience competition worldwide from competitors including Anelva Corporation, Ulvac Japan, Ltd. and Unaxis Holdings, Ltd., each of which has sold substantial numbers of systems worldwide. Anelva, Ulvac and Unaxis all have substantially greater financial, technical, marketing, manufacturing and other resources than we do. There can be no assurance that our competitors will not develop enhancements to, or future generations of, competitive products that will offer superior price or performance features or that new competitors will not enter our markets and develop such enhanced products. Accordingly, competition for our customers is intense, and suppliers of equipment may offer substantial pricing concessions and incentives to attract our customers or retain existing customers. The loss of any one of our large customers would significantly reduce potential future revenues.

We may not have the financial resources to repurchase our convertible notes if one of the events giving holders the right to require us to repurchase their notes occurs.

Certain events give holders of our convertible notes, including both our convertible notes due 2004 ("2004 Notes") and convertible notes due 2009 ("2009 Notes"), the right to require us to repurchase their notes. These events include the termination of trading of our common stock or a transaction that results in a change in control (which includes a person acquiring beneficial ownership of greater than 50% of our shares, a merger or consolidation, the sale of all or substantially all of our assets, or a change in the majority of our directors). In the case of the 2009 Notes only, a distribution to our common stock holders of all the capital stock of a subsidiary that at the time constitutes our Photonics business will also give the holders of the 2009 Notes the right to require us to repurchase their 2009 Notes. If one of these designated events were to occur, we may not have enough funds to pay the repurchase price for all notes for which repurchase is requested. Moreover, any future credit agreements or other debt agreements may prohibit such a repurchase, or may provide that such a repurchase constitutes an event of default under that debt agreement. If we are put in a position where one of these designated events has occurred but we are prohibited from repurchasing the notes, we could seek the consent of our lenders to repurchase the notes in question, or could attempt to

Table of Contents

refinance the debt agreements. If we do not obtain the lenders consent, we could not repurchase the notes, which would constitute an event of default under the particular indenture governing those notes, which might in turn also constitute an event of default under the terms of our other debt.

The majority of our future revenue is dependent on new products. If these new products are not successful, then our results of operations will be severely impacted.

We have invested heavily, and continue to invest, in the development of new products. PTD's LIVAR® target identification and low light level camera technologies are designed to offer significantly improved capability to military customers. EPD's D-STAR® deposition tool for flat panel display manufacturing is intended to displace products offered by competing manufacturers. EPD continues to invest heavily to develop products for the thin-film disk manufacturing industry. CID is developing commercial products based on the technology developed by PTD. These businesses will require substantial further investment in sales and marketing, in product development and in additional production facilities. There can be no assurance that we will succeed in these activities and generate significant sales of products. Failure of any of these products to perform as intended, to penetrate their markets and develop into profitable product lines would have an adverse effect on our business.

Demand for capital equipment is cyclical, which subjects our business to long periods of depressed revenues interspersed with periods of unusually high revenues.

EPD sells equipment to capital intensive industries, which sell commodity products such as disk drives and flat panel displays. These industries operate with high fixed costs. When demand for these commodity products exceeds capacity, demand for new capital equipment such as ours tends to be amplified. When supply of these commodity products exceeds demand, the demand for new capital equipment such as ours tends to be depressed. The cyclical nature of the capital equipment industry means that in some years sales of new systems by us will be unusually high, and that in other years sales of new systems by us will be severely depressed. Sales of systems for thin-film disk production have been severely depressed since the middle of 1998, and continue to be depressed. Failure to anticipate or respond quickly to the industry business cycle could have an adverse effect on our business.

Our significant amount of debt could have a negative effect on us and on our security holders.

We have \$1.0 million of convertible notes due in 2004 and \$29.6 million of convertible notes due in 2009 outstanding. The aggregate \$30.6 million of convertible notes commits us to substantial principal and interest obligations. Our significant amount of debt could harm Intevac and holders of our common stock and convertible notes in many ways, including:

- reducing the funds available to finance our business operations and for other corporate purposes because a portion of our cash flow from operations must be dedicated to the payment of principal and interest on our debt;
- impairing our ability to obtain additional financing for working capital, capital expenditures, acquisitions or general corporate purposes;
- placing us at a competitive disadvantage because we are substantially more leveraged than certain of our competitors;
- hindering our ability to adjust rapidly to changing market conditions; and
- making us more vulnerable financially in the event of a further downturn in general economic conditions or in our business.

Our ability to meet our debt service obligations will depend on our future operating performance and cash flow. Our operating performance and cash flow, in part, are subject to business, financial and economic factors beyond our control.

Table of Contents

We may undertake significant additional financing transactions in order to maintain sufficient cash to conduct our operations.

We may need to obtain additional financing to fund our future operations, and we may seek to raise additional funds through a variety of alternative sources, including the sale of additional securities or from other financing arrangements or asset sales. Our board of directors has from time to time considered a number of possible transactions. Such transactions might include:

- selling off a portion of our assets to raise additional capital;
- undertaking a rights offering to obtain financing from our existing shareholders;
- attempting to raise additional equity through public or private offerings;
- attempting to raise additional debt financing; or
- obtaining a line of credit.

We may undertake one or more of these transactions. We do not know whether we will be able to complete any of these transactions on a timely basis, on terms satisfactory to us, or at all. For example, we may not have access to new capital in the public or private markets until our results of operations improve, if at all. In addition, some of these transactions may result in significant dilution to our existing security holders or impairment of their rights. Nonetheless, if we are unable to complete one or more of these transactions, our ability to maintain our ongoing operations, and to pay principal and interest in cash on our outstanding notes when due, may be jeopardized.

Our business is subject to rapid technical change, which requires us to continually develop new products in order to sustain and grow our revenue.

Our ability to remain competitive requires substantial investments in research and development. The failure to develop, manufacture and market new systems, or to enhance existing systems, would have an adverse effect on our business. From time to time, we have experienced delays in the introduction of, and technical difficulties with, some of our systems and enhancements. Our future success in developing and selling equipment will depend upon a variety of factors, including our ability to accurately predict future customer requirements, technological advances, cost of ownership, our introduction of new products on schedule, cost-effective manufacturing and product performance in the field. Our new product decisions and development commitments must anticipate continuously evolving industry requirements significantly in advance of sales. Any failure to accurately predict customer requirements and to develop new generations of products to meet those requirements would have an adverse effect on our business.

Our products are complex, constantly evolving and are often designed and manufactured to individual customer requirements that require additional engineering.

EPD systems have a large number of components and are highly complex. We may experience delays and technical and manufacturing difficulties in future introductions or volume production of new systems or enhancements. In addition, some of the systems that we manufacture must be customized to meet individual customer site or operating requirements. We have limited manufacturing capacity and engineering resources and may be unable to complete the development, manufacture and shipment of these products, or to meet the required technical specifications for these products, in a timely manner. Such delays could lead to rescheduling of orders in backlog or, in extreme situations, to cancellation of orders. In addition, we may incur substantial unanticipated costs early in a product's life cycle, such as increased engineering, manufacturing, installation and support costs, that we may be unable to pass on to the customer. In some instances, we depend upon a sole supplier or a limited number of suppliers for complex components or sub-assemblies utilized in our products. Any of these factors could adversely affect our business.

Table of Contents

The sales of our disk and flat panel products are dependent on substantial capital investment by our customers, far in excess of the cost of our products.

The purchase of our systems, and the purchase of other related equipment and facilities, requires extremely large capital expenditures by our customers. These costs are far in excess of the cost of our systems alone. The magnitude of such capital expenditures requires that our customers have access to large amounts of capital and that they be willing to invest that capital over long periods of time to be able to purchase our equipment. Some of our potential customers, particularly those that would otherwise purchase our disk manufacturing products, may not be willing, or able, to make the magnitude of capital investment required.

Our business depends on the integrity of our intellectual property rights.

There can be no assurance that:

- any of our pending or future patent applications will be allowed or that any of the allowed applications will be issued as patents;
- any of our patents will not be invalidated, deemed unenforceable, circumvented or challenged;
- the rights granted under our patents will provide competitive advantages to us;
- any of our pending or future patent applications will issue with claims of the scope sought by us, if at all;
- others will not develop similar products, duplicate our products or design around our patents; or
- patent rights, intellectual property laws or our agreements will adequately protect our intellectual property rights.

Failure to adequately protect our intellectual property rights could have an adverse effect upon our business.

From time to time, we have received claims that we are infringing third parties' intellectual property rights. There can be no assurance that third parties will not in the future claim infringement by us with respect to current or future patents, trademarks, or other proprietary rights relating to our products. Any present or future claims, with or without merit, could be time-consuming, result in costly litigation, cause product shipment delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us, or at all. Any of the foregoing could have an adverse effect upon our business.

Our operating results fluctuate significantly.

Over the last eight quarters our operating loss as a percentage of net revenues has fluctuated between approximately 59% and 1% of net revenues. Over the same period our sales per quarter have fluctuated between \$23.6 million and \$6.7 million. We anticipate that our sales and operating margins will continue to fluctuate. As a result, period-to-period comparisons of our results of operations are not necessarily meaningful and should not be relied upon as indications of future performance.

Operating costs in northern California are high.

Our operations are located in Santa Clara, California. The cost of living in northern California is extremely high, which increases both the cost of doing business and the cost and difficulty of recruiting new employees. Our operating results depend in significant part upon our ability to effectively manage costs and to retain and attract qualified management, engineering, marketing, manufacturing, customer support, sales and administrative personnel. The failure to control costs and to attract and retain qualified personnel could have an adverse effect on our business.

Table of Contents

Business interruptions could adversely affect our business.

Our operations are vulnerable to interruption by fire, earthquake, power loss, telecommunications failure and other events beyond our control.

A significant portion of our sales are made to international customers.

Sales and operating activities outside of the United States are subject to inherent risks, including fluctuations in the value of the United States dollar relative to foreign currencies, tariffs, quotas, taxes and other market barriers, political and economic instability, restrictions on the export or import of technology, potentially limited intellectual property protection, difficulties in staffing and managing international operations and potentially adverse tax consequences. We earn a significant portion of our revenue from international sales, and there can be no assurance that any of these factors will not have an adverse effect on our business.

We generally quote and sell our products in US dollars. However, for some Japanese customers, we have quoted and sold our products in Japanese Yen. From time to time, we have entered into foreign currency contracts in an effort to reduce the overall risk of currency fluctuations to our business. However, there can be no assurance that the offer and sale of products denominated in foreign currencies, and the related foreign currency hedging activities will not adversely affect our business.

Our two principal competitors for disk deposition equipment are based in foreign countries and have cost structures based on foreign currencies. Accordingly, currency fluctuations could cause the price of our products to be more, or less, competitive than these competitors' products. Currency fluctuations will decrease, or increase, Intevac's cost structure relative to those of our competitors, which could impact our competitive position.

We expect the market price of our common stock and convertible notes to be volatile.

The market price of our common stock has experienced both significant increases in valuation and significant decreases in valuation, over short periods of time. We believe that factors such as announcements of developments related to our business, fluctuations in our operating results, failure to meet securities analysts' expectations, general conditions in the disk drive and thin-film media manufacturing industries and the worldwide economy, announcements of technological innovations, new systems or product enhancements by us or our competitors, fluctuations in the level of cooperative development funding, acquisitions, changes in governmental regulations, developments in patents or other intellectual property rights and changes in our relationships with customers and suppliers could cause the price of our common stock to continue to fluctuate substantially. In addition, in recent years the stock market in general, and the market for small capitalization and high technology stocks in particular, have experienced extreme price fluctuations that have often been unrelated to the operating performance of affected companies. Any of these factors could adversely affect the market price of our common stock and convertible notes. Our common stock is not heavily traded in the market, with daily volume averaging approximately 8,000 shares in 2002. As a result, any attempt by a shareholder to either acquire or dispose of a significant position in our stock could cause significant fluctuations in the price of the shares.

We routinely evaluate acquisition candidates and other diversification strategies.

We have completed multiple acquisitions as part of our efforts to expand and diversify our business. For example, our business was initially acquired from Varian Associates in 1991. We acquired our gravity lubrication and rapid thermal processing product lines in two acquisitions. We also acquired the RPC electron beam processing business in late 1997, and subsequently closed this business. We sold the rapid thermal processing product line in November 2002. We intend to continue to evaluate new acquisition candidates, divestiture and diversification strategies. Any acquisition involves numerous risks, including difficulties in the assimilation of the acquired company's employees, operations and products, uncertainties associated with operating in new markets and working with new customers, and the potential loss of the acquired company's key employees. Additionally, unanticipated expenses, difficulties and consequences may be incurred relating to the integration of technologies, research and development, and administrative and other functions. Any future

Table of Contents

acquisitions may also result in potentially dilutive issuance of equity securities, acquisition or divestiture related write-offs and the assumption of debt and contingent liabilities. Any of the above factors could adversely affect our business.

We use hazardous materials.

We are subject to a variety of governmental regulations relating to the use, storage, discharge, handling, emission, generation, manufacture, treatment and disposal of toxic or otherwise hazardous substances, chemicals, materials or waste. Any failure to comply with current or future regulations could result in substantial civil penalties or criminal fines being imposed on us or our officers, directors or employees, suspension of production, alteration of our manufacturing process or cessation of operations. Such regulations could require us to acquire expensive remediation or abatement equipment or to incur substantial expenses to comply with environmental regulations. Any failure by us to properly manage the use, disposal or storage of, or adequately restrict the release of, hazardous or toxic substances could subject us to significant liabilities.

Our directors and executive officers control a majority of our outstanding common stock.

Based on the shares outstanding on December 31, 2002, our current directors and their affiliates and our executive officers, in the aggregate, beneficially own a majority of the outstanding shares of common stock. These shareholders, acting together, are able to effectively control all matters requiring approval by our shareholders, including the election of a majority of the directors and approval of significant corporate transactions. Two of our directors also hold in aggregate 7% of the outstanding convertible notes.

Item 2. Properties

Intevac leases a 119,583 square foot facility in Santa Clara, California. The two-story facility includes offices, manufacturing, engineering labs and clean rooms. All of Intevac's operations, with the exception of our Singapore customer support office, are housed at the Santa Clara facility. As of December 31, 2002 approximately 20,600 square feet of the facility previously occupied by our fabrication center was not being utilized. Additionally, a portion of the facility dedicated to the Equipment Products Division manufacturing operations was significantly underutilized. The costs related to these underutilized spaces are included in selling, general and administrative expense, and totaled \$198,000 and \$0, respectively, in 2002 and 2001. If the utilization rate of the facility continues at the same level as at the end of 2002, then approximately \$1.1 million of excess facility cost will be included in 2003 selling, general and administrative expense. The lease for the Santa Clara facility expires in March 2007. Intevac has an option to extend the lease for an additional five-year period, with a monthly base rent to be negotiated by Intevac and the lessor. If Intevac and the lessor are unable to reach agreement with respect to such monthly base rent, an appraisal process set forth in the lease will determine the monthly base rent for the extension. Intevac also leases a facility of approximately 2,400 square feet in Singapore to house the Singapore customer support organization. This lease expires in December 2003. Intevac believes that its current facilities are suitable and adequate for its current and foreseeable operations. Intevac operates with one full manufacturing shift and one partial manufacturing shift. Intevac believes that it has sufficient productive capacity to meet its current needs.

Item 3. Legal Proceedings

On June 12, 1996 two Australian Army Black Hawk Helicopters collided in midair during nighttime maneuvers. Eighteen Australian servicemen perished and twelve were injured. Intevac was named as a defendant in a lawsuit related to this crash. The lawsuit was filed in Stamford, Connecticut Superior Court on June 10, 1999 by Mark Durkin, the administrator of the estates of the deceased crewmembers, the injured crewmembers and the spouses of the deceased and/or injured crewmembers. Included in the suit's allegations were assertions that the crash was caused by defective night vision goggles. The suit named three US manufacturers of military night vision goggles, of which Intevac was one. The suit also named the manufacturer of the pilot's helmets, two manufacturers of night vision system test equipment and the manufacturer of the helicopters. The suit claimed damages for 13 personnel killed in the crash, 5 personnel injured in the crash and spouses of those killed or injured. It is known that the Australian Army established a

Table of Contents

Board of Inquiry to investigate the accident and that one of the conclusions of the Board of Inquiry was that the accident was not caused by defective night vision goggles.

On July 27, 2000 the Connecticut Superior Court disallowed the defendants' motion to dismiss the lawsuit. On October 30, 2001 the Connecticut Supreme Court reversed the Superior Court's decision and remanded the case to the trial court with the direction to grant the defendants' motion to dismiss the suit subject to conditions already agreed to by the defendants. These conditions agreed to by the defendants include (1) consenting to jurisdiction in Australia; (2) accepting service of process in connection with an action in Australia; (3) making their personnel and records available for litigation in Australia; (4) waiving any applicable statutes of limitation in Australia up to six months from April 26, 2002, the date of dismissal of this action or for such other reasonable time as may be required as a condition of dismissing this action; (5) satisfying any judgement that may be entered against them in Australia; and (6) consenting to the reopening of the action in Connecticut in the event the above conditions are not met as to any proper defendant in the action.

On October 21, 2002 a lawsuit was filed in Queensland, Australia by Gerard Bampton, a member of the Australian Special Air Services Regiment who was injured in the 1996 crash. Included in the suit's allegations are assertions that the crash was caused by defective night vision goggles. The suit names three US manufacturers of military night vision goggles, of which Intevac was one. The suit also names the manufacturer of the helicopters. Investigations made at the time of the original Durkin lawsuit lead us to believe that we have meritorious defenses against the new lawsuit. However, there can be no assurance that the resolution of the suit will not have a material adverse effect on our business, operating results and financial condition.

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

No matters were submitted to a vote of security-holders during the fourth quarter of the fiscal year covered by this Annual Report on Form 10-K.

Table of Contents

EXECUTIVE OFFICERS AND DIRECTORS

Certain information about Intevac's directors and executive officers is listed below:

Name	Age	Position
<i>Executive Officers and Directors:</i>		
Norman H. Pond	64	Chairman of the Board
Kevin Fairbairn	49	President, Chief Executive Officer and Director
Verle Aebi	48	President of Photonics Technology Division
Charles B. Eddy III	52	Vice President, Finance and Administration, Chief Financial Officer, Treasurer and Secretary
David Dury(1)	54	Director
Robert D. Hempstead(1)(2)	59	Director
David N. Lambeth(2)	55	Director
Robert Lemos(1)	62	Director
H. Joseph Smead	77	Director
<i>Other Key Officers:</i>		
Kimberly Burk	37	Human Resources Director
Daniel Gentry	56	Vice President and General Manager of Equipment Products Division
Stephen Gustafson	31	Director, Product Operations, Photonics Technology Division
Timothy Justyn	40	Vice President, Operations, Equipment Products Division
Christopher Lane	36	Vice President and General Manager of Commercial Imaging Division

(1) Member of Audit Committee

(2) Member of Compensation Committee

Mr. Pond is a founder of Intevac and has served as Chairman of the Board since February 1991. Mr. Pond served as President and Chief Executive Officer from February 1991 until July 2000 and again from September 2001 through January 2002. Mr. Pond holds a BS in physics from the University of Missouri at Rolla and a MS in physics from the University of California at Los Angeles.

Mr. Fairbairn joined Intevac as President and Chief Executive Officer in January 2002 and was appointed a Director of the Company in February 2002. Before joining Intevac, Mr. Fairbairn was employed by Applied Materials from July 1985 to January 2002, most recently as Vice-President and General Manager of the Conductor Etch Organization with responsibility for the Silicon and Metal Etch Divisions. From 1996 to 1999, Mr. Fairbairn was General Manager of Applied's Plasma Enhanced Chemical Vapor Deposition Business Unit and from 1993 to 1996, he was General Manager of Applied's Plasma Silane CVD Product Business Unit. Mr. Fairbairn holds a MA in Engineering Sciences from Cambridge University.

Mr. Aebi has served as President of the Photonics Division since July 2000. Mr. Aebi served as General Manager of the Photonics Division since May 1995 and was elected as a Vice President of the Company in September 1995. From 1988 through 1994, Mr. Aebi was the Engineering Manager of the Company's night vision business, where he was responsible for new product development in the areas of advanced photocathodes and image intensifiers. Mr. Aebi holds a BS in physics and an MS in electrical engineering from Stanford University.

Mr. Eddy has served as Vice President, Finance and Administration, Chief Financial Officer, Treasurer and Secretary of Intevac since April 1991. Mr. Eddy holds a BS in engineering science from the University of Virginia and a MBA from Dartmouth College.

Table of Contents

Mr. Dury has served as a Director of Intevac since July 2002. Mr. Dury is a co-founder of Mentor Capital Group, a venture capital firm. From 1996 to 2000, Mr. Dury served as Senior Vice-President and Chief Financial Officer of Aspect Development, a software development firm. Mr. Dury holds a BA in psychology from Duke University and an MBA from Cornell University.

Dr. Hempstead has served as a Director of Intevac since March 1997 and served as Chief Operating Officer of Intevac from April 1996 through June 1999. Dr. Hempstead served as Chief Technology Officer at Veeco Instruments from December 1999 to December 2002. Dr. Hempstead is currently a self-employed consultant. Dr. Hempstead holds a BS and MS in electrical engineering from the Massachusetts Institute of Technology and a Ph.D. in physics from the University of Illinois.

Dr. Lambeth has served as a Director of Intevac since May 1996. Dr. Lambeth has been Professor of both Electrical and Computer Engineering and Material Science Engineering at Carnegie Mellon University since 1989. Dr. Lambeth was Associate Director of the Data Storage Systems at Carnegie Mellon University from 1989 to 1999. Since 1988, Dr. Lambeth has been the owner of Lambeth Systems, an engineering consulting and research firm. Dr. Lambeth holds a BS in electrical engineering from the University of Missouri and a Ph.D. in physics from the Massachusetts Institute of Technology.

Mr. Lemos has served as a Director of Intevac since August 2002. Mr. Lemos retired from Varian Associates, Inc. in 1999 after 23 years, including serving as Vice-President and Chief Financial Officer from 1988 to 1999. Mr. Lemos has a BS in Business from the University of San Francisco, a JD in law from Hastings College and a LLM in law from New York University.

Dr. Smead has served as a Director of Intevac since February 1991. Dr. Smead joined Kaiser Aerospace and Electronics Corporation (“Kaiser”) in 1974 and served as Kaiser’s President from 1974 until October 1997. Dr. Smead served as President and Chairman of the Board of Directors of K Systems, Inc., Kaiser’s parent company, from 1977 until October 1997. Dr. Smead served as Chairman of the Board of Directors of Kaiser until December 1999. Dr. Smead resigned as a director of Kaiser and its subsidiaries in December 2000. Dr. Smead holds a BS in electrical engineering from the University of Colorado, a MS in electrical engineering from the University of Washington and a Ph.D. in electrical engineering from Purdue University.

Ms. Burk has served as Human Resources Director of Intevac since May 2000. Prior to joining Intevac, Ms. Burk served as Human Resources Manager of Moen, Inc., from 1999 to 2000 and served as Human Resources Manager of Lawson Mardon from 1994 to 1999. Ms. Burk holds a BS in Sociology from Northern Illinois University.

Mr. Gentry has served as the General Manager of the Equipment Products Division of Intevac since 2002. Mr. Gentry joined Intevac in March 1991 and has served as Sales and Marketing Manager for the Company’s memory and flat panel equipment products. Mr. Gentry was elected a Vice-President of the Company in September 1995. Mr. Gentry holds a BS and MS in Electrical Engineering from the Massachusetts Institute of Technology and a MBA from Harvard University.

Mr. Gustafson has served as Director of Product Operations of Intevac since May 2002. Before joining Intevac, from 1995 to May 2002, Mr. Gustafson was employed by Applied Materials as a Sr. Operations Manager in the Conductor Etch Organization. Mr. Gustafson holds a BA in Humanities from San Jose State University.

Mr. Justyn has served as Vice President, Operations of Intevac since April 1997. Mr. Justyn joined Intevac in February 1991 and has served in various roles in our Equipment Products Division and our former night vision business. Mr. Justyn holds a BS in Chemical Engineering from the University of California, Santa Barbara.

Mr. Lane has served as General Manager of the Commercial Imaging Division since he joined Intevac in July 2002 and was elected a Vice-President in February 2003. Before joining Intevac, from 1990 to July 2002, Mr. Lane was employed by Applied Materials, most recently as Director of Engineering, CVD and Etch in the Conductor Etch Organization. Mr. Lane holds a BS in Mechanical Engineering, a MS in Engineering Management and a MBA, all from California Polytechnic State University at San Luis Obispo.

Table of Contents

PART II

Item 5. Market for Registrant's Common Equity and Related Shareholder Matters

Intevac's Common Stock commenced trading on the NASDAQ National Market on November 21, 1995 and is traded under the symbol "IVAC." As of December 31, 2002, there were approximately 2,000 holders of record of the Common Stock. The following table sets forth for the periods indicated the high and low closing sale prices for the Common Stock as reported on the NASDAQ National Market.

	High	Low
Fiscal 2001		
First Quarter	\$5.890	\$3.500
Second Quarter	\$5.950	\$4.400
Third Quarter	\$4.980	\$1.950
Fourth Quarter	\$4.240	\$2.380
Fiscal 2002		
First Quarter	\$4.390	\$2.380
Second Quarter	\$5.110	\$2.500
Third Quarter	\$4.250	\$2.060
Fourth Quarter	\$4.000	\$3.490

Dividend Policy

Intevac currently anticipates that it will retain its earnings, if any, for use in the operation of its business and does not expect to pay cash dividends on its capital stock in the foreseeable future.

Equity Compensation Plan Information

The following table summarizes the number of outstanding options granted to employees and directors, as well as the number of securities remaining available for future issuance, under the Company's equity compensation plans at December 31, 2002.

Plan Category	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders(2)	1,850,082	\$5.02	401,715
Equity compensation plans not approved by security holders	—	\$ —	—
Total	1,850,082	\$5.02	401,715

(1) Excludes securities reflected in column (a).

(2) Included in the column (c) amount are 185,946 shares available for future issuance under Intevac's 1995 Employee Stock Purchase Plan.

Table of Contents

Item 6. Selected Consolidated Financial Data

The following selected financial data of Intevac is qualified by reference to, and should be read in conjunction with, the consolidated financial statements of Intevac, including the notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations, each appearing elsewhere in this report.

	Year Ended December 31,				
	2002	2001	2000	1999	1998
(in thousands, except per share data)					
Consolidated Statement of Operations Data:					
Net revenues:					
Systems and components	\$ 27,625	\$ 43,599	\$ 30,074	\$ 35,895	\$ 90,085
Technology development	6,159	7,885	5,975	7,067	5,890
Total net revenues	<u>33,784</u>	<u>51,484</u>	<u>36,049</u>	<u>42,962</u>	<u>95,975</u>
Cost of net revenues:					
Systems and components	20,009	30,025	20,658	32,511	64,481
Technology development	5,150	7,988	6,022	5,907	4,709
Goodwill write-off	—	—	1,056	—	—
Inventory provisions	1,316	3,716	6,323	1,992	2,527
Total cost of net revenues	<u>26,475</u>	<u>41,729</u>	<u>34,059</u>	<u>40,410</u>	<u>71,717</u>
Gross profit	7,309	9,755	1,990	2,552	24,258
Operating expenses:					
Research and development	10,846	14,478	10,576	14,136	12,743
Selling, general and administrative	7,752	6,745	4,415	7,226	10,879
Restructuring and other	—	—	(638)	3,069	1,088
Total operating expenses	<u>18,598</u>	<u>21,223</u>	<u>14,353</u>	<u>24,431</u>	<u>24,710</u>
Operating loss	(11,289)	(11,468)	(12,363)	(21,879)	(452)
Interest expense	(2,981)	(2,912)	(3,033)	(3,711)	(4,187)
Interest income and other income, net	16,452	2,473	3,072	9,831	3,176
Income (loss) from continuing operations before income taxes	2,182	(11,907)	(12,324)	(15,759)	(1,463)
Provision for (benefit from) income taxes	(6,592)	5,029	—	(5,989)	(882)
Income (loss) from continuing operations	<u>8,774</u>	<u>(16,936)</u>	<u>(12,324)</u>	<u>(9,770)</u>	<u>(581)</u>
Income from discontinued operations, net	—	—	—	—	1,005
Net income (loss)	<u>\$ 8,774</u>	<u>\$(16,936)</u>	<u>\$(12,324)</u>	<u>\$ (9,770)</u>	<u>\$ 424</u>
Basic earnings per share:					
Income (loss) from continuing operations	\$ 0.73	\$ (1.42)	\$ (1.04)	\$ (0.83)	\$ (0.05)
Net income (loss)	\$ 0.73	\$ (1.42)	\$ (1.04)	\$ (0.83)	\$ 0.04
Shares used in per share calculations	12,077	11,955	11,803	11,777	12,052
Diluted earnings per share:					
Income (loss) from continuing operations	\$ 0.66	\$ (1.42)	\$ (1.04)	\$ (0.83)	\$ (0.05)
Net income (loss)	\$ 0.66	\$ (1.42)	\$ (1.04)	\$ (0.83)	\$ 0.03
Shares used in per share calculations	15,262	11,955	11,803	11,777	12,354
Consolidated Balance Sheet Data:					
Cash, cash equivalents and short-term investments	\$ 28,457	\$ 18,157	\$ 38,403	\$ 40,895	\$ 60,916
Working capital	31,309	27,160	41,093	51,579	77,774
Total assets	60,298	60,165	83,936	94,382	122,976
Long-term debt	30,568	37,545	41,245	43,188	59,461
Total shareholders' equity	10,545	1,408	17,804	29,623	40,436

Table of Contents

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

The following discussion and analysis contains forward-looking statements which involve risks and uncertainties. Words such as "believes," "expects," "anticipates" and the like indicate forward-looking statements. These forward looking statements include comments related to our projected revenue, gross margin, operating expense, income tax expense, effective tax rate and cash balances; our projected customer requirements for new capacity and technology upgrades for our installed base of thin-film disk manufacturing equipment and when, and if, our customers will place orders for these products, our plans to construct a model shop and the projected use for the model shop, PTD's ability to proliferate its technology into major military weapons programs; and the timing of delivery and/or acceptance of our backlog for revenue. Intevac's actual results may differ materially from the results discussed in the forward-looking statements for a variety of reasons, including those set forth under "Certain Factors Which May Affect Future Operating Results" and should be read in conjunction with the Consolidated Financial Statements and related Notes contained elsewhere in this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

Management's 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 ("US GAAP"). We review the accounting policies we use in reporting our financial results on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to revenue recognition, accounts receivable, inventories, income taxes, warranty obligations, long-lived assets, contingencies and litigation. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities. Results may differ from these estimates due to actual outcomes being different from those on which we based our assumptions. The Audit Committee and our auditors review significant estimates and judgements at the end of each quarter prior to the public release of our financial results.

Our significant accounting policies are described in Note 2 to the consolidated financial statements included in Item 8 of this Form 10-K. We believe the following critical accounting policies affect the more significant judgments and estimates made in the preparation of our consolidated financial statements.

Revenue Recognition — We recognize revenue using guidance from SEC Staff Accounting Bulletin No. 101 "Revenue Recognition in Financial Statements." Our policy allows revenue recognition when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectibility is reasonably assured. On January 1, 2003, Intevac changed its revenue recognition policy for system orders received after December 31, 2002.

System Revenue Recognition for Orders Received Before 12/31/02

Revenues for systems are recognized upon customer acceptance. For large deposition and rapid thermal processing systems shipped through a distributor, revenue is typically recognized after the distributor has accepted the system at our factory and the system has been shipped. For large deposition and RTP systems sold direct to end customers, revenue is recognized after installation and acceptance of the system at the customer site.

There is a written acceptance and test procedure ("ATP") for each system, which is specified in the customer purchase order. The ATP includes a detailed set of criteria that are required as a condition of customer acceptance. The ATP is typically conducted over one or more days during which the system is subjected to a number of tests to validate that the system is performing in a repeatable fashion, reliably and to specification. If material issues or problems are discovered during the ATP process, then they are corrected prior to customer acceptance.

Table of Contents

In the case of a direct end user sale, there are typically two ATP's performed. The first ATP is performed at Intevac's factory and must be approved by the customer prior to shipment of the system. The second ATP is performed after the system has been installed at the customer's factory, again with the customer in attendance. Once the second ATP is approved by the customer, and the customer has accepted the system in writing and agreed to make any remaining payments due on the system, then the system is recognized as a sale and revenue for the entire system is recorded.

In the case of a shipment through a distributor, an ATP is performed at Intevac's factory. Upon completion of the ATP, and after the distributor has accepted the system in writing and agreed to make any remaining payments due on the system, then the system is shipped and revenue for the entire system is recorded. The distributor then completes customer factory installation and the ATP at its cost. When we believe that there may be higher than normal end-user installation and acceptance issues for systems shipped through a distributor, such as when a major new version of a product is delivered for the first time, then the acceptance and revenue recognition process follows the model described above for a direct end user sale. The primary difference in this case is that revenue recognition is dependent on Intevac obtaining acceptance of the product by both our customer (the distributor) and our distributor's customer (the end user).

During the period that a system is undergoing customer acceptance (either distributor or end user), the value of the system remains in inventory, and any payments received, or amounts invoiced, related to the system are included in customer advances. When revenue is recognized on the system, the inventory is charged to cost of net revenues, the customer advance is liquidated and the customer is billed for the unpaid balance of the system revenue.

As of December 31, 2002 the Company reported \$9.9 million of finished goods (see *Inventories*), which consisted of five capacity upgrades to Flat Panel Display ("FPD") deposition systems undergoing final acceptance testing at the end user's facility and a FPD silicon deposition system undergoing final acceptance testing at the end user's facility. Taken as a whole, the above systems represent \$10.9 million of the Company's \$18.2 million order backlog, and \$9.8 million of the Company's \$12.3 million of customer advances (see Consolidated Balance Sheets).

System Revenue Recognition for Orders Received After 12/31/02

Certain of Intevac's product sales with customer acceptance provisions are accounted for as multiple-element arrangements. If the Company has met previously defined customer acceptance experience levels with the specific type of equipment, then Intevac recognizes revenue for the fair market value of the equipment upon shipment and transfer of title and recognizes revenue for the fair market value of installation and acceptance services when those services are completed. For products that have not been demonstrated to meet product specifications prior to shipment, revenue is recognized at customer acceptance. In the event that Intevac's customer chooses not to complete installation and acceptance, and Intevac's obligations under the contract to complete installation, acceptance or any other tasks (with the exception of warranty obligations) have been fully discharged, then Intevac recognizes any remainder revenue to the extent that collectibility under the contract is reasonably assured. For contracts with end user customer acceptance provisions established prior to 2003, Intevac has deferred all revenue recognition until completion of installation and customer acceptance. The revenue recognition policy outlined above and implemented for system orders received after December 31, 2002 was made to better conform Intevac's revenue recognition policies to industry accounting practice for companies selling similar equipment. The effect of adopting this policy in years prior to 2003 would have been no change in 2002 revenues, a decrease in 2001 revenues of \$1.5 million and an increase of 2000 revenues of \$1.5 million. The effect on net income of adopting this policy in years prior to 2003 would have been no effect in 2002 net income, a decrease in 2001 net income of \$33,000 and an increase in 2000 net income of \$33,000.

Other Systems and non-System Revenue Recognition

Revenues for systems without installation and acceptance provisions, technology upgrades, spare parts, consumables and prototype products built by PTD are generally recognized upon shipment. Service and

Table of Contents

maintenance contract revenue, which to date has been insignificant, is recognized ratably over applicable contract periods or as the service is performed.

Our shipping terms are customarily FOB shipping point. For systems sold directly to the end user, our obligations remaining after shipment typically include installation, end user factory acceptance and warranty. For systems sold to distributors, typically the distributor assumes responsibility for installation and end user customer acceptance. In some cases, the distributor will assume some or all of the warranty liability. For products other than systems and system upgrades, warranty is the only obligation we have after shipment.

Technology Development Revenue Recognition

We perform best efforts research and development work under various government-sponsored research contracts. Typically, for each contract, we commit to perform certain research and development efforts up to an agreed upon amount. In connection with these contracts, we receive funding on an incremental basis up to a ceiling. Some of these contracts are cost sharing in nature, where Intevac is reimbursed for a portion of the total costs expended. Revenue on these contracts is recognized in accordance with contract terms, typically as costs are incurred. In addition, we have, from time to time, negotiated with a third party to fund a portion of our costs in return for a joint interest in our technology rights developed pursuant to the contract. In the event that total cost incurred under a particular contract over-runs its agreed upon amount, we may be liable for the additional costs.

These contracts are accounted for under ARB No. 43, Chapter 11, Section A, which addresses Cost-Plus-Fixed-Fee Contracts. The contracts are all cost-type, with financial terms that are a mixture of fixed fee, incentive fee, no fee and cost-sharing. The deliverables under each contract range from providing reports to providing prototype hardware. In none of the contracts is there an obligation for either party to continue the program once the funds have been expended. The efforts can be terminated at any time for convenience, in which case we would be reimbursed for our actual incurred costs, plus fee, if applicable, for the completed effort. We own the entire right, title and interest to each invention discovered under the contract, unless we specifically give up that right. The US Government has a paid-up license to use any invention/intellectual property for government purposes only.

Inventories — We make provisions for potentially excess and obsolete inventory based on backlog and forecasted demand. However, order backlog is subject to revisions, cancellations, and rescheduling. Actual demand will inevitably differ from forecasted demand due to a number of factors. For example, the disk industry has suffered from over-capacity and poor financial results, which has led to industry consolidation. Consolidation can lead to the availability of used equipment that competes at very low prices with our products. Financial stress and consolidation in our customer base can also lead to the cancellation of orders for products after we have incurred substantial costs related to those orders. Such problems have resulted, and may continue to result, in excess and obsolete inventory, and the provision of related reserves.

Warranty — The Company's standard warranty is twelve months from customer acceptance. During this warranty period any necessary non-consumable parts are supplied and installed. A provision for the estimated warranty cost is recorded at the time revenue is recognized.

Valuation of long-lived and intangible assets and goodwill — We assess the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include the following:

- significant under-performance relative to expected historical or projected future operating results;
- significant changes in the manner of our use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period; and
- our market capitalization relative to net book value.

Table of Contents

When we determine that the carrying value of long-lived assets, intangibles or goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any impairment based on a projected discounted cash flow method using a discount rate determined by our management to be commensurate with the risk inherent in our current business model.

Results of Operations

Net revenues. Net revenues consist primarily of sales of equipment used to manufacture thin-film disks, equipment used to manufacture flat panel displays, related equipment and system components, and contract research and development related to the development of electro-optical devices and systems. Net revenues totaled \$33.8 million, \$51.5 million and \$36.0 million in 2002, 2001 and 2000, respectively.

Equipment Products Division (“EPD”) revenues totaled \$27.1 million, \$42.7 million and \$28.8 million in 2002, 2001 and 2000, respectively. EPD revenues decreased in 2002 due to a decrease in sales of flat panel manufacturing systems and disk system upgrades and components, partially offset by an increase in sales of disk manufacturing systems. EPD revenues increased in 2001 from 2000 due to an increase in sales of flat panel manufacturing systems, partially offset by a decrease in sales of disk manufacturing systems, disk systems upgrades and components. EPD delivered, and recognized revenue on, five of its D-STAR® deposition systems during 2001. During 2002 EPD delivered upgrades to the five systems and one new D-STAR® system. Revenue recognition on the five upgrades and one new system was pending final customer acceptance at December 31, 2002. Net revenues for 2002 and 2001 include \$7.1 million and \$6.8 million, respectively, of sales of rapid thermal processing equipment, a product line the Company sold in November 2002. There were no sales of rapid thermal processing equipment in 2000. EPD’s fabrication center, which manufactured machined parts, contributed sales to outside customers of \$0.6 million, \$1.8 million and \$5.0 million in 2002, 2001 and 2000, respectively. The fabrication center was closed in September 2002. EPD plans to replace the fabrication center with a smaller model shop during 2003. The model shop will manufacture engineering prototypes and parts for use in our products.

The disk manufacturing industry has now consolidated into a small number of large manufacturers. We believe that the majority of our active customers now utilize most of their capacity and that there is significant potential for these customers to both resume adding capacity and to upgrade the technical capability of their installed base to permit production of high density disks for perpendicular recording rather than the current longitudinal technology. However, we are not able to accurately predict when our customers will begin placing significant equipment orders again, or if they will place those orders with us, and this subjects us to a high degree of uncertainty in projecting our 2003 revenue.

Photonics Technology Division (“PTD”) revenues totaled \$6.6 million, \$8.8 million and \$7.2 million in 2002, 2001 and 2000, respectively. PTD revenues decreased in 2002 as a result of a decrease in revenues from contract research and development. PTD revenues increased in 2001 over 2000 as the result of increased revenues from contract research and development. PTD revenues in 2003 are expected to be primarily derived from contract research and development, but with some increase in revenue from LIVAR® target identification systems. Substantial growth in future PTD revenues is dependent on PTD proliferating its technology into major military weapons programs and obtaining production subcontracts for these programs.

The Commercial Imaging Division (“CID”) was formed in July 2002 with the charter of developing commercial products based on PTD technology. CID also assumed responsibility from PTD for activities related to the development of photodiodes for use in high-speed fiber optic systems. CID’s 2002 revenues totaled \$43,000 related to the sale of sample photodiodes. Further development of these photodiodes was suspended at the end of 2002 due to weak market conditions in the telecommunications industry. CID expects to initiate the sale of commercial products based on PTD’s LIVAR® and low light level technology during 2003, but does not expect to realize significant revenues from these products in 2003.

Intevac’s backlog of orders at December 31, 2002 was \$18.2 million, as compared to a December 31, 2001 backlog of \$30.6 million. The \$18.2 million of backlog at December 31, 2002 consisted of \$15.0 million of EPD backlog and \$3.2 million of PTD backlog. The \$30.6 million of backlog at December 31, 2001 consisted of \$26.5 million of EPD backlog and \$4.1 million of PTD backlog. The reduction in EPD backlog

Table of Contents

was primarily due to a reduction in the number of rapid thermal processing systems and disk manufacturing systems on order. Most of Intevac's backlog at December 31, 2002 is scheduled for either customer acceptance or delivery during the first half of 2003. The Company needs to book substantial orders in 2003 in order for 2003 sales to meet or exceed 2002 sales.

Significant portions of our revenues in any particular period have been attributable to sales to a limited number of customers. In 2002, Seagate, Toppoly and the US Army Communications-Electronics Command each accounted for more than 10% of Intevac's consolidated net revenues and in aggregate accounted for 74% of consolidated net revenues. In 2001, equipment sales through Matsubo, our Japanese distributor, accounted for 49% of consolidated net revenues. In 2000, MMC Technology, Seagate, Westt and Matsubo each accounted for more than 10% of Intevac's consolidated net revenues and in aggregate accounted for 56% of consolidated net revenues. Our largest customers tend to change from period to period.

International sales totaled \$17.5 million, \$37.3 million and \$9.6 million in 2002, 2001 and 2000, respectively, accounting for 52%, 73% and 27% of net revenues. The decrease in international sales in 2002 compared to 2001 was primarily due to a decrease in net revenues from flat panel manufacturing systems, and to a lesser extent, to a decrease in net revenues from disk system upgrades and components. The increase in international sales in 2001 over 2000 was primarily due to an increase in net revenues from flat panel manufacturing systems. Substantially all of Intevac's international sales are to customers in the Far East.

Gross margin. Cost of net revenues consists primarily of purchased materials, fabrication, assembly, test and installation labor and overhead, customer-specific engineering costs, warranty costs, royalties, provisions for inventory reserves, scrap and costs attributable to contract research and development. Gross margin was 22%, 19% and 6% in 2002, 2001 and 2000, respectively.

Gross margin in EPD was 25%, 23% and 12% in 2002, 2001 and 2000, respectively. EPD gross margin in 2002 improved slightly over 2001 due primarily to lower production costs and by a reduction in inventory provisions, partially offset by the under-absorption of manufacturing overhead due to low manufacturing volume. EPD gross margin improved from 2000 to 2001, but was tempered by high initial costs to manufacture Intevac's redesigned flat panel manufacturing systems and establishment of \$2.4 million of inventory reserves related to a cancelled order for a custom flat panel system. 2001 EPD gross margin excluding the effect of the inventory reserve would have been 29%. EPD gross margin in 2000 was negatively impacted by establishment of \$5.1 million of reserves related to slow moving equipment inventory and an \$0.8 million write-off of goodwill related to electronically swept source technology, which was acquired in 1996 and subsequently abandoned. 2000 Equipment gross margin excluding the effect of these two items would have been 32%. \$11.1 million of EPD's backlog at 12/31/02 relates to D-STAR® products that will not generate any significant gross margin. We are not able to accurately project the 2003 gross margin for the balance of the equipment business as it will vary depending on a number of factors, including, factory utilization and pricing achieved on future orders.

Gross margin in PTD was 10%, (2%) and (8%) in 2002, 2001 and 2000, respectively. PTD gross margins improved in 2002 due to a higher portion of the revenue being derived from fully funded research and development contracts. PTD gross margins in 2001 and 2000 were negatively impacted by a significant portion of revenue being derived from cost-sharing research and development contracts versus fully funded research and development contracts. We expect that 2003 PTD gross margins will improve based on the majority of revenues being derived from fully funded research and development contracts and from prototype products.

Research and development. Research and development expense consists primarily of prototype materials, salaries and related costs of employees engaged in ongoing research, design and development activities for disk manufacturing equipment, flat panel manufacturing equipment, imaging products and Company funded research performed by PTD. Research and development expense totaled \$10.8 million, \$14.5 million and \$10.6 million in 2002, 2001 and 2000, respectively, representing 32%, 28% and 29% of net revenue. The dollar decrease from 2001 to 2002 was the result of the completion during 2001 of the design activities related to development of the D-STAR®, RTP and MDP-200 platforms, partially offset by increased expenses related to the development of CID products and PTD technology and products. The dollar increase from 2000 to 2001 was primarily the result of increased expenses related to the development and redesign of flat panel

Table of Contents

manufacturing equipment and, to a lesser extent, the development of PTD technology and products. We expect that research and development expenses in 2003 will be slightly lower than in 2002 as a result of the sale of the rapid thermal processing product line, partially offset by projected increases in CID and in PTD.

Research and development expenses do not include costs of \$5.2 million, \$8.0 million and \$6.0 million in 2002, 2001 and 2000, respectively, related to PTD contract research and development, which are included in cost of net revenues. Research and development expenses also do not include costs of \$0.3 million, \$0.5 million and \$0.7 million incurred by Intevac in 2002, 2001 and 2000, respectively, and reimbursed under the terms of research and development cost sharing agreements related to development of disk and flat panel manufacturing equipment.

Selling, general and administrative. Selling, general and administrative expense consists primarily of selling, marketing, customer support, production of customer samples, financial, travel, management, liability insurance, legal and professional services and bad debt expense.

Domestic sales and international sales of disk manufacturing products in Singapore, Malaysia and Taiwan are made by the Company's direct sales force, whereas other international sales of disk manufacturing and other products are made by distributors and representatives that provide services such as sales, installation, warranty and customer support. The Company also has a subsidiary in Singapore to support customers in Southeast Asia. Through the second quarter of 2000, Intevac marketed its flat panel manufacturing equipment to the Far East through its Japanese joint venture, IMAT. During the third quarter of 2000 the Company and its joint venture partner, Matsubo, transferred IMAT's activities and employees to Matsubo, which became a distributor of the Company's flat panel products, and shut down the operations of IMAT.

Selling, general and administrative expense totaled \$7.8 million, \$6.7 million and \$4.4 million in 2002, 2001, and 2000, respectively, representing 23%, 13% and 12% of net revenue. The increase in 2002 over 2001 was primarily the result of representative commissions paid on the sale of flat panel manufacturing systems, an increase in selling, general and administrative personnel in PTD and an increase in corporate general and administrative expenses. The increase from 2000 to 2001 was primarily due to a \$1.5 million credit to bad debt expense recognized in 2000. We expect that selling, general and administrative expenses will increase in 2003 over 2002 due to an increase in marketing resources, the charge for underutilized space and higher charges for directors and officers insurance.

Restructuring and other. Restructuring and other was a gain of \$0.6 million in 2000. During the third quarter of 1999, the Company adopted an expense reduction plan that included closing one of the buildings at its Santa Clara facility and a reduction in force of 7 employees. The Company incurred a charge of \$2.2 million in 1999 related to the expense reduction plan. In the fourth quarter of 1999, \$0.1 million of the restructuring reserve was reversed due to lower than expected costs on the closure of the facility. During the first quarter of 2000, the Company vacated the building and negotiated a lease termination for that space with its landlord, which released the Company from the obligation to pay any rent after April 30, 2000. As a result, the Company reversed \$0.6 million of the restructuring reserve during the first quarter of 2000. During the third quarter of 2000, the Company completed all activities related to closing the vacated portion of the building and reversed the remaining \$23,000 of the restructuring reserve.

Interest expense. Interest expense consists primarily of interest on the convertible notes, amortization of debt issuance costs, and, to a lesser extent in 2000, interest on approximately \$2.0 million of long-term debt related to the purchase of Cathode Technology in 1996. Interest expense totaled \$3.0 million, \$2.9 million and \$3.0 million in 2002, 2001 and 2000, respectively. The increase in interest expense in 2002 over 2001 was due primarily to the write-off of \$0.5 million of debt offering costs from the original convertible note offering in 1997 as a result of the exchange of these notes for new convertible notes in July 2002. The decline in interest expense in 2001 from 2000 was primarily the result of the repurchase by Intevac of \$3.7 million of the convertible notes during 2001, and, to a lesser extent, the repayment of the Cathode Technology debt in January 2001. Interest expense on Intevac's outstanding convertible notes is expected to be \$2.1 million in 2003.

Interest income and other, net. Interest income and other, net totaled \$16.5 million, \$2.5 million and \$3.1 million in 2002, 2001 and 2000, respectively. Interest income and other, net in 2002 consisted of

Table of Contents

\$0.3 million of interest income on investments, a \$15.4 million gain on the sale of the rapid thermal processing product line, a \$0.3 million gain on the sale of fixed assets, \$0.4 million of dividends from 601 California Avenue LLC and \$0.1 million of early payment discounts and other income. Interest income and other, net in 2001 consisted of \$1.2 million of interest income on investments, a \$1.4 million gain from the repurchase of Intevac's convertible notes, \$0.4 million of dividends from 601 California Avenue LLC, a \$0.8 million loss on the disposition of Pacific Gas and Electric commercial paper and \$0.3 million of early payment discounts and other income. Interest income and other, net in 2000 consisted of \$2.3 million of interest income on investments, \$0.4 million of dividends from in 601 California Avenue LLC, \$0.2 million of gains on foreign currency forward contracts and \$0.2 million of early payment discounts and other income.

Provision for (benefit from) income taxes. In 2002, Intevac recorded an income tax benefit of \$6.6 million. This resulted from the enactment of the Job Creation and Worker Assistance Act of 2002 which increased the length of time, from 2 years to 5 years, over which losses incurred in 2001 and 2002 could be carried back against taxes paid in prior years. We paid federal income taxes of approximately \$5.2 million for 1996, \$0.9 million for 1997 and \$0.5 million for 1998. Our federal tax returns, and any refunds resulting from them, are subject to audit for 3 years from the date filed. Intevac's net deferred tax asset totaled zero at December 31, 2002, net of a \$12.1 million valuation allowance. We have substantial net operating loss carry-forwards which can be used to limit the taxes paid in the future and to reduce our effective tax rate to less than the statutory income tax rates in effect.

In 2001, Intevac recorded \$5.0 million of income tax expense to provide additional valuation allowance against deferred tax assets. Our net deferred tax assets totaled zero at December 31, 2001, net of a \$19.2 million valuation allowance established due to the uncertainty of realizing certain tax credits, loss carry-forwards and other deferred tax assets.

Intevac's estimated effective tax rate for 2000 was 0%. We did not accrue a tax benefit during 2000 due to the inability to realize additional refunds from loss carry-backs.

Liquidity and Capital Resources

Intevac's operating activities provided cash of \$0.9 million in 2002. The cash provided was primarily a result of the operating loss being more than offset by a refund of federal income taxes paid in prior years, depreciation and amortization. Operating activities in 2001 used cash of \$11.8 million, primarily due to the net loss incurred, which was partially offset by depreciation, amortization and an increase in the valuation allowance against deferred tax assets. Operating activities in 2000 generated cash of \$22,000, primarily as a result of the net loss incurred being offset by an increase in customer advances, a refund of federal income taxes paid in prior years, depreciation and amortization.

Investing activities in 2002 provided cash of \$16.8 million as a result of the sale of the rapid thermal processing product line and the sale of equipment, which was partially offset by the purchase of fixed assets. Investing activities in 2001 provided cash of \$28.9 million as a result of the net sale of investments, which was partially offset by the purchase of fixed assets. Investing activities in 2000 provided cash of \$0.8 million as a result of the net sale of investments, which was partially offset by the purchase of fixed assets.

Intevac's financing activities used cash of \$7.4 million in 2002, primarily as a result of the exchange of most of our convertible notes due 2004 for new convertible notes due 2009 and cash. On July 12, 2002 we completed the exchange of \$36.3 million in aggregate principal amount of our convertible notes due 2004 for \$29.5 million of our new 6 1/2% Convertible Subordinated Notes due 2009 and \$7.6 million in cash, including \$0.9 million for accrued interest. Sales of Intevac's common stock to its employees through our employee benefit plans provided cash of \$0.3 million. Financing activities in 2001 used cash of \$3.7 million, due to the repurchase of a portion of the convertible notes and the repayment of the Cathode Technology debt, partially offset by the sale of Intevac's stock to employees under its employee benefit plans. Financing activities in 2000 provided cash of \$0.5 million from the sale of Intevac's stock to employees under its employee benefit plans.

At December 31, 2002, Intevac had \$28.5 million of cash and cash equivalents. Intevac intends to undertake approximately \$3 million in capital expenditures during the next 12 months and believes the

Table of Contents

existing cash and cash equivalent balances will be sufficient to meet its cash requirements for the next twelve months.

Intevac has incurred operating losses each year since 1998 and cannot predict with certainty when it will return to operating profitability. 2003 operating profitability and cash flow are contingent upon a number of factors, but in particular on the receipt by the Equipment Products Division of large multi-system disk manufacturing equipment orders deliverable for revenue in 2003. While the Company is forecasting the receipt of these orders in 2003, it is not able to accurately predict when, or if, its Equipment Products Division will actually receive these orders. Without the receipt of substantial equipment orders deliverable for revenue during 2003, the Company is likely to incur an operating loss and consume a significant portion of its cash during 2003.

Item 7A. *Quantitative and Qualitative Disclosure About Market Risk*

Interest rate risk. The table below presents principal amounts and related weighted-average interest rates by year of maturity for the Company's debt obligations.

	2003	2004	2005	2006	2007	Beyond	Total	Fair Value
(dollars in thousands)								
Long-term debt								
Fixed rate	—	\$1,025	—	—	—	\$29,543	\$30,568	\$23,449
Average rate	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%		

Foreign exchange risk. From time to time, the Company enters into foreign currency forward exchange contracts to hedge anticipated foreign currency transaction, translation and re-measurement exposures. The objective of these contracts is to minimize the impact of foreign currency exchange rate movements on the Company's operating results. At December 31, 2002, the Company did not have any foreign currency forward exchange contracts.

Table of Contents**Item 8. Financial Statements and Supplementary Data****INTEVAC, INC.****CONSOLIDATED FINANCIAL STATEMENTS****Contents**

	Page
Report of Grant Thornton LLP, Independent Auditors	31
Consolidated Balance Sheets	32
Consolidated Statements of Operations and Comprehensive Income	33
Consolidated Statement of Shareholders' Equity	34
Consolidated Statements of Cash Flows	35
Notes to Consolidated Financial Statements	36

30

Table of Contents

REPORT OF GRANT THORNTON LLP, INDEPENDENT AUDITORS

The Board of Directors and Shareholders
Intevac, Inc.

We have audited the accompanying consolidated balance sheets of Intevac, Inc. as of December 31, 2002 and 2001 and the related consolidated statements of operations and comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2002. Our audits also included the data in the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Intevac, Inc. at December 31, 2002 and 2001, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2002, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the data in the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

Grant Thornton LLP

San Jose, California
January 29, 2003

Table of Contents

INTEVAC, INC.

CONSOLIDATED BALANCE SHEETS
(In thousands)

	December 31,	
	2002	2001
ASSETS		
Current assets:		
Cash and cash equivalents	\$28,457	\$ 18,157
Trade and other accounts receivable, net of allowances of \$269 and \$225 at December 31, 2002 and 2001	4,991	8,046
Income taxes recoverable	214	—
Inventories, including \$9,914 and \$4,070 held at customer locations at December 31, 2002 and 2001	15,871	21,691
Prepaid expenses and other current assets	961	478
	<hr/>	<hr/>
Total current assets	50,494	48,372
Property, plant and equipment, at cost:		
Leasehold improvements	5,751	5,873
Machinery and equipment	16,216	21,096
	<hr/>	<hr/>
	21,967	26,969
Less accumulated depreciation and amortization	15,174	18,105
	<hr/>	<hr/>
	6,793	8,864
Investment in 601 California Avenue LLC	2,431	2,431
Debt issuance costs, net of amortization of \$2,482 and \$1,808 at December 31, 2002 and 2001	577	495
Other long term assets	3	3
	<hr/>	<hr/>
Total assets	\$60,298	\$ 60,165
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Book overdraft	\$ 459	\$ 242
Accounts payable	1,280	2,386
Accrued payroll and related liabilities	1,379	1,573
Other accrued liabilities	3,723	3,547
Customer advances	12,344	13,464
	<hr/>	<hr/>
Total current liabilities	19,185	21,212
Convertible notes	30,568	37,545
Commitments	—	—
Shareholders' equity:		
Undesignated preferred stock, no par value, 10,000 shares authorized, no shares issued and outstanding	—	—
Common stock, no par value:		
Authorized shares — 50,000		
Issued and outstanding shares – 12,125 and 12,004 at December 31, 2002 and 2001, respectively	19,389	19,093
Accumulated other comprehensive income	189	122
Accumulated deficit	(9,033)	(17,807)
	<hr/>	<hr/>
Total shareholders' equity	10,545	1,408
	<hr/>	<hr/>
Total liabilities and shareholders' equity	\$60,298	\$ 60,165
	<hr/>	<hr/>

See accompanying notes.

Table of Contents

INTEVAC, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(In thousands, except per share amounts)

	Years Ended December 31,		
	2002	2001	2000
Net revenues:			
Systems and components	\$ 27,625	\$ 43,599	\$ 30,254
Technology development	6,159	7,885	5,795
	<hr/>	<hr/>	<hr/>
Total net revenues	33,784	51,484	36,049
Cost of net revenues:			
Systems and components	20,009	30,025	20,658
Technology development	5,150	7,988	6,022
Goodwill write-off	—	—	1,056
Inventory provisions	1,316	3,716	6,323
	<hr/>	<hr/>	<hr/>
Total cost of net revenues	26,475	41,729	34,059
Gross profit	7,309	9,755	1,990
Operating expenses:			
Research and development	10,846	14,478	10,576
Selling, general and administrative	7,752	6,745	4,415
Restructuring and other	—	—	(638)
	<hr/>	<hr/>	<hr/>
Total operating expenses	18,598	21,223	14,353
Operating loss	(11,289)	(11,468)	(12,363)
Interest expense	(2,981)	(2,912)	(3,033)
Interest income	284	1,245	2,341
Other income and expense, net	16,168	1,228	731
	<hr/>	<hr/>	<hr/>
Income (loss) before income taxes	2,182	(11,907)	(12,324)
Provision for (benefit from) income taxes	(6,592)	5,029	—
	<hr/>	<hr/>	<hr/>
Net income (loss)	\$ 8,774	\$(16,936)	\$(12,324)
	<hr/>	<hr/>	<hr/>
Other comprehensive income:			
Foreign currency translation adjustments	67	122	—
	<hr/>	<hr/>	<hr/>
Total adjustments	67	122	—
	<hr/>	<hr/>	<hr/>
Total comprehensive income (loss)	\$ 8,841	\$(16,814)	\$(12,324)
	<hr/>	<hr/>	<hr/>
Basic income (loss) per share:			
Net income (loss)	\$ 0.73	\$ (1.42)	\$ (1.04)
Shares used in per share amounts	12,077	11,955	11,803
Diluted income (loss) per share:			
Net income (loss)	\$ 0.66	\$ (1.42)	\$ (1.04)
Shares used in per share amounts	15,262	11,955	11,803

See accompanying notes.

Table of Contents

INTEVAC, INC.

CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY
(In thousands)

	Common Stock		Accumulated Other Comprehensive Income	Retained Earnings (Accum. Deficit)	Total Shareholders' Equity
	Shares	Amount			
Balance at January 1, 2000	11,715	\$18,170	\$ —	\$ 11,453	\$ 29,623
Shares issued in connection with:					
Exercise of stock options	20	58	—	—	58
Employee stock purchase plan	109	418	—	—	418
Income tax benefits realized from activity in employee stock plans	—	29	—	—	29
Net loss	—	—	—	(12,324)	(12,324)
Balance at December 31, 2000	11,844	\$18,675	\$ —	\$ (871)	\$ 17,804
Shares issued in connection with:					
Exercise of stock options	41	13	—	—	13
Employee stock purchase plan	119	405	—	—	405
Foreign currency translation adjustment	—	—	122	—	122
Net loss	—	—	—	(16,936)	(16,936)
Balance at December 31, 2001	12,004	\$19,093	\$122	\$ (17,807)	\$ 1,408
Shares issued in connection with:					
Exercise of stock options	13	19	—	—	19
Employee stock purchase plan	108	273	—	—	273
Compensation expense in the form of common stock	—	4	—	—	4
Foreign currency translation adjustment	—	—	67	—	67
Net income	—	—	—	8,774	8,774
Balance at December 31, 2002	12,125	\$19,389	\$189	\$ (9,033)	\$ 10,545

See accompanying notes.

Table of Contents

INTEVAC, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ending December 31,		
	2002	2001	2000
Operating activities			
Net income (loss)	\$ 8,774	\$(16,936)	\$ (12,324)
Adjustments to reconcile net income (loss) to net cash and cash equivalents provided by (used in) operating activities:			
Depreciation	2,577	3,916	3,721
Deferred income taxes	—	4,988	2,734
Amortization of intangibles	—	7	1,042
Amortization of debt offering costs	672	244	244
Goodwill write-off	—	—	1,056
Inventory provisions	1,316	3,716	6,323
Gain on sale of Rapid Thermal Processing product line	(15,428)	—	—
Gain on sale of equipment	(324)	—	—
Gain on purchase of convertible notes	(23)	(1,408)	—
Compensation expense in the form of common stock	4	—	—
Loss on IMAT investment	—	—	125
Restructuring and other charges — non-cash portion	—	—	856
Loss on disposal of investment	—	803	—
Loss on disposal of equipment	13	8	2
Changes in assets and liabilities:			
Accounts receivable	2,264	1,547	1,614
Inventory	3,359	(7,252)	(6,666)
Prepaid expenses and other assets	(492)	366	(332)
Accounts payable	(1,107)	443	929
Accrued payroll and other accrued liabilities	335	639	(5,768)
Customer advances	(1,120)	(2,853)	6,466
Total adjustments	<u>(7,954)</u>	<u>5,164</u>	<u>12,346</u>
Net cash and cash equivalents provided by (used in) operating activities	820	(11,772)	22
Investing activities			
Purchase of investments	—	(5,463)	(116,271)
Proceeds from sales and maturities of investments	—	38,447	120,084
Net proceeds from sale of Rapid Thermal Processing product line	17,780	—	—
Proceeds from sale of equipment	535	—	—
Purchase of equipment	(1,480)	(4,050)	(2,990)
Net cash and cash equivalents provided by investing activities	16,835	28,934	823
Financing activities			
Proceeds from issuance of common stock	292	418	476
Repurchase of Intevac convertible notes	(225)	(2,257)	—
Exchange of Intevac convertible notes due 2004	(7,483)	—	—
Repayment of notes payable	—	(1,904)	—
Net cash and cash equivalents provided by (used in) financing activities	(7,416)	(3,743)	476
Effect of exchange rate changes on cash	<u>61</u>	<u>122</u>	<u>—</u>
Net increase in cash and cash equivalents	10,300	13,541	1,321
Cash and cash equivalents at beginning of period	<u>18,157</u>	<u>4,616</u>	<u>3,295</u>
Cash and cash equivalents at end of period	<u>\$ 28,457</u>	<u>\$ 18,157</u>	<u>\$ 4,616</u>
Cash paid (received) for:			
Interest	\$ 2,456	\$ 2,715	\$ 2,789
Income taxes	2	2	2

Income tax refund	(6,369)	—	(5,803)
Other non-cash changes:			
Inventories transferred to (from) property, plant and equipment	\$ (514)	\$ (2,322)	\$ 304
Exchange of \$36.3M of convertible notes due 2004 for \$29.5M of convertible notes 2009 (exchange completed July 2002)	—	—	—
Income tax benefit realized from activity in employee stock plans	—	—	29

See accompanying notes.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Business and Nature of Operations

Intevac, Inc.'s businesses are the design, manufacture and sale of complex capital equipment used to manufacture products such as thin-film disks and flat panel displays (the "Equipment Products Division"), the development of highly sensitive electro-optical devices and systems for the US military and its allies (the "Photonics Technology Division") and the design, manufacture and sale of commercial products based on technology developed by the Photonics Technology Division (the "Commercial Imaging Division").

Systems sold by the Equipment Products Division are used to deposit highly engineered thin-films of material on a substrate. These systems generally utilize proprietary manufacturing techniques and processes, operate under high levels of vacuum, are designed for high-volume continuous operation and use precision robotics, computerized controls and complex software programs to fully automate and control the production process. Products manufactured with these systems include disks for computer hard disk drives and flat panel displays for use in consumer electronics products.

The Photonics Technology Division is developing electro-optical sensors, cameras and systems that permit highly sensitive detection of photons in the visible and infrared portions of the spectrum. This development work is aimed at creating new products for both military and industrial applications. Products include Laser Illuminated Viewing and Ranging ("LIVAR®") systems for positive target identification at long range and low-cost extreme low light level cameras for use in military applications.

The Commercial Imaging Division was formed in July 2002 with the charter of developing products based on PTD technology for sale to commercial markets.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Intevac and its wholly owned subsidiaries. All inter-company transactions and balances have been eliminated.

Revenue Recognition

We recognize revenue using guidance from SEC Staff Accounting Bulletin No. 101 "Revenue Recognition in Financial Statements." Our policy allows revenue recognition when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the seller's price is fixed or determinable, and collectibility is reasonably assured. On January 1, 2003, Intevac changed its revenue recognition policy for system orders received after 2002.

System Revenue Recognition for Orders Received Before 12/31/02

Revenues for systems are recognized upon customer acceptance. For large deposition and rapid thermal processing systems shipped through a distributor, revenue is typically recognized after the distributor has accepted the system at our factory and the system has been shipped. For large deposition and rapid thermal processing systems sold direct to end customers, revenue is recognized after installation and acceptance of the system at the customer site.

There is a written acceptance and test procedure ("ATP") for each system, which is specified in the customer purchase order. The ATP includes a detailed set of criteria that are required as a condition of customer acceptance. The ATP is typically conducted over one or more days during which the system is subjected to a number of tests to validate that the system is performing in a repeatable fashion, reliably and to specification. If material issues or problems are discovered during the ATP process, then they are corrected prior to customer acceptance.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In the case of a direct end user sale, there are typically two ATP's performed. The first ATP is performed at Intevac's factory and must be approved by the customer prior to shipment of the system. The second ATP is performed after the system has been installed at the customer's factory, again with the customer in attendance. Once the second ATP is approved by the customer, and the customer has accepted the system in writing and agreed to make any remaining payments due on the system, then the system is recognized as a sale and revenue for the entire system is recorded.

In the case of a shipment through a distributor, an ATP is performed at Intevac's factory. Upon completion of the ATP, and after the distributor has accepted the system in writing and agreed to make any remaining payments due on the system, then the system is shipped and revenue for the entire system is recorded. The distributor then completes customer factory installation and the ATP at its cost. When we believe that there may be higher than normal end-user installation and acceptance issues for systems shipped through a distributor, such as when a major new version of a product is delivered for the first time, then the acceptance and revenue recognition process follows the model described above for a direct end user sale. The primary difference in this case is that revenue recognition is dependent on the Company obtaining acceptance of the product by both its customer (the distributor) and its distributor's customer (the end user).

During the period that a system is undergoing customer acceptance (either distributor or end user), the value of the system remains in inventory and any payments received, or amounts invoiced, related to the system are included in customer advances. When revenue is recognized on the system, the inventory is charged to cost of net revenues, the customer advance is liquidated and the customer is billed for the unpaid balance of the system revenue.

As of December 31, 2002 the Company reported \$9.9 million of finished goods which consisted of five capacity upgrades to Flat Panel Display ("FPD") deposition systems undergoing final acceptance testing at the end user's facility and a FPD silicon deposition system undergoing final acceptance testing at the end user's facility. Taken as a whole, the above systems represent \$10.9 million of the Company's \$18.2 million order backlog, and \$9.8 million of the Company's \$12.3 million of customer advances.

System Revenue Recognition for Orders Received After 12/31/02

Certain of Intevac's product sales with customer acceptance provisions are accounted for as multiple-element arrangements. If the Company has met previously defined customer acceptance experience levels with the specific type of equipment, then Intevac recognizes revenue for the fair market value of the equipment upon shipment and transfer of title and recognizes revenue for the fair market value of installation and acceptance services when those services are completed. For products that have not been demonstrated to meet product specifications prior to shipment, revenue is recognized at customer acceptance. In the event that Intevac's customer chooses not to complete installation and acceptance, and Intevac's obligations under the contract to complete installation, acceptance or any other tasks (with the exception of warranty obligations) have been fully discharged, then Intevac recognizes any remainder revenue to the extent that collectibility under the contract is reasonably assured. For contracts with end user customer acceptance provisions established prior to 2003, Intevac has deferred all revenue recognition until completion of installation and customer acceptance. The revenue recognition policy outlined above and implemented for system orders received after December 31, 2002 was made to better conform Intevac's revenue recognition policies to industry accounting practice for companies selling similar equipment. The effect of adopting this policy in years prior to 2003 would have been no change in 2002 revenues, a decrease in 2001 revenues of \$1.5 million and an increase of 2000 revenues of \$1.5 million. The effect on net income of adopting this policy in years prior to 2003 would have been no effect in 2002 net income, a decrease in 2001 net income of \$33,000 and an increase in 2000 net income of \$33,000.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Other Systems and non-System Revenue Recognition

Revenues for systems without installation and acceptance provisions, technology upgrades, spare parts, consumables and prototype products built by PTD are generally recognized upon shipment. Service and maintenance contract revenue, which to date has been insignificant, is recognized ratably over applicable contract periods or as the service is performed.

Our shipping terms are customarily FOB shipping point. For systems sold directly to the end user, our obligations remaining after shipment typically include installation, end user factory acceptance and warranty. For systems sold to distributors, typically the distributor assumes responsibility for installation and end user customer acceptance. In some cases, the distributor will assume some or all of the warranty liability. For products other than systems and system upgrades, warranty is typically the only obligation we have after shipment.

Technology Development Revenue Recognition

We perform best efforts research and development work under various government-sponsored research contracts. Typically, for each contract, we commit to perform certain research and development efforts up to an agreed upon amount. In connection with these contracts, we receive funding on an incremental basis up to a ceiling. Some of these contracts are cost sharing in nature, where Intevac is reimbursed for a portion of the total costs expended. Revenue on these contracts is recognized in accordance with contract terms, typically as costs are incurred. In addition, we have, from time to time, negotiated with a third party to fund a portion of our costs in return for a joint interest to our rights at the end of the contract. In the event that a particular contract overruns its agreed upon amount, we may be liable for the additional costs.

These contracts are accounted for under ARB No. 43, Chapter 11, Section A, which addresses Cost-Plus-Fixed-Fee Contracts. The contracts are all cost-type, with financial terms that are a mixture of fixed fee, incentive fee, no fee and cost-sharing. The deliverables under each contract range from reports to prototype hardware. In none of the contracts is there an obligation for either party to continue the program once the funds have been expended. The efforts can be terminated at any time for convenience, in which case we would be reimbursed for our actual incurred costs, plus fee, if applicable, for the completed effort. We own the entire right, title and interest to each invention discovered under the contract, unless we specifically give up that right. The US Government has a paid-up license to use any invention/intellectual property for government purposes only.

Trade Receivables and Doubtful Accounts

The Company evaluates the collectibility of trade receivables on an ongoing basis and provides reserves against potential losses when appropriate.

Warranty

The Company's standard warranty is twelve months from customer acceptance. During this warranty period any necessary non-consumable parts are supplied and installed. A provision for the estimated warranty cost is recorded when revenue is recognized.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table displays the activity in the warranty provision account for 2002 and 2001:

	2002	2001
	(in thousands)	
Beginning balance	\$ 906	\$ 745
Expenditures incurred under warranties	(794)	(623)
Accruals for product warranties issued during the reporting period	410	769
Adjustments to previously existing warranty accruals	323	15
 Ending balance	 \$ 845	 \$ 906

International Distribution Costs

The Company makes payments to agents and representatives under agreements related to international sales in return for obtaining orders and providing installation and warranty services. These payments to agents and representatives are included in selling, general and administrative expenses. These amounts totaled approximately \$300,000, \$141,000 and \$0 for the years ended December 31, 2002, 2001 and 2000, respectively.

Customer Advances

Customer advances generally represent nonrefundable deposits invoiced by the Company in connection with receiving customer purchase orders and other events preceding acceptance of systems. Customer advances related to products that have not been shipped to customers, and included in accounts receivable were \$0 and \$857,000 at December 31, 2002 and 2001, respectively.

Cash, Cash Equivalents and Short-term Investments

The Company considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents.

Short-term investments consist principally of highly rated debt instruments with maturities generally between one and twelve months and are carried at fair value. These investments are typically short-term in nature and therefore bear minimal interest rate risk.

Management determines the appropriate classification of debt securities at the time of purchase and reevaluates such designation as of each balance sheet date. All debt securities are classified as available-for-sale under Statement of Financial Accounting Standards No. 115 "Accounting for Certain Investments in Debt and Equity Securities." Securities classified as available-for-sale are reported at fair market value with the related unrealized gains and losses included in retained earnings. Realized gains and losses and declines in value judged to be other-than-temporary on available-for-sale securities are included in other income and expenses. The cost of securities sold is based on the specific identification method.

Cash and cash equivalents represent cash accounts and money market funds.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Valuation of Long-lived and Intangible Assets and Goodwill

We assess the impairment of identifiable intangibles, long-lived assets and goodwill whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include the following:

- significant underperformance relative to expected historical or projected future operating results;
- significant changes in the manner of our use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period; and
- our market capitalization relative to net book value.

When we determine that the carrying value of long-lived assets, intangibles or goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we measure any impairment based on a projected discounted cash flow method using a discount rate determined by our management to be commensurate with the risk inherent in our current business model. In 2000, Intevac determined that the intangible assets related to the purchase of Cathode Technology Corporation and Lotus Technologies, Inc. had become impaired. This determination was based on a review of the future revenue expected from products based on these technologies. At December 31, 2000 the remaining goodwill related to those purchases, amounting to \$1,056,000, was written off. Of this write-off, \$818,000 is included in the Equipment Products business segment and \$238,000 is included in Corporate activities.

Foreign Exchange Contracts

Intevac may enter into foreign currency forward exchange contracts to hedge certain of its foreign currency transaction, translation and re-measurement exposures. Our accounting policies for some of these instruments are based on our designation of such instruments as hedging transactions. Instruments not designated as a hedge transaction will be “marked to market” at the end of each accounting period. The criteria we use for designating an instrument as a hedge include effectiveness in exposure reduction and one-to-one matching of the derivative financial instrument to the underlying transaction being hedged. Gains and losses on foreign currency forward exchange contracts that are designated and effective as hedges of existing transactions are recognized in income in the same period as losses and gains on the underlying transactions are recognized and generally offset.

During fiscal 2000 Intevac entered into yen denominated foreign currency forward exchange contracts to hedge anticipated yen denominated sales. We did not designate these foreign currency forward contracts as hedge transactions; therefore, the contracts were “marked to market.” In fiscal 2000 we realized gains of \$111,000 related to foreign currency forward exchange contracts. As of December 31, 2002, Intevac had no foreign currency forward exchange contracts outstanding.

Financial Instruments

The carrying amount of the short-term financial instruments (cash and cash equivalents, short-term investments, accounts receivable and certain other liabilities) approximates fair value due to the short-term maturity of those instruments. Based on the quoted market prices for the same or similar issues or on the current rates offered for debt of the same remaining maturities, the fair value of the \$30.6 million of outstanding convertible notes as of December 31, 2002 is \$23.4 million.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Inventories

Inventories for systems and components are stated at the lower of cost or market. Inventories consist of the following:

	December 31,	
	2002	2001
(in thousands)		
Raw materials	\$ 3,329	\$ 5,659
Work-in-progress	2,628	11,962
Finished goods	9,914	4,070
	<hr/>	<hr/>
	\$15,871	\$21,691
	<hr/>	<hr/>

Finished goods inventory consists solely of completed systems at customer sites that are undergoing installation and acceptance testing.

Inventory reserves included in the above numbers were \$9.6 million and \$12.7 million at December 31, 2002 and December 31, 2001, respectively. Each quarter, we analyze our inventory (raw materials, WIP and finished goods) against the forecast demand for the next 12 months. Parts with no forecast requirements in that period are considered excess and inventory provisions are established to write those parts down to zero net book value. During this process, some inventory is identified as having no future use or value to us and is disposed of against the reserves.

During the twelve months ended December 31, 2002, \$1.3 million was added to inventory reserves based on the quarterly analysis and \$4.2 million of inventory was disposed of and charged to the reserve. Most of the disposed inventory related to two MDP 250K Disk Sputtering systems that had been written down to estimated salvage value in 2000. Inventory reserves were further reduced by \$0.2 million due to the sale of the rapid thermal processing product line.

During the twelve months ended December 31, 2001, \$3.7 million was added to inventory reserves based on the quarterly analysis and \$0.7 million of inventory was disposed of and charged to the reserve. The major increase in inventory reserves was the establishment of a \$2.4 million reserve related to a cancelled order for a custom flat panel system. The system was written down to the value that was recoverable if the system could be reconfigured for a different customer. Inventory reserves increased by an additional \$0.9 million when a customer cancelled an order for a disk manufacturing system and forfeited its customer advance. The forfeited advance was applied to the inventory made excess by the cancelled order.

Property, Plant and Equipment

Equipment and leasehold improvements are carried at cost less allowances for accumulated depreciation and amortization. Gains and losses on dispositions are reflected in the consolidated statements of operations.

Depreciation for machinery and equipment is computed using the straight-line method over the estimated useful lives of the assets, which are generally three to seven years. Amortization of leasehold improvements is computed using the shorter of the remaining terms of the leases or the estimated economic useful lives of the improvements.

Intangible Assets

Intevac amortizes intangible assets on a straight-line basis over the estimated useful lives, which range from two to seven years.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Comprehensive Income

SFAS No. 130, "Reporting Comprehensive Income" requires unrealized gains or losses on our available-for-sale securities and the foreign currency translation adjustments, which prior to the adoption were reported separately in shareholders' equity, to be included in other comprehensive income. As of December 31, 2002, the \$189,000 balance of accumulated other comprehensive income is comprised entirely of accumulated foreign currency translation adjustments.

Employee Stock Plans

At December 31, 2002, Intevac had two stock-based employee compensation plans, which are described more fully in Note 11. We account for those plans under the recognition and measurement principles of APB Opinion No. 25, "Accounting for Stock Issued to Employees", and related Interpretations. No stock-based employee compensation cost is reflected in net income, as all options granted under those plans had an exercise price equal to the market value of the underlying common stock on the date of grant. Intevac does not have any plans to adopt the fair value requirements of SFAS 123 for reporting purposes.

Pro forma information regarding net income and earnings per share is required by SFAS 123, which also requires that the information be determined as if we had accounted for our employee stock options granted subsequent to December 31, 1994 under the fair value method of this Statement. The fair value for these options was estimated at the date of grant using a Black-Scholes multiple option pricing model with the following weighted average assumptions for 2002, 2001 and 2000, respectively: risk-free interest rates of 1.64%, 3.03% and 5.17%; dividend yields of 0.0%, 0.0% and 0.0%; volatility factors of the expected market price of Intevac's common stock of 0.933, 0.946 and 0.936; and a weighted-average expected life of the option of 0.25, 0.25 and 0.25 years beyond each respective vesting period.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option models require the input of highly subjective assumptions including the expected stock price volatility. Because Intevac's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

Under the 1995 Employee Stock Purchase Plan, as amended in 1999, (the "ESPP"), Intevac is authorized to issue up to 1,000,000 shares of common stock to participating employees. Under the terms of the ESPP, employees can choose to have up to 10% of their annual base earnings withheld to purchase Intevac's common stock. The purchase price of the stock is 85% of the lower of the subscription date fair market value or the purchase date fair market value. Under the ESPP, we sold 108,020, 118,904 and 108,784 shares to employees in 2002, 2001 and 2000, respectively. As of December 31, 2002, 185,946 shares remained reserved for issuance under the ESPP. We do not recognize compensation cost related to employee purchase rights under the plan. To comply with the pro forma reporting requirements of SFAS 123, compensation cost is estimated for the fair value of the employees' purchase rights using the Black-Scholes model with the following assumptions for those rights granted in 2002, 2001 and 2000, respectively: risk-free interest rates of 1.12%, 1.93% and 5.36%; dividend yield of 0.0%, 0.0% and 0.0%; expected volatility of 0.933, 0.946 and 0.936; and an expected life of 1.50, 2.00 and 2.00 years (the offering period ends July 31, 2003 for the subscription period that began in February 2002). The weighted average fair value of those purchase rights granted in 2002, 2001 and 2000 1999 were \$1.71, \$2.47 and \$2.78, respectively per share.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table illustrates the effect on net income and earnings per share if Intevac had applied the fair value-recognition provisions of FASB Statement No. 123, "Accounting for Stock-Based Compensation", to stock-based employee compensation.

	2002	2001	2000
	(in thousands, except per share data)		
Net income (loss), as reported	\$8,774	\$(16,936)	\$(12,324)
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(157)	(895)	(819)
Pro forma net income (loss)	\$8,617	\$(17,831)	\$(13,143)
Earnings per share			
Basic — as reported	\$ 0.73	\$ (1.42)	\$ (1.04)
Basic — pro forma	\$ 0.71	\$ (1.49)	\$ (1.11)
Diluted — as reported	\$ 0.66	\$ (1.42)	\$ (1.04)
Diluted — pro forma	\$ 0.65	\$ (1.49)	\$ (1.11)

Financial Presentation

Certain prior year amounts in the Consolidated Financial Statements have been reclassified to conform to 2002 presentation.

Net income (loss) per share

The following table sets forth the computation of basic and diluted loss per share:

	2002	2001	2000
	(in thousands)		
Numerator:			
Numerator for basic loss per share — income (loss) available to common stockholders	\$ 8,774	\$(16,936)	\$(12,324)
Effect of dilutive securities:			
6 1/2% convertible notes(1)	1,338	—	—
Numerator for diluted earnings per share — income (loss) available to common stockholders after assumed conversions	\$10,112	\$(16,936)	\$(12,324)
Denominator:			
Denominator for basic earnings per share — weighted-average shares	12,077	11,955	11,803
Effect of dilutive securities:			
Employee stock options(2)	137	—	—
6 1/2% convertible notes(1)	3,048	—	—
Dilutive potential common shares	3,185	—	—
Denominator for diluted earnings per share — adjusted weighted-average shares and assumed conversions	15,262	11,955	11,803

INTEVAC, INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

-
- (1) Diluted EPS for the twelve-month periods ended December 31, 2001 and 2000 excludes “as converted” treatment of the convertible notes, as their inclusion would be anti-dilutive. The number of “as converted” shares excluded from the twelve-month periods ended December 31, 2001 and 2000 was 1,954,910 and 1,999,758, respectively.
 - (2) Potentially dilutive securities, consisting of shares issuable upon exercise of employee stock options, are excluded from the calculation of diluted EPS as their effect would be anti-dilutive. The weighted average number of employee stock options excluded from the twelve-month periods ended December 31, 2002, 2001 and 2000 was 1,328,278, 1,637,268, and 1,474,961, respectively.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results inevitably will differ from those estimates, and such differences may be material to the financial statements.

New Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board (“FASB”) issued Statement of Financial Accounting Standards (“SFAS”) No. 143, “Accounting for Asset Retirement Obligations.” SFAS 143 requires that asset retirement obligations that are identifiable upon acquisition and construction, and during the operating life of a long-lived asset be recorded as a liability using the present value of the estimated cash flows. A corresponding amount would be capitalized as part of the asset’s carrying amount and amortized to expense over the asset’s useful life. Intevac will adopt the provisions of SFAS 143 effective January 1, 2003. We do not expect the adoption of this statement to have a material impact on our financial statements.

In July 2002, FASB issued SFAS No. 146, “Accounting for Costs Associated with Exit or Disposal Activities” which supercedes EITF No. 94-3, “Liability Recognition for Certain Employment Termination Benefits and Other Costs to Exit an Activity.” SFAS 146 requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred, whereas EITF No. 94-3 had recognized the liability at the commitment date to an exit plan. Adoption of this standard is effective for exit or disposal activities that are initiated after December 31, 2002. We do not expect the impact of the adoption of this statement to have a material impact on our financial statements.

In November 2002, the Emerging Issues Task Force (“EITF”) issued EITF 00-21 “Revenue Arrangements with Multiple Deliverables.” EITF 00-21 prescribes a method to account for contracts that have multiple elements or deliverables. It provides guidance on how to allocate the value of a contract to its different deliverables, as well as guidance on when to recognize revenue allocated to each deliverable over its performance period. The provisions of EITF 00-21 will apply to revenue arrangements entered into in the fiscal periods beginning after June 15, 2003. We do not expect the adoption of EITF No. 00-21 to have a material impact on our financial statements.

3. Concentrations*Credit Risk and Significant Customers*

Financial instruments that potentially subject Intevac to significant concentrations of credit risk consist of cash equivalents, short-term investments, accounts receivable and foreign exchange forward contracts. We generally invests our excess cash in money market funds and in commercial paper, which have contracted maturities generally within one year. By policy, our investments in commercial paper, certificates of deposit,

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Eurodollar time deposits, or banker's acceptances are rated A1/ P1 or better. In 2001, Intevac recorded a loss of \$803,000 on its investment in commercial paper issued by Pacific Gas & Electric.

Our largest customers tend to change from period to period. Historically, a significant portion of Intevac's revenues in any particular period have been attributable to sales to a limited number of customers. In 2002, three customers accounted for 42%, 21%, and 11%, respectively, of our consolidated revenues and in aggregate accounted for 74% of net revenues. In 2001, one customer accounted for 49% of our consolidated net revenues. In 2000, four customers accounted for 17%, 16%, 12% and 11%, respectively, of our consolidated revenues and in aggregate accounted for 56% of net revenues. Intevac performs credit evaluations of its customers' financial conditions and requires deposits on system orders but does not generally require collateral or other security to support customer receivables.

Products

Disk manufacturing and flat panel manufacturing equipment together contributed a significant portion of our revenues in 2002 and 2001, while disk manufacturing equipment alone contributed a significant portion of our revenues in 2000. We expect that our ability to maintain or expand our current levels of revenues and to return to operating profitability in the future will depend upon our success in enhancing our existing systems and developing and manufacturing competitive disk manufacturing equipment and our success in developing both military and commercial products based on our LIVAR® and low light technology.

4. Sale of Rapid Thermal Processing Product Line

In the fourth quarter of 2002, Intevac sold its Rapid Thermal Processing product line to Photon Dynamics, Inc. ("PDI") for \$20 million cash and the assumption of certain liabilities. \$2 million of the cash payment will be held in escrow for one year, and is not included in total assets on the consolidated balance sheet as of December 31, 2002, due to the contingencies related to the release of these funds from escrow. Release of the escrow at the end of this period is subject to a number of conditions. In connection with this sale, we recorded a gain of \$15.4 million, which is included in other income and expense, net on the Consolidated Statement of Operations. The following table recaps the gain from the sale and the effect on Intevac's balance sheet (in thousands):

Cash received from PDI (excluding the \$2 million in escrow)	\$18,000
Less: Accounts receivable transferred to PDI	(594)
Inventory transferred to PDI	(1,911)
Warranty and retrofit liability transferred to PDI	163
Other assets and liabilities transferred to PDI	(10)
Expenses associated with the transaction	(220)
Net gain on sale	\$15,428

5. Equity Investments

601 California Avenue LLC

In 1995, Intevac entered into a Limited Liability Company Operating Agreement (the "Operating Agreement"), which expires December 31, 2015, with 601 California Avenue LLC (the "LLC"), a California limited liability company formed and owned by Intevac and certain shareholders of Intevac at that time. Under the Operating Agreement we transferred our leasehold interest in the site of our discontinued night vision business (the "Site") in exchange for a preferred share in the LLC with a face value of \$3,900,000. We are accounting for the investment under the cost method and have recorded our investment in the LLC at

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

\$2,431,000, which represents our historical carrying value of the leasehold interest in the Site. The preferred share in the LLC pays a 10% annual cumulative preferred dividend.

During 1996, the LLC formed a joint venture with Stanford University (the “Stanford JV”). The Stanford JV developed the property and fully leased it to a high quality tenant on a long-term lease. The LLC is a highly profitable enterprise whose primary asset is its interest in the Stanford JV. The Company received dividends of \$390,000 from the LLC in each of the last three years. As of December 31, 2002 all outstanding cumulative dividends on the preferred share had been paid. These dividends are included in other income and expense.

IMAT Inc.

On June 27, 1997, Intevac entered into an agreement with Matsubo to form a joint venture responsible for the sales and service of Intevac’s flat panel display equipment in Japan and other Asian countries. We invested \$436,000 for 49% of the voting stock of the joint venture. The joint venture was accounted for by the equity method. Gains and losses related to our share of the joint venture were reflected in other income and expense, net on the consolidated statements of operations. Intevac’s equity in the net income or (loss) of IMAT, Inc. was (\$125,000) in 2000. During the third quarter of 2000, Intevac and its joint venture partner, Matsubo, transferred IMAT’s activities and employees to Matsubo and terminated the operations of IMAT.

6. Commitments

We lease certain facilities under non-cancelable operating leases that expire at various times up to March 2007. The facility leases require Intevac to pay for all normal maintenance costs. The lease for the primary facility in Santa Clara includes an option to extend the lease for an additional five-year period.

Future minimum rental payments under these leases at December 31, 2002 are as follows (in thousands):

2003	\$ 2,971
2004	3,070
2005	3,192
2006	3,318
2007	838
 Total	 \$13,389

Gross rental expense was approximately \$2,873,000, \$2,993,000 and \$1,596,000 for the years ended December 31, 2002, 2001 and 2000, respectively. Offsetting rental expense for the year ending December 31, 2000 was sublease income of \$62,000.

7. Employee Benefit Plan

In 1991, Intevac established a defined contribution retirement plan with 401(k) plan features. The plan covers all United States employees eighteen years and older. Employees may make contributions by a percentage reduction in their salaries, not to exceed the statutorily prescribed annual limit. We made cash contributions of \$276,000, \$301,000 and \$123,000 for the years ended December 31, 2002, 2001 and 2000, respectively. Employees may choose among twelve investment options for their contributions and their share of Intevac’s contributions, and they are able to move funds between investment options at any time. Intevac’s common stock is not one of the investment options. Administrative expenses relating to the plan are insignificant.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

8. Notes Payable

In 1996, Intevac issued notes related to the purchase of Cathode Technology Corporation. The notes bore interest at 5.58% compounded monthly and payable quarterly. The balance on the notes was paid in full in January 2001.

9. Convertible Notes

During the first quarter of 1997, Intevac completed an offering of \$57.5 million of its 6 1/2% Convertible Subordinated Notes (the “2004 Notes”), which mature March 1, 2004. Interest is payable each March 1st and September 1st. The notes are convertible into shares of Intevac’s common stock at \$20.625 per share. Expenses associated with the offering of approximately \$2.3 million were deferred. Such expenses are being amortized to interest expense over the term of the notes.

On July 12, 2002 we completed the exchange of \$36.3 million in aggregate principal amount of our 2004 Notes for \$29.5 million of our new 6 1/2% Convertible Subordinated Notes due 2009 (the “2009 Notes”) and \$7.6 million in cash, including \$0.9 million for accrued interest. The 2009 Notes are convertible, at the holders’ option, into Intevac common shares at a conversion price of \$7.00 per share. \$1.3 million in aggregate principal amount of the 2004 Notes remained outstanding after the closing of the exchange offer.

In accounting for the exchange of the convertible notes, we wrote off \$0.4 million of debt issuance costs related to the 2004 Notes, reflecting the portion of such costs attributable to the convertible notes exchanged. The remaining debt issuance costs will be amortized to interest expense over the remaining life of the 2004 Notes. In connection with the exchange offer, Intevac incurred \$0.8 million of offering costs. Of this amount, \$0.2 million represented the cash portion of the exchange offer and was expensed during the 3 months ended September 28, 2002. The \$0.6 million balance of the exchange offering costs will be amortized to interest expense over the term of the 2009 Notes. There was no gain or loss associated with this transaction as \$36.3 million of 2004 Notes were exchanged for \$36.3 million of cash and new securities.

During 2002, in addition to the note exchange described above, Intevac repurchased \$0.3 million, face value, of its 2004 Notes. The repurchase resulted in a gain of \$23,000. During 2001, Intevac repurchased \$3.7 million, face value, of its 2004 Notes. The repurchase resulted in a gain of \$1.4 million. In accordance with adoption of SFAS 145, the gain on the note repurchase is included in Other income and expense, net on the consolidated statements of operations.

10. Segment Reporting

Segment Description

Intevac, Inc. has three reportable operating segments: Equipment Products, Photonics Technology and Commercial Imaging. Our Equipment Products Division sells complex capital equipment used in the manufacturing of thin-film disks and flat panel displays. Our Photonics Technology Division is developing sensors and cameras that permit highly sensitive detection of photons in the visible and infrared portions of the spectrum. Our Commercial Imaging Division is developing commercial products based on technology developed by PTD.

Included in corporate activities are general corporate expenses, the equity in net loss of IMAT, Inc. (see Note 5), amortization expenses related to certain intangible assets and the reversal in 2000 of a portion of a restructuring reserve established in September 1999, less an allocation of corporate expenses to operating units equal to 1% of net revenues. Assets of corporate activities include unallocated cash and short-term investments, deferred income tax assets (which were written off in 2001) and certain intangibles and other assets.

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Segment Profit or Loss and Segment Assets

We evaluate performance and allocates resources based on a number of factors including, profit or loss from operations and future revenue potential. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies.

Business Segment Net Revenues

	2002	2001	2000
	(in thousands)		
Equipment Products	\$27,100	\$42,723	\$28,797
Photonics Technology	6,641	8,761	7,252
Commercial Imaging	43	—	—
Total	\$33,784	\$51,484	\$36,049

Business Segment Profit & Loss

	2002	2001	2000
	(in thousands)		
Equipment Products(1)(2)	\$ (5,139)	\$ (7,234)	\$ (8,048)
Photonics Technology(3)	(2,173)	(2,595)	(2,164)
Commercial Imaging	(1,656)	—	—
Corporate activities(4)	(2,321)	(1,639)	(2,151)
 Operating loss	 (11,289)	 (11,468)	 (12,363)
Interest expense	(2,981)	(2,912)	(3,033)
Interest income	284	1,245	2,341
Other income and expense, net	16,168	1,228	731
 Income (loss) before income taxes	 \$ 2,182	 \$(11,907)	 \$(12,324)

(1) Includes goodwill write-off of \$818,000 in 2000.

(2) Includes inventory provisions of \$847,000, \$3,830,000 and \$6,007,000 in 2002, 2001 and 2000, respectively.

(3) Includes inventory provisions of \$469,000, (\$114,000) and \$316,000 in 2002, 2001 and 2000, respectively.

(4) Includes goodwill write-off of \$238,000 in 2000.

Business Segment Assets

	2002	2001
	(in thousands)	
Equipment Products	\$20,162	\$31,843
Photonics Technology	7,719	7,253
Commercial Imaging	—	—
Corporate activities	32,417	21,069
 Total assets	 \$60,298	 \$60,165

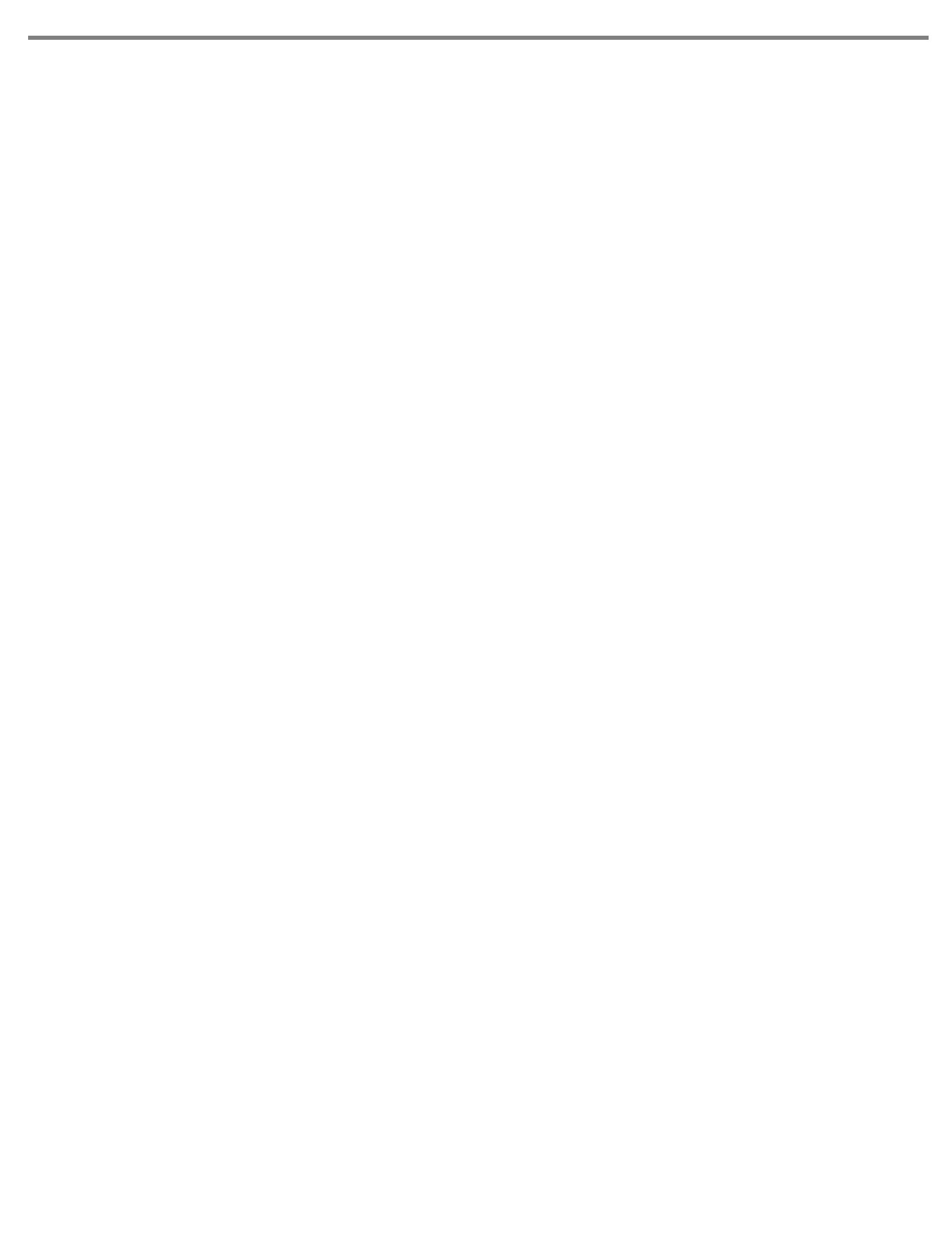


Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Business Segment Property, Plant & Equipment

	Additions	2002	2001
Equipment Products	\$ 89	\$ 692	
Photonics Technology	1,203	3,010	
Commercial Imaging	—	—	
Corporate activities	188	348	
Total additions	\$1,480	\$4,050	
<hr/>			
Depreciation	2002	2001	2000
Equipment Products	\$1,346	\$2,559	\$2,387
Photonics Technology	860	799	716
Commercial Imaging	—	—	—
Corporate activities	371	558	618
Total depreciation	\$2,577	\$3,916	\$3,721

Geographic Area Net Trade Revenues

	2002	2001	2000
United States	\$16,332	\$14,154	\$26,466
Far East	17,150	36,363	9,414
Europe	301	827	49
Rest of World	1	140	120
Total revenues	\$33,784	\$51,484	\$36,049

11. Shareholders' Equity

Intevac's Articles of Incorporation authorize 10,000,000 shares of Preferred Stock. The Board of Directors has the authority to issue the Preferred Stock in one or more series and to fix the price, rights, preferences, privileges and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series or the designation of such series, without further vote or action by the shareholders.

Stock Option/ Stock Issuance Plans

The Board of Directors approved the 1991 Stock Option/ Stock Issuance Plan (the "1991 Plan") in 1991. The maximum number of shares that may be issued over the term of the 1991 Plan is 2,666,667 shares. The 1991 Plan is divided into two separate components: the Option Grant Program and the Stock Issuance Program. Under the Option Grant Program, Intevac may grant either incentive stock options or nonqualified options or implement stock appreciation rights provisions at the discretion of the Board of Directors. Exercisability, option price, and other terms are determined by the Board of Directors, but the option price shall not be less than 85% and 100% of the fair market value for nonqualified options and incentive stock options, respectively, as determined by the Board of Directors. Options granted under the 1991 Plan are immediately exercisable; however, unexercised options and shares purchased upon the exercise of the options

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

are subject to vesting over a five-year period. Intevac may repurchase shares that are not vested. No shares were subject to repurchase at December 31, 2002, 2001 and 2000.

In 1995, the Board of Directors approved adoption of (i) the 1995 Stock Option/ Stock Issuance Plan (the "1995 Plan") under which employees, non-employee directors and consultants may be granted stock options to purchase stock or issued shares of stock at not less than 85% of fair market value on the grant/issuance date; and (ii) the Employee Stock Purchase Plan. The 1995 Plan, as amended in 2000, serves as the successor equity incentive program to our 1991 Plan. Upon adoption of the 1995 Plan, all shares available for issuance under the 1991 Plan were transferred to the 1995 Plan. As of December 31, 2002, 2,065,851 shares of common stock are authorized for future issuance under the 1995 Plan. Options granted under the 1995 Plan are exercisable upon vesting and vest over periods of up to five years. Options currently expire no later than ten years from the date of grant.

A summary of Intevac's stock option activity and related information for the years ended December 31 follows:

	2002		2001		2000	
	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price	Options	Weighted-Average Exercise Price
Outstanding — beginning of year	1,802,022	\$5.22	1,570,297	\$5.39	1,496,370	\$5.82
Granted	429,800	3.19	341,900	3.90	336,100	3.75
Exercised	(13,400)	1.46	(41,149)	0.30	(20,261)	2.86
Forfeited	(368,340)	4.00	(69,026)	5.32	(241,912)	5.99
Outstanding — end of year	1,850,082	5.02	1,802,022	5.22	1,570,297	5.39
Exercisable at end of year	1,188,382	\$5.81	1,062,242	\$5.89	878,157	\$5.84
Weighted-average per share fair value of options granted during the year		\$1.58		\$1.93		\$2.20

Outstanding and Exercisable by Price Range as of December 31, 2002

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding As of December 31, 2002	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable As of December 31, 2002	Weighted Average Exercise Price
\$1.275 – \$ 2.630	334,812	7.35 yrs	\$ 2.49	84,812	\$ 2.09
\$3.063 – \$ 3.550	203,040	8.64 yrs	\$ 3.22	61,380	\$ 3.25
\$3.570 – \$ 3.980	211,790	8.04 yrs	\$ 3.81	107,110	\$ 3.74
\$4.000 – \$ 5.120	190,500	8.71 yrs	\$ 4.40	104,300	\$ 4.44
\$5.375 – \$ 5.690	121,640	6.71 yrs	\$ 5.41	83,360	\$ 5.39
\$6.000 – \$ 6.000	353,161	2.61 yrs	\$ 6.00	353,161	\$ 6.00
\$6.063 – \$ 6.625	161,300	5.71 yrs	\$ 6.46	140,680	\$ 6.46
\$6.750 – \$ 7.625	180,779	3.87 yrs	\$ 7.48	172,819	\$ 7.50
\$7.688 – \$21.250	93,060	5.09 yrs	\$10.60	80,760	\$10.99
\$1.275 – \$21.250	1,850,082	6.17 yrs	\$ 5.02	1,188,382	\$ 5.81

Table of Contents**INTEVAC, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)****12. Income Taxes**

The provision for (benefit from) income taxes on income from continuing operations consists of the following (in thousands):

	Years Ended December 31,		
	2002	2001	2000
Federal:			
Current	\$(6,585)	\$ —	\$—
Deferred	—	3,771	—
	<hr/>	<hr/>	<hr/>
	(6,585)	3,771	—
State:			
Current	2	—	—
Deferred	—	1,217	—
	<hr/>	<hr/>	<hr/>
	2	1,217	—
Foreign:			
Current	(9)	41	—
	<hr/>	<hr/>	<hr/>
Total	\$(6,592)	\$5,029	\$—
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The tax benefits associated with exercises of nonqualified stock options and disqualifying dispositions of stock acquired through the incentive stock option and employee stock purchase plans reduced taxes currently payable for 2002, 2001 and 2000 as shown above by \$0, \$0 and \$29,000, respectively. Such benefits are credited to additional paid-in capital when realized.

Deferred income taxes reflect the net tax effects of temporary differences between losses reported and the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets computed in accordance with SFAS 109 are as follows (in thousands):

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	December 31,	
	2002	2001
Deferred tax assets:		
Vacation accrual, rent accrual and warranty reserve	\$ 1,167	\$ 1,260
Depreciation	1,370	1,237
Inventory valuation	3,534	5,505
Research and other tax credit carry-forwards	513	1,767
Federal and State NOL carry-forward	4,962	6,745
Basis difference in subsidiary investment	—	2,337
Other	587	428
	<hr/>	<hr/>
Valuation allowance for deferred tax assets	12,133	19,279
	<hr/>	<hr/>
Total deferred tax assets	\$ 50	\$ 52
	<hr/>	<hr/>
Deferred tax liabilities:		
Other	\$ 50	\$ 52
	<hr/>	<hr/>
Total deferred tax liabilities	\$ 50	\$ 52
	<hr/>	<hr/>
Net deferred tax assets	\$ —	\$ —
	<hr/>	<hr/>

The valuation allowance decreased by \$7,144,000 during 2002 due primarily to the carry-back of 2001 net operating losses, which resulted in a tax refund of \$6,585,000. This carry-back resulted from the enactment of the Job Creation and Worker Assistance Act of 2002, which increased the length of time over which losses incurred in 2001 could be carried back from 2 years to 5 years. The Federal and State net operating loss carry-forwards of \$13,166,000 and \$8,319,000 expire at various dates through 2021 and 2013, respectively, if not previously utilized.

A reconciliation of the income tax provision on income from continuing operations at the federal statutory rate of 34% to the income tax provision at the effective tax rate is as follows (in thousands):

	Years Ended December 31,		
	2002	2001	2000
Income taxes (benefit) computed at the federal statutory rate	\$ 766	\$ (4,125)	\$ (4,314)
State taxes (net of federal benefit)	109	(408)	(640)
Tax exempt income	—	—	(14)
Goodwill amortization	—	—	713
Research and other tax credit	(142)	(1,033)	—
Effect of tax rate changes and other permanent differences	(181)	44	650
Valuation allowance	(7,144)	10,551	3,605
	<hr/>	<hr/>	<hr/>
Total	\$(6,592)	\$ 5,029	\$ —
	<hr/>	<hr/>	<hr/>

13. Research and Development Cost Sharing Agreements

In 1992 Intevac entered into an agreement with a Japanese company to perform best efforts joint research and development work. The nature of the project was to develop a glass-coating machine to be used in the production of flat panel displays. We were funded for one-half of the actual costs of the project up to a ceiling of \$9,450,000. At December 31, 1999, we had received the entire amount under the contract. Qualifying costs

Table of Contents

INTEVAC, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

of approximately \$3,108,000 for the year ended December 31, 2000 were incurred on this project, resulting in offsets against research and development costs of approximately \$583,000 in 2000. As of December 31, 2000, the entire advance had been applied to qualifying costs. Each party received certain manufacturing and marketing rights for separate regions of the world. The agreement also calls for 5% royalty payments by each party to the other party, based on production and sales.

14. Other Accrued Liabilities

	December 31,	
	2002	2001
Accrued product warranties	\$ 845	\$ 906
Accrued interest expense	662	813
Accrued rent expense	1,435	1,241
Other	781	587
 Total other accrued liabilities	 \$3,723	 \$3,547

15. Quarterly Consolidated Results of Operations (Unaudited)

	Three Months Ended			
	March 30, 2002	June 29, 2002	Sept. 28, 2002	Dec. 31, 2002
(in thousands, except per share data)				
Net sales	\$ 6,670	\$ 8,385	\$ 6,737	\$11,992
Gross profit	963	2,003	1,342	3,001
Net income (loss)(1)(2)(3)	(2,142)	809	(3,835)	13,942
Basic earnings per share	\$ (0.18)	\$ 0.07	\$ (0.32)	\$ 1.15
Diluted earnings per share	(0.18)	0.07	(0.32)	0.86
Three Months Ended				
	March 31, 2001	June 30, 2001	Sept. 29, 2001	Dec. 31, 2001
(in thousands, except per share data)				
Net sales	\$10,005	\$ 9,490	\$ 8,414	\$23,575
Gross profit	3,400	(181)	1,682	4,854
Net loss(4)	(3,784)	(4,540)	(5,356)	(3,256)
Basic and diluted loss per share	\$ (0.32)	\$ (0.38)	\$ (0.45)	\$ (0.27)

- (1) Net income (loss) for the three months ended March 30, 2002, June 29, 2002 and December 31, 2002 include tax benefits of \$2.2 million, \$4.2 million and \$0.2 million, respectively, booked as a result of the enactment of the Job Creation and Worker Assistance Act of 2002.
- (2) Net income (loss) for the three months ended December 31, 2002 includes a gain of \$15.4 million from the sale of the rapid thermal processing product line.
- (3) Net income (loss) for the three months ended December 31, 2002 includes a gain of \$0.3 million from the sale of fabrication shop fixed assets.
- (4) Net loss for the three months ended December 31, 2001 includes a gain of \$1.4 million from the repurchase of Intevac's convertible notes.

Table of Contents

Item 9. Changes In and Disagreements With Accountants on Accounting and Financial Disclosure

None.

PART III

Item 10. Directors and Officers of the Registrant

The information required by this item relating to the Company's directors and nominees and disclosure relating to compliance with Section 16(a) of the Securities Exchange Act of 1934 is included under the captions "Election of Directors" and "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's Proxy Statement for the 2003 Annual Meeting of Shareholders and is incorporated herein by reference. The information required by this item relating to the Company's executive officers and key employees is included under the caption "Executive Officers and Directors" under Item 4 in Part I of this Annual Report on Form 10-K.

Item 11. Executive Compensation

The information required by this item is included under the caption "Executive Compensation and Related Information" in the Company's Proxy Statement for the 2003 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this item is included under the caption "Ownership of Securities" in the Company's Proxy Statement for the 2003 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions

The information required by this item is included under the caption "Certain Transactions" in the Company's Proxy Statement for the 2003 Annual Meeting of Shareholders and is incorporated herein by reference.

Item 14. Controls and Procedures

Evaluation of disclosure controls and procedures. Within 90 days prior to the filing date of this Annual Report on Form 10-K (the "Evaluation Date"), we evaluated, under the supervision of our chief executive officer and our chief financial officer, the effectiveness of our disclosure controls and procedures. Based on this evaluation, our chief executive officer and chief financial officer concluded that our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms.

Changes in internal controls. Subsequent to the Evaluation Date, there were no significant changes in our internal controls or in other factors that could significantly affect such controls, including any corrective actions with regards to significant deficiencies and material weaknesses.

Table of Contents

PART IV

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

(a) List of Documents filed as part of this Annual Report on Form 10-K.

1. The following consolidated financial statements of Intevac, Inc. are filed in Part II, Item 8 of this Report on Form 10-K:

Report of Grant Thornton LLP, Independent Auditors

Consolidated Balance Sheets — December 31, 2002 and 2001

Consolidated Statements of Operations and Comprehensive Income for the years ended December 31, 2002, 2001 and 2000

Consolidated Statement of Shareholders' Equity for the years ended December 31, 2002, 2001 and 2000

Consolidated Statements of Cash Flows for the years ended December 31, 2002, 2001 and 2000

Notes to Consolidated Financial Statements — Years Ended December 31, 2002, 2001 and 2000

2. Financial Statement Schedules.

The following financial statement schedule of Intevac, Inc. is filed in Part IV, Item 14(a) of this Annual Report on Form 10-K:

Schedule II — Valuation and Qualifying Accounts

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

3. Exhibits

Exhibit Number	Description
*****2.1	Asset Purchase Agreement between Intevac, Inc. and Photon Dynamics, Inc. dated as of October 22, 2002
*3.1	Amended and Restated Articles of Incorporation of the Registrant
*3.2	Bylaws of the Registrant
***4.2	Indenture, dated as of February 15, 1997, between the Company and State Street Bank and Trust Company of California, N.A. as Trustee, including the form of the Convertible Notes
4.3	Indenture, dated as of July 12, 2002, between the Company and State Street Bank and Trust Company of California, N.A. as Trustee, including the form of the Convertible Notes
*10.1	The Registrant's 1991 Stock Option/ Stock Issuance Plan
*10.2	The Registrant's 1995 Stock Option/ Stock Issuance Plan, as amended
*10.3	The Registrant's Employee Stock Purchase Plan, as amended
****10.5	Lease, dated February 5, 2001 regarding the space located at 3560, 3570 and 3580 Bassett Street, Santa Clara, California
*10.8	601 California Avenue LLC Limited Liability Operating Agreement, dated July 28, 1995
*10.9	The Registrant's 401(k) Profit Sharing Plan
21.1	Subsidiaries of the Registrant
23.1	Consent of Grant Thornton LLP, Independent Auditors
24.1	Power of Attorney (see page 57)
99.1	Certification Pursuant to 18 U.S.C. Section 1350

Table of Contents

* Previously filed as an exhibit to the Registration Statement on Form S-1 (No. 33-97806)

** Previously filed as an exhibit to the Registration Statement on Form S-1 (No. 333-05531)

*** Previously filed as an exhibit to the Registration Statement on Form S-3 (No. 333-24275)

**** Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 2000

***** Incorporated by reference to the exhibit filed with the Company's Report on Form 8-K filed November 14, 2002

(b) Reports on Form 8-K

On November 14, 2002, the registrant filed a report on Form 8-K regarding the sale of the assets of its Rapid Thermal Processing product line to Photon Dynamics, Inc.

Table of Contents

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 11, 2003.

INTEVAC, INC.

By:

/s/ CHARLES B. EDDY III

Charles B. Eddy III
Vice President, Finance and Administration,
Chief Financial Officer, Treasurer and Secretary
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Kevin Fairbairn and Charles B. Eddy III, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ KEVIN FAIRBAIRN	President, Chief Executive Officer and Director (Principal Executive Officer)	March 11, 2003
Kevin Fairbairn		
/s/ NORMAN H. POND	Chairman of the Board	March 11, 2003
Norman H. Pond		
/s/ CHARLES B. EDDY III	Vice President, Finance and Administration, Chief Financial Officer Treasurer and Secretary (Principal Financial and Accounting Officer)	March 11, 2003
Charles B. Eddy III		
/s/ DAVID DURY	Director	March 11, 2003
David Dury		
/s/ ROBERT D. HEMPSTEAD	Director	March 11, 2003
Robert D. Hempstead		

Table of Contents

Signature	Title	Date
/s/ DAVID N. LAMBETH	Director	March 11, 2003
David N. Lambeth		
/s/ ROBERT LEMOS	Director	March 11, 2003
Robert Lemos		
/s/ H. JOSEPH SMEAD	Director	March 11, 2003
H. Joseph Smead		

Table of Contents

SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

INTEVAC, INC.

Description	Balance at Beginning of Period	Additions (Reductions)			Balance at End of Period
		Charged (Credited) to Costs and Expenses	Charged (Credited) to Other Accounts	Deductions - Describe	
Year ended December 31, 2000:					
Deducted from asset accounts:					
Allowance for doubtful accounts	\$ 1,713,076	\$(1,544,172)	\$ (2,892)	\$ 52,500(1)	\$ 113,512
Inventory provisions	4,105,930	6,323,014	(311,136)	1,370,681(2)	8,747,127
Year ended December 31, 2001:					
Deducted from asset accounts:					
Allowance for doubtful accounts	\$ 113,512	\$ 40,515	\$ 70,833	\$ (484)(1)	\$ 225,344
Inventory provisions	8,747,127	3,715,817	896,000	698,077(2)	12,660,867
Year ended December 31, 2002:					
Deducted from asset accounts:					
Allowance for doubtful accounts	\$ 225,344	\$ 72,717	\$ —	\$ 28,741(1)	\$ 269,320
Inventory provisions	12,660,867	1,315,582	(229,367)	4,189,035(2)	9,558,047

(1) Write-offs of amounts deemed uncollectible.

(2) Write-off of inventory having no future use or value to the Company

Table of Contents

I, Kevin Fairbairn certify that:

1. I have reviewed this annual report on Form 10-K of Intevac, Inc.;

2. Based on my knowledge, this annual 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 annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual 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 annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

a) designed such disclosure controls and procedures 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 annual report is being prepared;

b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officer and I have indicated in this annual report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

/s/ KEVIN FAIRBAIRN

Kevin Fairbairn
President, Chief Executive Officer and Director

Date: March 11, 2003

Table of Contents

I, Charles B. Eddy certify that:

1. I have reviewed this annual report on Form 10-K of Intevac, Inc.;

2. Based on my knowledge, this annual 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 annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual 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 annual report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and have:

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a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officer and I have indicated in this annual report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

/s/ CHARLES B. EDDY III

Charles B. Eddy III
Vice President, Finance and Administration,
Chief Financial Officer, Treasurer and Secretary

Date: March 11, 2003

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**** Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 2000

***** Incorporated by reference to the exhibit filed with the Company's Report on Form 8-K filed November 14, 2002

INTEVAC, INC.

AND

STATE STREET BANK AND TRUST COMPANY OF CALIFORNIA, N.A.

AS TRUSTEE

6-1/2% CONVERTIBLE SUBORDINATED NOTES DUE 2009

INDENTURE

DATED AS OF JULY 12, 2002

TABLE OF CONTENTS

	PAGE
ARTICLE I Definitions and Incorporation by Reference.....	1
SECTION 1.01 Definitions.....	1
SECTION 1.02 Other Definitions.....	7
SECTION 1.03 Incorporation by Reference of Trust Indenture Act.....	8
SECTION 1.04 Rules of Construction.....	8
ARTICLE II The Securities.....	9
SECTION 2.01 Form and Dating.....	9
SECTION 2.02 Execution and Authentication.....	10
SECTION 2.03 Registrar, Paying Agent and Conversion Agent.....	10
SECTION 2.04 Paying Agent to Hold Money in Trust.....	11
SECTION 2.05 Securityholder.....	11
SECTION 2.06 Transfer and Exchange.....	11
SECTION 2.07 Replacement Securities.....	12
SECTION 2.08 Outstanding Securities.....	12
SECTION 2.09 Treasury Securities.....	12
SECTION 2.10 Temporary Securities: Exchange of Global Security for Certificated Securities.....	13
SECTION 2.11 Cancellation.....	13
SECTION 2.12 Defaulted Interest.....	14
ARTICLE III Redemption.....	14
SECTION 3.01 Notices to Trustee.....	14
SECTION 3.02 Selection of Securities to be Redeemed.....	14
SECTION 3.03 Notice of Redemption.....	14
SECTION 3.04 Effect of Notice of Redemption.....	15
SECTION 3.05 Deposit of Redemption Price.....	15
SECTION 3.06 Securities Redeemed in Part.....	15
SECTION 3.07 Optional Redemption.....	16
SECTION 3.08 Designated Event Offer.....	16
SECTION 3.09 Conversion Arrangement on Underwritten Call for Redemption.....	18
ARTICLE IV Covenants.....	18
SECTION 4.01 Payment of Securities.....	18
SECTION 4.02 SEC Reports.....	19
SECTION 4.03 Compliance Certificate.....	19
SECTION 4.04 Stay, Extension and Usury Law.....	19
SECTION 4.05 Corporate Existence.....	20
SECTION 4.06 Maintenance of Properties.....	20
SECTION 4.07 Payment of Taxes and Other Claims.....	20

TABLE OF CONTENTS
(Continued)

SECTION 4.08	Designated Event.....	20
SECTION 4.09	Triggering Distribution.....	21
SECTION 4.10	Further Instruments and Acts.....	21
ARTICLE V Conversion.....		21
SECTION 5.01	Conversion Privilege.....	21
SECTION 5.02	Conversion Procedure.....	22
SECTION 5.03	Fractional Shares.....	22
SECTION 5.04	Taxes on Conversion.....	22
SECTION 5.05	Company to Provide Stock.....	23
SECTION 5.06	Adjustment of Conversion Price.....	23
SECTION 5.07	No Adjustment.....	26
SECTION 5.08	Other Adjustments.....	26
SECTION 5.09	Adjustments for Tax Purposes.....	27
SECTION 5.10	Adjustments by the Company.....	27
SECTION 5.11	Notice of Adjustment.....	27
SECTION 5.12	Notice of Certain Transactions.....	27
SECTION 5.13	Effect of Reclassifications, Consolidations, Mergers or Sales on Conversion Privilege.....	27
SECTION 5.14	Trustee's Disclaimer.....	28
SECTION 5.15	Automatic Conversion.....	29
ARTICLE VI Subordination.....		30
SECTION 6.01	Agreement to Subordinate.....	30
SECTION 6.02	No Payment on Securities if Senior Debt in Default.....	30
SECTION 6.03	Distribution on Acceleration of Securities; Dissolution and Reorganization: Subrogation of Securities.....	31
SECTION 6.04	Reliance by Holders of Senior Debt on Subordination Provisions.....	34
SECTION 6.05	No Waiver of Subordination Provisions.....	34
SECTION 6.06	Trustee's Relation to Senior Debt.....	35
SECTION 6.07	Other Provisions Subject Hereto.....	35
SECTION 6.08	Certain Conversions and Repurchases Deemed Payment....	35
ARTICLE VII Successors.....		36
SECTION 7.01	Merger, Consolidation or Sale of Assets.....	36
SECTION 7.02	Successor Corporate Entity Substituted.....	36
ARTICLE VIII Defaults and Remedies.....		37
SECTION 8.01	Events of Default.....	37
SECTION 8.02	Acceleration.....	38

TABLE OF CONTENTS
(Continued)

SECTION 8.04	Waiver of Past Defaults.....	39
SECTION 8.05	Control by Majority.....	39
SECTION 8.06	Limitation on Suits.....	39
SECTION 8.07	Rights of Securityholders to Receive Payment.....	39
SECTION 8.08	Collection Suit by Trustee.....	40
SECTION 8.09	Trustee May File Proofs of Claim.....	40
SECTION 8.10	Priorities.....	40
SECTION 8.11	Undertaking for Costs.....	40
ARTICLE IX Trustee.....		40
SECTION 9.01	Duties of Trustee.....	41
SECTION 9.02	Rights of Trustee.....	41
SECTION 9.03	Individual Rights of Trustee.....	42
SECTION 9.04	Trustee's Disclaimer.....	42
SECTION 9.05	Notice of Defaults.....	42
SECTION 9.06	Reports by Trustee to Securityholders.....	42
SECTION 9.07	Compensation and Indemnity.....	42
SECTION 9.08	Replacement of Trustee.....	43
SECTION 9.09	Successor Trustee by Merger, Etc.....	44
SECTION 9.10	Eligibility; Disqualification.....	44
SECTION 9.11	Preferential Collection of Claims Against Company.....	44
SECTION 9.12	Sections Applicable to Registrar, Paying Agent and Conversion Agent.....	44
ARTICLE X Discharge of Indenture.....		45
SECTION 10.01	Termination of Company's Obligation.....	45
SECTION 10.02	Repayment to Company.....	45
ARTICLE XI Amendments, Supplements and Waivers.....		45
SECTION 11.01	Without Consent of Securityholders.....	45
SECTION 11.02	With Consent of Securityholders.....	46
SECTION 11.03	Compliance with Trust Indenture Act.....	47
SECTION 11.04	Revocation and Effect of Consents.....	47
SECTION 11.05	Notation on or Exchange of Securities.....	48
SECTION 11.06	Trustee Protected.....	48
ARTICLE XII Miscellaneous.....		48
SECTION 12.01	Trust Indenture Act Controls.....	48
SECTION 12.02	Notices.....	48
SECTION 12.03	Communication by Securityholders with Other Securityholders.....	49
SECTION 12.04	Certificate and Opinion as to Conditions Precedent.....	49

TABLE OF CONTENTS
(Continued)

SECTION 12.05	Statements Required in Certificate or Opinion.....	49
SECTION 12.06	Rules by Trustee and Agents.....	49
SECTION 12.07	Legal Holidays.....	49
SECTION 12.08	No Recourse Against Others.....	50
SECTION 12.09	Counterparts.....	50
SECTION 12.10	Variable Provisions.....	50
SECTION 12.11	Governing Law.....	51
SECTION 12.12	No Adverse Interpretation of Other Agreements.....	51
SECTION 12.13	Successors.....	51
SECTION 12.14	Severability.....	51
SECTION 12.15	Table of Contents, Headings, Etc.....	51
ARTICLE XIII Repurchase Offer.....		51
SECTION 13.01	Repurchase Offer.....	51
SECTION 13.02	Repurchase Notice.....	52
SECTION 13.03	Deposit of Repurchase Offer Amount.....	53
SECTION 13.04	Compliance with Applicable Laws.....	53
EXHIBIT A	FORM OF CONVERTIBLE SUBORDINATED NOTE.....	A-1

INDENTURE dated as of July 12, 2002 between Intevac, Inc., a California corporation (the "Company") and State Street Bank and Trust Company of California, N.A., a national banking association under the laws of the United States of America, as Trustee (the "Trustee").

Each party agrees as follows for the benefit of the other party and for the equal and ratable benefit of the Securityholders of the Company's 6-1/2% Convertible Subordinated Notes due 2009 (the "Securities"):

ARTICLE I

Definitions and Incorporation by Reference

SECTION 1.01 Definitions

"Affiliate" of any specified person means any other person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified person. For the purposes of this definition, "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as used with respect to any person, shall mean the possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of such person, whether through the ownership of voting securities or by agreement or otherwise.

"Agent" means any Registrar, Paying Agent, Conversion Agent or co-registrar.

"Board of Directors" means the Board of Directors of the Company or any authorized committee of the Board.

"Board Resolution" means a copy of a resolution of the Board of Directors certified by the Secretary or an Assistant Secretary of the Company to be in full force and effect on the date of such certification and delivery to the Trustee.

"Business Day" means any day that is not a Legal Holiday.

"Capital Stock" means with respect to any entity any and all shares, interests, participations, rights or other equivalents (however designated) of equity interests in entity, including, without limitation, corporate stock and partnership interests.

"Change of Control" means any event where: (i) any "person" or "group" (as such terms are used in Section 13(d) and 14(d) of the Exchange Act) is or becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act) of shares representing more than 50% of the combined voting power of the then-outstanding securities entitled to vote generally in elections of directors of the Company ("Voting Stock"), (ii) the Company consolidates with or merges into any other corporation, or any other corporation merges into the Company, and, in the case of any such transaction, the outstanding Common Stock of the Company is reclassified into or exchanged

for any other property or security, unless the shareholders of the Company immediately before such transaction own, directly or indirectly immediately following such transaction, at least a majority of the combined voting power of the outstanding voting securities of the Corporate Entity resulting from such transaction in substantially the same proportion as their ownership of the Voting Stock immediately before such transaction, (iii) the Company conveys, transfers or leases all or substantially all of its assets to any person, unless such conveyance, transfer or lease is to a corporation and the shareholders of the Company immediately before such conveyance, transfer or lease own, directly or indirectly immediately following such transaction, at least a majority of the combined voting power of the Corporate Entity to which such assets are so conveyed, transferred or leased in the same proportion as their ownership of the Voting Stock immediately before such transaction, or (iv) any time the Continuing Directors do not constitute a majority of the Board of Directors of the Company (or, if applicable, a successor corporation to the Company); provided, that a Change of Control shall not be deemed to have occurred if at least 90% of the consideration (excluding cash payments for fractional shares) in the transaction or transactions constituting the Change of Control consists of shares of common stock that are, or upon issuance will be, traded on a United States national securities exchange or approved for trading on an established automated over-the-counter trading market in the United States.

"Common Stock" means the common stock of the Company as the same exists at the date of the execution of this Indenture or as such stock may be constituted from time to time.

"Company" means the party named as such above until a successor replaces it in accordance with Article VI and thereafter means the successor.

"Continuing Directors" means, as of any date of determination, any member of the Board of Directors of the Company who (i) was a member of such Board of Directors on the date of this Indenture or (ii) was nominated for election or elected to such Board of Directors with the approval of a majority of the Continuing Directors who were members of such board at the time of such nomination or election.

"Corporate Entity" shall be any corporation, limited liability company or other business entity.

"Custodian" means State Street Bank and Trust Company of California, N.A., as custodian with respect to the Global Securities, or any successor entity thereto.

"Daily Market Price" means the price of a share of Common Stock on the relevant date, determined (a) on the basis of the last reported sale price regular way of the Common Stock as reported on the NNM, or if the Common Stock is not then listed on the NNM, as reported on such national securities exchange upon which the Common Stock is listed, or (b) if there is no such reported sale on the day in question, on the basis of the average of the closing bid and asked quotations regular way as so reported, or (c) if the Common Stock is not listed on the NNM or on any national securities exchange, on the basis of the average of the high bid and low asked quotations regular way on the day in question in the over-the-counter market as reported by the

National Association of Securities Dealers Automated Quotation System, or if not so quoted, as reported by National Quotation Bureau, Incorporated, or a similar organization.

"Default" means any event that is, or with the passage of time or the giving of notice or both, would be an Event of Default. "Depositary" means The Depository Trust Company, its nominees and their respective successors.

"Designated Event" means the occurrence of a Change of Control or a Termination of Trading.

"Designated Senior Debt" means any Senior Debt which, at the date of determination, has an aggregate principal amount outstanding of, or commitments to lend up to, at least \$10.0 million and is specifically designated by the Company in the instrument evidencing or governing such Senior Debt as "Designated Senior Debt" for purposes of this Indenture (provided, that such instrument may place limitations and conditions on the right of such Senior Debt to exercise the rights of Designated Senior Debt).

"Exchange Act" means the Securities Exchange Act of 1934, as amended.

"Excess Payment" means the excess of (A) the aggregate of the cash and fair market value of other consideration paid by the Company or any of its Subsidiaries with respect to the shares acquired in a tender offer or other negotiated transaction over (B) the Daily Market Price on the Trading Day immediately following the completion of such tender offer or other negotiated transaction multiplied by the number of acquired shares.

"GAAP" means generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other entity as may be approved by a significant segment of the accounting profession in the United States, which are in effect from time to time.

"Guarantee" means a guarantee (other than by endorsement of negotiable instruments for collection in the ordinary course of business), direct or indirect, in any manner (including, without limitation, letters of credit and reimbursement agreements in respect thereof), of all or any part of any Indebtedness.

"Indebtedness" means, with respect to any person, all obligations, whether or not contingent, of such person (i)(a) for borrowed money (including, but not limited to, any indebtedness secured by a security interest, mortgage or other lien on the assets of such person which is (1) given to secure all or part of the purchase price of property subject thereto, whether given to the vendor of such property or to another, or (2) existing on property at the time of acquisition thereof), (b) evidenced by a note, debenture, bond or other written instrument, (c) under a lease required to be capitalized on the balance sheet of the lessee under GAAP or under any lease or related document (including a

purchase agreement) which provides that such person is contractually obligated to purchase or to cause a third party to purchase such leased property, (d) in respect of letters of credit, loan, bank guarantees or bankers' acceptances, (e) with respect to Indebtedness secured by a mortgage, pledge, lien, encumbrance, charge or adverse claim affecting title or resulting in an encumbrance to which the property or assets of such person are subject, whether or not the obligation secured thereby shall have been assumed or guaranteed by or shall otherwise be such person's legal liability, (f) in respect of the balance of the deferred and unpaid purchase price of any property or assets, (g) under interest rate, currency or credit swap agreements, cap, floor and collar agreements, spot and forward-contracts and similar agreements and arrangements; (ii) with respect to any obligation of others of the type described in the preceding clause (i) or under clause (iii) below assumed by or guaranteed in any manner by such person or in effect guaranteed by such person through an agreement to purchase (including, without limitation, "take or pay" and similar arrangements), contingent or otherwise (and the obligations of such person under any such assumptions, guarantees or other such arrangements); and (iii) any and all deferrals, renewals, extensions, refinancings and refundings of, or amendments, modifications or supplements to, any of the foregoing.

"Indenture" means this Indenture as amended from time to time.

"Issuance Date" means the date on which the Securities are first authenticated and issued.

"Material Subsidiary" means any Subsidiary of the Company which at the date of determination is a "significant subsidiary" as defined in Rule 1-02(w) of Regulation S-X under the Securities Act and the Exchange Act (as such Regulation is in effect on the date hereof).

"NNM" means the Nasdaq Stock Market's National Market.

"Obligations" means any principal, interest, penalties, fees, indemnifications, reimbursements, damages and other liabilities payable under the documentation governing any Indebtedness.

"Offering Circular" means the Offering Circular relating to the Securities dated June 21, 2002, as supplemented on July 3, 2002, and as the same may be amended or further supplemented from time to time.

"Officers' Certificate" means a certificate signed by two Officers, one of whom must be the Chairman of the Board, the President, the Chief Financial Officer, the Treasurer or a Vice-President of the Company. See Sections 12.04 and 12.05 hereof.

"Opinion of Counsel" means a written opinion from legal counsel who is acceptable to the Trustee. The counsel may be an employee of or counsel to the Company or the Trustee. See Sections 12.04 and 12.05 hereof.

"person" means any individual, corporation, partnership, joint venture, association, joint stock company, trust, unincorporated organization or government or any agency or political subdivision thereof.

"Photronics Business" means the design, development, manufacture and service of the Photonic Products by the Company or one of its Subsidiaries.

"Photonic Products" means:

- (i) the Company's Electron Bombarded Charge Coupled Device ("EBCCD") that is a sensor that has a transparent glass window on one side through which photons are focused onto a photocathode grown on the vacuum side of the window, such that when these photons strike the photocathode through the window, electrons are emitted into the vacuum and these electrons are then electrically accelerated through the vacuum and strike a charge coupled device ("CCD") imager, which in turn outputs a high resolution, low noise video signal;
- (ii) the Company's Electron Bombarded Active Pixel Sensor ("EBAPS") that incorporates the same basic technology as described in clause (i) above but contains a Complementary Metal-Oxide-Semiconductor ("CMOS") imager instead of a CCD chip;
- (iii) the Company's Laser Illuminated Viewing and Ranging system ("LIVAR") that is an EBCCD sensor with a laser illuminator that operates in a manner similar to RADAR, but utilizing an eye safe laser, rather than a longer wavelength microwave source, and displaying the reflected signal as a digital video image, rather than as a blip; and
- (iv) any products derived from the devices specified in (i) through (iii) above.

"principal" of a debt security means the principal of the security plus the premium, if any, on the security.

"Representative" means the trustee, agent or representative (if any) for an issue of Senior Debt.

"SEC" means the Securities and Exchange Commission.

"Securities" means the Securities described in the preamble above that are issued, authenticated and delivered under this Indenture.

"Securities Act" means the Securities Act of 1933, as amended.

"Securityholder" or "holder" means a person in whose name a Security is registered.

"Senior Debt" means the principal of, premium, if any, interest, on, and fees, costs and expenses in connection with, and other amounts due on Indebtedness of the Company, whether

outstanding on the date of the Indenture or thereafter created, incurred, assumed or guaranteed by the Company, unless, in the instrument creating or evidencing or pursuant to which Indebtedness is outstanding, it is expressly provided that such Indebtedness is not senior in right of payment to the Securities. Senior Debt includes, with respect to the obligations described above, interest accruing, pursuant to the terms of such Senior Debt, on or after the filing of any petition in bankruptcy or for reorganization relating to the Company, whether or not post-filing interest is allowed in such proceeding, at the rate specified in the instrument governing the relevant obligation. Notwithstanding anything to the contrary in the foregoing, Senior Debt shall not include: (a) Indebtedness of the Company to a Subsidiary of the Company; (b) the Securities; (c) the Company's 6-1/2% Convertible Subordinated Notes due 2004;

(d) Indebtedness of or amount owned by the Company for compensation to employees, or for goods, services or material purchased in the ordinary course of business; or (e) any liability for federal, state, local or other taxes owed or owing by the Company. For the purposes of this definition of Senior Debt under this Indenture, it is the intent of the parties hereto that the Securities issued under this Indenture be "Senior Debt" (as defined under that certain Indenture, dated February 15, 1997, between the Company and State Street Bank and Trust Company of California, N.A. (the "2004 Indenture")) for purposes of the 6-1/2% Convertible Subordinated Notes due 2004 (the "Existing Notes") issued under the 2004 Indenture, and in furtherance thereof, the parties hereto agree that nothing contained in this Indenture or in the definition of Senior Debt under this Indenture is meant to or shall be construed to expressly provide that the Securities issued under this Indenture are not superior to the Existing Notes.

"Subsidiary" means any corporation, association or other business entity of which more than 50% of the total voting power of shares of Capital Stock entitled (without regard to the occurrence of any contingency) to vote in the election of directors, managers or trustees thereof is at the time owned or controlled, directly or indirectly, by any person or one or more of the other Subsidiaries of that person or a combination thereof.

"Termination of Trading" will be deemed to have occurred if the Common Stock (or other common stock into which the Securities are then convertible) is neither listed for trading on a United States national securities exchange nor approved for trading on an established automated over-the-counter trading market in the United States.

"TIA" means the Trust Indenture Act of 1939, and rules and regulations thereunder as so amended as in effect on the date of execution of this Indenture; provided, however, in the event that Trust Indenture Act of 1939 is amended after such date, "Trust Indenture Act" means, to the extent required by any such amendment, the Trust Indenture Act of 1939 as so amended.

"Trading Day" shall mean (A) if the applicable security is quoted on the NNM, a day on which trades may be made thereon, (B) if the applicable security is listed or admitted for trading on the New York Stock Exchange or another national securities exchange, a day on which the New York Stock Exchange or such other national securities exchange is open for business or (C) if the applicable security is not so listed, admitted for trading or quoted, any day other than a Saturday or Sunday or a day on which banking institutions in the State of New York or the State of California are authorized or obligated by law or executive order to close.

"Triggering Distribution" means an event where the Company declares or makes any dividend or other distribution to all of the holders of the Common Stock or shares of Capital Stock of any Subsidiary that at the time constitutes the Company's Photonics Business.

"Trustee" means the party named as such above until a successor replaces it in accordance with the applicable provisions of this Indenture and thereafter means the successor.

"Trust Officer" means any officer or assistant officer of the Trustee assigned by the Trustee to administer this Indenture.

SECTION 1.02 Other Definitions.

	Defined in Term Section
"Agent Members".....	2.01
"Automatic Conversion".....	15.15
"Automatic Conversion Notice".....	15.15
"Bankruptcy Custodian".....	8.01
"Bankruptcy Law".....	8.01
"Designated Event Offer".....	4.08
"Designated Event Payment".....	4.08
"Designated Event Payment Date".....	3.08
"Commencement Date".....	3.08
"Conversion Agent".....	2.03
"Conversion Date".....	5.02
"Conversion Price".....	5.01
"Current Market Price".....	5.06(e)
"Event of Default".....	8.01
"Global Security".....	2.01
"Legal Holiday".....	12.07
"Offer Amount".....	3.08
"Officer".....	12.10
"Paying Agent".....	2.03
"Payment Blockage Notice".....	6.02
"Payment Blockage Period".....	6.02
"Payment Default".....	8.01

	Defined in Term Section
"Purchase Agreement".....	2.01
"Purchase Date".....	5.06
"Registrar".....	2.03
"Repurchase Commencement Date".....	13.01
"Repurchase Offer".....	4.09
"Repurchase Offer Agreement".....	13.01
"Repurchase Payment".....	4.09
"Repurchase Payment Date".....	4.09
"Restricted Securities".....	2.01
"Tender Period".....	3.08

SECTION 1.03 Incorporation by Reference of Trust Indenture Act. Whenever this Indenture refers to a provision of the TIA, the provision is incorporated by reference in and made a part of this Indenture.

The following TIA terms used in this Indenture have the following meanings:

"indenture securities" means the Securities;

"indenture security holder" means a Securityholder;

"indenture to be qualified" means this Indenture;

"indenture trustee" or "institutional trustee" means the Trustee; and

"obligor" on the Securities means the Company or any other obligor on the Securities.

All other terms used in this Indenture that are defined by the TIA, defined by TIA reference to another statute or defined by SEC rule under the TIA have the meanings so assigned to them.

SECTION 1.04 Rules of Construction. Unless the context otherwise requires:

(a) a term has the meaning assigned to it;

(b) an accounting term not otherwise defined has the meaning assigned to it in accordance with GAAP consistently applied;

(c) "or" is not exclusive;

(d) words in the singular include the plural, and words in the plural include the singular; and

(e) provisions apply to successive events and transactions.

ARTICLE II

The Securities

SECTION 2.01 Form and Dating. The Securities and the Trustee's certificate of authentication shall be substantially in the form of Exhibit A which is hereby incorporated in and expressly made a part of this Indenture.

The Securities may have notations, legends or endorsements required by law, stock exchange rule, agreements to which the Company is subject, if any, or usage (provided that any such notation, legend or endorsement is in a form acceptable to the Company). The Company shall furnish any such legend not contained in Exhibit A to the Trustee in writing. The Securities shall be dated the date of their authentication. The terms and provisions of the Securities set forth in Exhibit A are part of the terms of this Indenture and to the extent applicable, the Company and the Trustee, by their execution and delivery of this Indenture, expressly agree to such terms and provisions and to be bound thereby.

(a) **Global Securities.** The Securities shall be issued in the form of one or more global Securities in definitive, fully registered form without interest coupons with the global securities legend set forth in Exhibit A hereto (a "Global Security"). The Global Securities shall be deposited on behalf of the purchasers of the Securities represented thereby with the Trustee as Custodian for the Depositary, and registered in the name of the Depositary or a nominee of the Depositary, duly executed by the Company and authenticated by the Trustee as hereinafter provided. The aggregate principal amount of the Global Security may from time to time be increased or decreased by adjustments made on the records of the Trustee and the Depositary or its nominee as hereinafter provided in this Article II.

(b) **Book-Entry Provisions.** This Section 2.01(b) shall apply only to a Global Security deposited with or on behalf of the Depositary.

The Company shall execute and the Trustee shall, in accordance with this Section 2.01(b) and the written order of the Company, authenticate and deliver initially one or more Global Securities that (i) shall be registered in the name of Cede & Co. or other nominee of such Depositary and (ii) shall be delivered by the Trustee to such Depositary or pursuant to such Depositary's instructions or held by the Trustee as Custodian for the Depositary pursuant to a FAST Balance Certificate Agreement between the Depositary and the Trustee.

Members of, or participants in, the Depositary ("Agent Members") shall have no rights under this Indenture with respect to any Global Security held on their behalf by the Depositary or by the Trustee as the Custodian for the Depositary or under such Global Security, and the Depositary or its

nominee, as the case may be, may be treated by the Company, the Trustee and any agent of the Company or the Trustee as the absolute owner of such Global Security for all purposes whatsoever. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Trustee or any agent of the Company or the Trustee from giving effect to any written certification, proxy or other authorization furnished by the Depository or impair, as between the Depository and its Agent Members, the operation of customary practices of such Depository governing the exercise of the rights of a holder of a beneficial interest in any Global Security.

SECTION 2.02 Execution and Authentication. Two Officers shall sign the Securities for the Company by manual or facsimile signature.

If an Officer whose signature is on a Security no longer holds that office at the time the Security is authenticated, the Security shall nevertheless be valid.

A Security shall not be valid until authenticated by the manual signature of an authorized officer of the Trustee. The signature shall be conclusive evidence that the Security has been authenticated under this Indenture.

Upon a written order of the Company signed by two Officers, the Trustee shall authenticate the Securities for original issue up to an aggregate principal amount of \$29,543,000. The aggregate principal amount of Securities outstanding at any time shall not exceed such aggregate amount of \$29,543,000 except as provided in Section 2.07.

The Trustee may appoint an authenticating agent acceptable to the Company to authenticate Securities. An authenticating agent may authenticate Securities whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent. An authenticating agent has the same rights as an Agent to deal with the Company or an Affiliate.

SECTION 2.03 Registrar, Paying Agent and Conversion Agent. The Company shall maintain in the Borough of Manhattan, City of New York, State of New York

(i) an office or agency where Securities may be presented for registration of transfer or for exchange ("Registrar"), (ii) an office or agency where Securities may be presented for payment ("Paying Agent") and (iii) an office or agency where Securities may be presented for conversion ("Conversion Agent"). The Registrar shall keep a register of the Securities and of their transfer and exchange. The Company may appoint the Registrar, the Paying Agent and the Conversion Agent. The Company may appoint one or more co-registrars, one or more additional paying agents and one or more additional conversion agents in such other locations as it shall determine; provided that no such designation shall in any manner relieve the Company of its obligation to maintain an office or agency in the Borough of Manhattan, The City of New York, State of New York, for such purposes. The term "Paying Agent" includes any additional paying agent and the term "Conversion Agent" includes any additional conversion agent. The Company may change any Paying Agent, Registrar, co-registrar or Conversion Agent without prior notice to any Securityholder. The Company shall notify the Trustee of the name and address of any Agent not a party to this Indenture. If the Company fails to appoint or maintain another entity as Registrar, Paying Agent or Conversion Agent, the Trustee shall act as such. The

Company or any of its Affiliates may act as Paying Agent, Registrar, co-registrar or Conversion Agent. The Company initially appoints the Trustee as Paying Agent, Registrar, Conversion Agent and Custodian and the Trustee hereby accepts such appointments and each of the corporate trust office of the Trustee in Los Angeles, California and the office or agency of the Trustee in the Borough of Manhattan, The City of New York, State of New York (which shall initially be State Street Bank and Trust Company, N.A., an Affiliate of the Trustee located at 61 Broadway, Concourse Level, Corporate Trust Window, New York, New York 10006), shall be considered as one such office or agency of the Company for the aforesaid purposes.

SECTION 2.04 Paying Agent to Hold Money in Trust. The Company shall require each Paying Agent other than the Trustee to agree in writing that the Paying Agent will hold in trust for the benefit of Securityholders or the Trustee all money held by the Paying Agent for the payment of principal or interest, and will notify the Trustee of any default by the Company in making any such payment. While any such default continues, the Trustee may require a Paying Agent to pay all money held by it to the Trustee. The Company at any time may require a Paying Agent to pay all money held by it to the Trustee and to account for any money disbursed by it. Upon payment over to the Trustee, the Paying Agent (if other than the Company or an Affiliate of the Company) shall have no further liability for the money. If the Company or an Affiliate of the Company acts as Paying Agent, it shall segregate and hold in a separate trust fund for the benefit of the Securityholders all money held by it as Paying Agent.

SECTION 2.05 Securityholder. The Trustee shall preserve in as current a form as is reasonably practicable the most recent list available to it of the names and addresses of Securityholders. If the Trustee is not the Registrar, the Company shall furnish to the Trustee on or before each interest payment date and at such other times as the Trustee may request in writing a list in such form and as of such date as the Trustee may reasonably require of the names and addresses of Securityholders.

SECTION 2.06 Transfer and Exchange. When Securities are presented to the Registrar or a co-registrar with a request to register a transfer or to exchange them for an equal principal amount of Securities of other denominations, the Registrar shall register the transfer or make the exchange if its requirements for such transactions are met. To permit registrations of transfers and exchanges, the Company shall issue and the Trustee shall authenticate Securities at the Registrar's request. No service charge shall be made for any registration of transfer or exchange (except as otherwise expressly permitted herein), but the Company may require payment of a sum sufficient to cover any transfer tax or similar governmental charge payable in connection therewith (other than any such transfer tax or similar governmental charge payable upon exchanges pursuant to Sections 2.10, 3.06, 3.08, 5.02 or 11.05 hereof).

The Company shall not be required (i) to register the transfer of or exchange Securities during a period beginning at the opening of business 15 days before the day of any selection of Securities for redemption under Section 3.02 hereof and ending at the close of business on the day of selection, or (ii) to exchange or register the transfer of any Security so selected for redemption in whole or in part, except the unredeemed portion of any Security being redeemed in part or (iii) to

register the transfer of or exchange Securities submitted for repurchase (and not withdrawn) under Sections 4.08 or 4.09 hereof.

The Trustee shall have no responsibility for any actions taken or not taken by the Depositary.

SECTION 2.07 Replacement Securities. If the holder of a Security claims that the Security has been lost, destroyed or wrongfully taken or if such Security is mutilated and is surrendered to the Trustee, the Company shall issue and the Trustee shall authenticate a replacement Security if the Trustee's and the Company's requirements are met. If required by the Trustee or the Company, an indemnity bond must be sufficient in the judgment of both to protect the Company, the Trustee, any Agent or any authenticating agent from any loss which any of them may suffer if a Security is replaced. The Company may charge for its expenses in replacing a Security.

In case any such mutilated, destroyed, lost or stolen Security has become or is about to become due and payable, or is about to be redeemed or purchased by the Company pursuant to Article III hereof or converted into shares of Common Stock pursuant to Article V hereof, the Company in its discretion may, instead of issuing a new Security, pay, redeem, purchase or convert such Security, as the case may be.

Every replacement Security is an additional obligation of the Company.

SECTION 2.08 Outstanding Securities. The Securities outstanding at any time are all the Securities authenticated by the Trustee except for those canceled by it, those delivered to it for cancellation, and those described in this Section as not outstanding.

If a Security is replaced, paid, redeemed, or purchased or converted pursuant to Section 2.07 hereof, it ceases to be outstanding unless, in the case of a replaced Security, the Trustee receives proof satisfactory to it that the replaced Security is held by a bona fide purchaser.

If Securities are considered paid under Section 4.01 hereof, they cease to be outstanding and interest on them ceases to accrue.

A Security does not cease to be outstanding because the Company or an Affiliate of the Company holds the Security.

SECTION 2.09 Treasury Securities. In determining whether the Securityholders of the required principal amount of Securities have concurred in any direction, waiver or consent, Securities owned by the Company or an Affiliate of the Company shall be considered as though they are not outstanding, except that for the purposes of determining whether the Trustee shall be protected in relying on any such direction, waiver or consent, only Securities which a Trust Officer knows are so owned shall be so disregarded.

SECTION 2.10 Temporary Securities: Exchange of Global Security for Certificated Securities.

- (a) Until definitive Securities are ready for delivery, the Company may prepare and the Trustee shall authenticate temporary Securities. Temporary Securities shall be substantially in the form of definitive securities but may have variations that the Company considers appropriate for temporary Securities. Without unreasonable delay, the Company shall prepare and the Trustee shall authenticate definitive Securities in exchange for temporary Securities.
- (b) Any Global Security or Securities deposited with the Depository or with the Trustee as Custodian for the Depository pursuant to Section 2.01 shall be transferred to the beneficial owners thereof in the form of certificated securities only if such transfer complies with Section 2.06 and
- (i) the Depository notifies the Company that it is unwilling or unable to continue as Depository for such Global Security or if at any time such Depository ceases to be a "clearing agency" registered under the Exchange Act and a successor Depository is not appointed by the Company within 90 days of such notice, or (ii) an Event of Default has occurred and is continuing.
- (c) Any Global Security that is transferable to the beneficial owners thereof in the form of certificated Securities pursuant to this Section 2.10 shall be surrendered by the Depository to the Trustee to be so transferred, in whole or from time to time in part, without charge, and the Trustee shall authenticate and deliver, upon such transfer of each portion of such Global Security, an equal aggregate principal amount at maturity of Securities of authorized denominations in the form of certificated Securities. Any portion of a Global Security transferred pursuant to this Section shall be executed, authenticated and delivered only in denominations of \$1,000 and any integral multiple thereof and registered in such names as the Depository shall direct.
- (d) Prior to any transfer pursuant to Section 2.10(b), the registered holder of a Global Security may grant proxies and otherwise authorize any person, including Agent Members and persons that may hold interests through Agent Members, to take any action which a holder is entitled to take under this Indenture or the Securities.
- (e) In the event of the occurrence of either of the events specified in Section 2.10(b), the Company will promptly make available to the Trustee a reasonable supply of certificated Securities in definitive form without interest coupons.

SECTION 2.11 Cancellation. The Company at any time may deliver Securities to the Trustee for cancellation. The Registrar, Paying Agent and Conversion Agent shall forward to the Trustee any Securities surrendered to them for registration of transfer, redemption, purchase, conversion, exchange or payment. The Trustee shall promptly cancel all Securities surrendered for registration of transfer, redemption, purchase, conversion, exchange, payment, replacement or cancellation and shall destroy all canceled Securities unless the Company otherwise directs. The Company may not issue new Securities to replace Securities that it has paid or that have been delivered to the Trustee for cancellation or that any holder has converted.

SECTION 2.12 Defaulted Interest. If the Company fails to make a payment of interest, it shall pay such defaulted interest plus any interest payable on the defaulted interest, in any lawful manner. It may pay such defaulted interest, plus any such interest payable thereon, to the persons who are Securityholders on a subsequent special record date. The Company shall fix any such record date and payment date. At least 15 days before any such record date, the Company shall mail to Securityholders a notice that states the record date, payment date, and amount of such interest to be paid.

ARTICLE III

Redemption

SECTION 3.01 Notices to Trustee. If the Company elects to redeem Securities pursuant to Section 3.07 hereof, it shall notify the Trustee of the redemption date and the principal amount of Securities to be redeemed. The Company shall give each notice provided for in this Section 3.01 to the Trustee at least 20 days before the redemption date (unless a shorter notice period shall be satisfactory to the Trustee).

SECTION 3.02 Selection of Securities to be Redeemed. If less than all the Securities are to be redeemed, the Trustee shall select the Securities to be redeemed by a method that complies with the requirements of the principal national securities exchange, if any, on which the Securities are listed, or, if the Securities are not so listed, on a pro rata basis. The Trustee shall make the selection not more than 60 days and not less than 15 days before the redemption date from Securities outstanding not previously called for redemption. The Trustee may select for redemption portions of the principal of Securities that have denominations larger than \$1,000. Securities and portions of them it selects shall be in amounts of \$1,000 or integral multiples of \$1,000. Provisions of this Indenture that apply to Securities called for redemption also apply to portions of Securities called for redemption. The Trustee shall notify the Company promptly of the Securities or portions of Securities to be called for redemption.

If any Security selected for partial redemption is converted in part after such selection, the converted portion of such Security shall be deemed (so far as may be) to be the portion to be selected for redemption. The Securities (or portions thereof) so selected shall be deemed duly selected for redemption for all purposes hereof, notwithstanding that any such Security is converted in whole or in part before the mailing of the notice of redemption. Upon any redemption of less than all the Securities, the Company and the Trustee may treat as outstanding any Securities surrendered for conversion during the period 15 days next preceding the mailing of a notice of redemption and need not treat as outstanding any Security authenticated and delivered during such period in exchange for the unconverted portion of any Security converted in part during such period.

SECTION 3.03 Notice of Redemption. At least 15 days but not more than 60 days before a redemption date, the Company shall mail a notice of redemption to each holder whose Securities are to be redeemed at such holder's registered address.

The notice shall identify the Securities to be redeemed and shall state:

- (a) the redemption date;
- (b) the redemption price;
- (c) if any Security is being redeemed in part, the portion of the principal amount of such Security to be redeemed and that, after the redemption date, upon cancellation of such Security, a new Security or Securities in principal amount equal to the unredeemed portion will be issued in the name of the holder thereof;
- (d) the name and address of the Paying Agent;
- (e) that Securities called for redemption must be surrendered to the Paying Agent to collect the redemption price plus accrued interest;
- (f) that, unless the Company defaults in making such redemption payment or the Paying Agent is prohibited from making such payment pursuant to the terms of this Indenture, by law or otherwise, interest on Securities called for redemption ceases to accrue on and after the redemption date; and
- (g) the paragraph of the Securities pursuant to which the Securities called for redemption are being redeemed.

Such notice shall also state the current Conversion Price and the date on which the right to convert such Securities or portions thereof into Common Stock of the Company will expire.

At the Company's request, the Trustee shall give notice of redemption in the Company's name and at its expense.

SECTION 3.04 Effect of Notice of Redemption. Once notice of redemption is mailed, Securities called for redemption become due and payable on the redemption date at the price set forth in the Security.

SECTION 3.05 Deposit of Redemption Price. On or before the redemption date, the Company shall deposit with the Trustee or with the Paying Agent money sufficient to pay the redemption price of and accrued interest, up to but not including the redemption date on all Securities to be redeemed on that date (subject to the right of holders of record on the relevant record date to receive interest, due on an interest payment date) unless theretofore converted into Common Stock pursuant to the provisions hereof. The Trustee or the Paying Agent shall return to the Company any money not required for that purpose.

SECTION 3.06 Securities Redeemed in Part. Upon surrender of a Security that is redeemed in part, the Company shall issue and the Trustee shall authenticate for the holder at the expense of the Company a new Security equal in principal amount to the unredeemed portion of the Security surrendered.

SECTION 3.07 Optional Redemption. The Company may redeem all or any portion of the Securities, upon the terms and at the redemption price set forth in each of the Securities. Any redemption pursuant to this Section 3.07 shall be made pursuant to the provisions of Section 3.01 through 3.06 hereof.

SECTION 3.08 Designated Event Offer.

(a) In the event that, pursuant to Section 4.08 hereof, the Company shall commence a Designated Event Offer, the Company shall follow the procedures in this Section 3.08.

(b) The Designated Event Offer shall remain open for a period specified by the Company which shall be no less than 30 calendar days and no more than 40 calendar days following its commencement on the date of the mailing of notice in accordance with Section 4.08 hereof (the "Commencement Date"), except to the extent that a longer period is required by applicable law (the "Tender Period"). Upon the expiration of the Tender Period (the "Designated Event Payment Date"), the Company shall purchase the principal amount of Securities required to be purchased pursuant to Section 4.08 hereof (the "Offer Amount").

(c) If the Designated Event Payment Date is on or after an interest payment record date and on or before the related interest payment date, any accrued interest, to the related interest payment date will be paid to the person in whose name a Security is registered at the close of business on such record date, and no additional interest, will be payable to Securityholders who tender Securities pursuant to the Designated Event Offer.

(d) The Company shall provide the Trustee with written notice of the Designated Event Offer at least 10 Business Days before the Commencement Date.

(e) On or before the Commencement Date, the Company or the Trustee (at the request and expense of the Company) shall send, by first class mail, a notice to each of the Securityholders, which shall govern the terms of the Designated Event Offer and shall state:

(i) that the Designated Event Offer is being made pursuant to this Section 3.08 and Section 4.08 hereof and that all Securities tendered will be accepted for payment;

(ii) the purchase price (as determined in accordance with Section 4.08 hereof), the length of time the Designated Event Offer will remain open and the Designated Event Payment Date;

(iii) that any Security or portion thereof not tendered or accepted for payment will continue to accrue interest;

(iv) that, unless the Company defaults in the payment of the Designated Event Payment, any Security or portion thereof accepted for payment pursuant to the Designated Event Offer shall cease to accrue interest, after the Designated Event Payment Date;

(v) that Securityholders electing to have a Security or portion thereof purchased pursuant to any Designated Event Offer will be required to surrender the Security, with the form entitled "Option of Securityholder To Elect Purchase" on the reverse of the Security completed, to the Paying Agent at the address specified in the notice prior to the close of business on the third Business Day preceding the Designated Event Payment Date;

(vi) that Securityholders will be entitled to withdraw their election if the Paying Agent receives, not later than the close of business on the second Business Day preceding the Designated Event Payment Date, or such longer period as may be required by law, a letter or a telegram, telex, facsimile transmission (receipt of which is confirmed and promptly followed by a letter) setting forth the name of the Securityholder, the principal amount of the Security or portion thereof the Securityholder delivered for purchase and a statement that such Securityholder is withdrawing his election to have the Security or portion thereof purchased; and

(vii) that Securityholders whose Securities are being purchased only in part will be issued new Securities equal in principal amount to the unpurchased portion of the Securities surrendered, which unpurchased portion must be equal to \$1,000 in principal amount or an integral multiple thereof.

In addition, the notice shall contain all instructions and materials that the Company shall reasonably deem necessary to enable such Securityholders to tender Securities pursuant to the Designated Event Offer.

(f) On or prior to the Designated Event Payment Date, the Company shall irrevocably deposit with the Trustee or a Paying Agent in immediately available funds an amount equal to the Offer Amount to be held for payment in accordance with the terms of this Section 3.08. On the Designated Event Payment Date, the Company shall, to the extent lawful, (i) accept for payment the Securities or portions thereof tendered pursuant to the Designated Event Offer,

(ii) deliver or cause to be delivered to the Trustee Securities so accepted and

(iii) deliver to the Trustee an Officers' Certificate stating such Securities or portions thereof have been accepted for payment by the Company in accordance with the terms of this Section 3.08. The Paying Agent shall promptly (but in any case not later than five calendar days after the Designated Event Payment Date) mail or deliver to each tendering Securityholder an amount equal to the purchase price of the Securities tendered by such Securityholder, and the Trustee shall promptly authenticate and mail or deliver to such Securityholders a new Security equal in principal amount to any unpurchased portion of the Security surrendered, if any; provided, that each new Security shall be in a principal amount of \$1,000 or an integral multiple thereof. Any Securities not so accepted shall be promptly mailed or delivered by or on behalf of the Company to the holder thereof. The Company will publicly announce the results of the Designated Event Offer on, or as soon as practicable after, the Designated Event Payment Date.

(g) The Designated Event Offer shall be made by the Company in compliance with all applicable provisions of the Exchange Act, and all applicable tender offer rules promulgated thereunder, and shall include all instructions and materials that the Company shall reasonably deem necessary to enable such Securityholders to tender their Securities.

SECTION 3.09 Conversion Arrangement on Underwritten Call for Redemption. In connection with any redemption of Securities, the Company may arrange for the purchase and conversion of any Securities by an arrangement with one or more investment bankers or other purchasers to purchase such Securities by paying to the Trustee in trust for the holders, on or before the date fixed for redemption, an amount not less than the applicable redemption price, together with interest accrued to (but excluding) the date fixed for redemption, of such Securities. Notwithstanding anything to the contrary contained in this Article III, the obligation of the Company to pay the redemption price of such Securities, together with interest accrued to (but excluding) the date fixed for redemption, shall be deemed to be satisfied and discharged to the extent such amount is so paid by the purchasers. If such an agreement is entered into, a copy of which will be filed with the Trustee prior to the date fixed for redemption, any Securities not duly surrendered for conversion by the holders thereof may, at the option of the Company, be deemed, to the fullest extent permitted by law, acquired by such purchasers from such holders and (notwithstanding anything to the contrary contained in Article V) surrendered by such purchasers for conversion, all as of immediately prior to the close of business on the date fixed for redemption (and the right to convert any such Securities shall be deemed to have been extended through such time), subject to payment of the above amount as aforesaid. At the direction of the Company, the Trustee shall hold and dispose of any such amount paid to it in the same manner as it would monies deposited with it by the Company for the redemption of Securities. Without the Trustee's prior written consent, no arrangement between the Company and such purchasers for the purchase and conversion of any Securities shall increase or otherwise affect any of the powers, duties, responsibilities or obligations of the Trustee as set forth in this Indenture, and the Company agrees to indemnify the Trustee from, and hold it harmless against, any loss, liability or expense arising out of or in connection with any such arrangement for the purchase and conversion of any Securities between the Company and such purchasers to which the Trustee has not consented in writing, including the costs and expenses incurred by the Trustee in the defense of any claim or liability arising out of or in connection with the exercise or performance of any of its powers, duties, responsibilities or obligations under this Indenture.

ARTICLE IV

Covenants

SECTION 4.01 Payment of Securities. The Company shall pay the principal of, premium, if any, and interest on the dates and in the manner provided in the Securities. Principal, premium, if any, and interest, shall be considered paid on the date due if the Paying Agent (other than the Company or an Affiliate of the Company) holds on that date money designated for and sufficient to pay all principal, premium, if any, and interest, then due and such Paying Agent is not prohibited from paying such money to the Securityholders on that date pursuant to the terms of this Indenture. To the extent lawful, the Company shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue installments of interest (without regard to any applicable grace period) at the rate borne by the Securities, compounded semiannually.

SECTION 4.02 SEC Reports. Whether or not required by the rules and regulations of the SEC, so long as any Securities are outstanding, the Company will file with the SEC and the Trustee, and if requested by any holders of Securities, the Trustee shall furnish to the holders of Securities all quarterly and annual financial information required to be contained in a filing with the SEC on Forms 10-Q and 10-K, including a "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and, with respect to annual information only, a report thereon by the Company's certified independent accountants.

SECTION 4.03 Compliance Certificate. The Company shall deliver to the Trustee, within 120 days after the end of each fiscal year of the Company, an Officers' Certificate stating that a review of the activities of the Company and its subsidiaries during the preceding fiscal year has been made under the supervision of the signing Officers with a view to determining whether the Company has kept, observed, performed and fulfilled its obligations under, and complied with the covenants and conditions contained in, this Indenture, and further stating, as to each such Officer signing such certificate, that to the best of such Officer's knowledge the Company has kept, observed, performed and fulfilled each and every covenant, and complied with the covenants and conditions contained in this Indenture and is not in default in the performance or observance of any of the terms, provisions and conditions hereof (or if a Default or Event of Default shall have occurred, describing all such Defaults or Events of Default of which such Officer may have knowledge) and that to the best of such Officer's knowledge no event has occurred and remains in existence by reason of which payments on account of the principal or of interest are prohibited.

One of the Officers signing such Officers' Certificate shall be either the Company's principal executive officer, principal financial officer or principal accounting officer.

The Company will, so long as any of the Securities are outstanding, deliver to the Trustee, forthwith upon becoming aware of:

- (a) any Default, Event of Default or default in the performance of any covenant, agreement or condition contained in this Indenture; or
- (b) any event of default under any other mortgage, indenture or instrument as that term is used in Section 8.01(f), an Officers' Certificate specifying such Default, Event of Default or default.

SECTION 4.04 Stay, Extension and Usury Law. The Company covenants (to the extent that it may lawfully do so) that it will not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law wherever enacted, now or at any time hereafter in force, which may affect the covenants or the performance of this Indenture; and the Company (to the extent it may lawfully do so) hereby expressly waives all benefit or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Trustee, but will suffer and permit the execution of every such power as though no such law has been enacted.

SECTION 4.05 Corporate Existence. Except as provided in Article VII hereof, the Company will do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the corporate, partnership or other existence of each Subsidiary of the Company in accordance with the respective organizational documents of each Subsidiary and the rights (charter and statutory), licenses and franchises of the Company and its Subsidiaries; provided, however, that the Company shall not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any Subsidiary, if the Company shall determine that the preservation thereof is no longer desirable in the conduct of the business of the Company and its Subsidiaries taken as a whole and that the loss thereof is not adverse in any material respect to the Securityholders.

SECTION 4.06 Maintenance of Properties. The Company will cause all properties used or useful in the conduct of its business or the business of any Subsidiary to be maintained and kept in good condition, repair and working order and supplied with all necessary equipment and will cause to be made all necessary repairs, renewals, replacements, betterments and improvements thereof, all as in the judgment of the Company may be necessary so that the business carried on in connection therewith may be properly and advantageously conducted at all times; provided, however, that nothing in this Section shall prevent the Company from discontinuing the operation or maintenance of any of such properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business or the business of any Subsidiary and not disadvantageous in any material respect to the holders.

SECTION 4.07 Payment of Taxes and Other Claims. The Company will pay or discharge, or cause to be paid or discharged, before the same may become delinquent, (i) all taxes, assessments and governmental charges levied or imposed upon the Company or any Subsidiary or upon the income, profits or property of the Company or any Subsidiary, (ii) all claims for labor, materials and supplies which, if unpaid, might by law become a lien or charge upon the property of the Company or any Subsidiary, and (iii) all stamps and other duties, if any, which may be imposed by the United States or any political subdivision thereof or therein in connection with the issuance, transfer, exchange or conversion of any Securities or with respect to this Indenture; provided, however, that, in the case of clauses (i) and (ii), the Company shall not be required to pay or discharge or cause to be paid or discharged any such tax, assessment, charge or claim (A) if the failure to do so will not, in the aggregate, have a material adverse impact on the Company, or (B) if the amount, applicability or validity is being contested in good faith by appropriate proceedings.

SECTION 4.08 Designated Event. Upon the occurrence of a Designated Event, each holder of Securities shall have the right, in accordance with this Section 4.08 and Section 3.08 hereof, to require the Company to repurchase all or any part (equal to \$1,000 or an integral multiple thereof) of such holder's Securities pursuant to the terms of Section 3.08 (the "Designated Event Offer") at a purchase price equal to 101% of the principal amount thereof, plus accrued and unpaid interest to the Designated Event Payment Date (the "Designated Event Payment").

Within 30 days following any Designated Event, the Company shall mail to each holder the notice provided by Section 3.08(e).

SECTION 4.09 Triggering Distribution. Upon the occurrence of a Triggering Distribution, each holder of Securities shall have the right, in accordance with this Section 4.09 and Article XIII hereof, to require the Company to repurchase all or any part (equal to \$1,000 or an integral multiple thereof) of such holder's Securities pursuant to the terms of Article XIII hereof (the "Repurchase Offer") at a purchase price equal to 100% of the principal amount thereof, together with any accrued and unpaid interest (the "Repurchase Payment") to the repurchase date, which repurchase date shall be on or prior to the distribution date for such Triggering Distribution (the "Repurchase Payment Date"). Notwithstanding anything herein to the contrary, in the event that such Triggering Distribution is not so paid or made, all of such holder's rights to require the Company to repurchase their Securities pursuant to this Section 4.09 and Article XIII hereof as a result of such Triggering Distribution shall terminate and any pending Repurchase Offer shall be rescinded.

SECTION 4.10 Further Instruments and Acts. Upon request of the Trustee, the Company will execute and deliver such further instruments and do such further acts as may be reasonably necessary or proper to carry out more effectively the purposes of this Indenture.

ARTICLE V

Conversion

SECTION 5.01 Conversion Privilege. A holder of a Security may convert the principal amount thereof (or any portion thereof that is an integral multiple of \$1,000) into fully paid and nonassessable shares of Common Stock of the Company at any time prior to the close of business (New York time) on the maturity date of the Security at the Conversion Price then in effect, except that, with respect to any Security called for redemption, such conversion right shall terminate at the close of business (New York time) on the Business Day immediately preceding the redemption date (unless the Company shall default in making the redemption payment when it becomes due, in which case the conversion price shall terminate on the date such default is cured). A Security in respect of which a holder has delivered an "Option of Securityholder to Elect Purchase" form set forth on Exhibit A hereto exercising the option of such holder to require the Company to purchase such Security may be converted only if the notice of exercise is withdrawn as provided in accordance with Section 3.08 hereof. The number of shares of Common Stock issuable upon conversion of a Security is determined by dividing the principal amount of the Security converted by the conversion price in effect on the Conversion Date (the "Conversion Price").

The initial Conversion Price is stated in paragraph 10 of the Securities and is subject to adjustment as provided in this Article V.

Provisions of this Indenture that apply to conversion of all of a Security also apply to conversion of a portion of it. A holder of Securities is not entitled to any rights of a holder of Common Stock until such holder of Securities has converted such Securities into Common Stock, and only to the extent that such Securities are deemed to have been converted into Common Stock under this Article V.

SECTION 5.02 Conversion Procedure. To convert a Security, a holder must satisfy the requirements in paragraph 10 of the Securities. The date on which the holder satisfies all of those requirements is the conversion date (the "Conversion Date"). As soon as practicable after the Conversion Date, the Company shall deliver to the holder through the Conversion Agent a certificate for the number of whole shares of Common Stock issuable upon the conversion and a check for any fractional share determined pursuant to Section 5.03. The person in whose name the certificate is registered shall become the shareholder of record on the Conversion Date and, as of such date, such person's rights as a Securityholder with respect to the converted Security shall cease; provided, however, that no surrender of a Security on any date when the stock transfer books of the Company shall be closed shall be effective to constitute the person entitled to receive the shares of Common Stock upon such conversion as the shareholder of record of such shares of Common Stock on such date, but such surrender shall be effective to constitute the person entitled to receive such shares of Common Stock as the shareholder of record thereof for all purposes at the close of business on the next succeeding day on which such stock transfer books are open; provided further, however, that such conversion shall be at the Conversion Price in effect on the date that such Security shall have been surrendered for conversion, as if the stock transfer books of the Company had not been closed.

No payment or adjustment will be made for accrued and unpaid interest on a converted Security or for dividends or distributions on shares of Common Stock issued upon conversion of a Security, but if any holder surrenders a Security for conversion after the close of business on the record date for the payment of an installment of interest and prior to the opening of business on the next interest payment date, then, notwithstanding such conversion, the interest payable on such interest payment date shall be paid to the holder of such Security on such record date. In such event, unless such Security has been called for redemption on or prior to such interest payment date, such Security, when surrendered for conversion, must be accompanied by payment in funds acceptable to the Company of an amount equal to the interest payable on such interest payment date on the portion so converted.

If a holder converts more than one Security at the same time, the number of whole shares of Common Stock issuable upon the conversion shall be based on the total principal amount of Securities converted.

Upon surrender of a Security that is converted in part, the Trustee shall authenticate for the holder a new Security equal in principal amount to the unconverted portion of the Security surrendered.

SECTION 5.03 Fractional Shares. The Company will not issue fractional shares of Common Stock upon conversion of a Security. In lieu thereof, the Company will pay an amount in cash based upon the Daily Market Price of the Common Stock on the Trading Day prior to the date of conversion.

SECTION 5.04 Taxes on Conversion. The issuance of certificates for shares of Common Stock upon the conversion of any Security shall be made without charge to the converting Securityholder for such certificates or for any tax in respect of the issuance of such certificates, and such certificates shall be issued in the respective names of, or in such names as may be directed by,

the holder or holders of the converted Security; provided, however, that in the event that certificates for shares of Common Stock are to be issued in a name other than the name of the holder of the Security converted, such Security, when surrendered for conversion, shall be accompanied by an instrument of transfer, in form satisfactory to the Company, duly executed by the registered holder thereof or his duly authorized attorney; and provided further, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any such certificates in a name other than that of the holder of the converted Security, and the Company shall not be required to issue or deliver such certificates unless or until the person or persons requesting the issuance thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid or is not applicable.

SECTION 5.05 Company to Provide Stock. The Company shall at all times reserve and keep available, free from preemptive rights, out of its authorized but unissued Common Stock, solely for the purpose of issuance upon conversion of Securities as herein provided, a sufficient number of shares of Common Stock to permit the conversion of all outstanding Securities for shares of Common Stock.

All shares of Common Stock which may be issued upon conversion of the Securities shall be duly authorized, validly issued, fully paid and nonassessable when so issued.

SECTION 5.06 Adjustment of Conversion Price. The Conversion Price shall be subject to adjustment from time to time as follows:

(a) In case the Company shall (1) pay a dividend in shares of Common Stock to holders of Common Stock, (2) make a distribution in shares of Common Stock to holders of Common Stock, (3) subdivide its outstanding shares of Common Stock into a greater number of shares of Common Stock or (4) combine its outstanding shares of Common Stock into a smaller number of shares of Common Stock, the Conversion Price in effect immediately prior to such action shall be adjusted so that the holder of any Security thereafter surrendered for conversion shall be entitled to receive the number of shares of Common Stock which he would have owned immediately following such action had such Securities been converted immediately prior thereto. Any adjustment made pursuant to this subsection (a) shall become effective immediately after the record date in the case of a dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

(b) In case the Company shall issue rights or warrants to substantially all holders of Common Stock entitling them (for a period commencing no earlier than the record date for the determination of holders of Common Stock entitled to receive such rights or warrants and expiring not more than 45 days after such record date) to subscribe for or purchase shares of Common Stock (or securities convertible into Common Stock) at a price per share less than the Current Market Price (as determined pursuant to subsection (f) below) of the Common Stock on such record date, the Conversion Price shall be adjusted so that the same shall equal the price determined by multiplying the Conversion Price in effect immediately prior to such record date by a fraction of which the numerator shall be the number of shares of Common Stock outstanding on such record date, plus the

number of shares of Common Stock which the aggregate offering price of the offered shares of Common Stock (or the aggregate conversion price of the convertible securities so offered) would purchase at such Current Market Price, and of which the denominator shall be the number of shares of Common Stock outstanding on such record date plus the number of additional shares of Common Stock offered (or into which the convertible securities so offered are convertible). Such adjustments shall become effective immediately after such record date.

(c) In case the Company shall distribute to all holders of Common Stock shares of any class of Capital Stock of the Company (other than Common Stock referred to in subsection (a) above), evidences of indebtedness or other assets (other than cash dividends out of current or retained earnings), or shall distribute to substantially all holders of Common Stock rights or warrants to subscribe for securities (other than those Securities referred to in subsection

(b) above), then in each such case the Conversion Price shall be adjusted so that the same shall equal the price determined by multiplying the Conversion Price in effect immediately prior to the date of such distribution by a fraction of which the numerator shall be the Current Market Price (determined as provided in subsection (f) below) of the Common Stock on the record date mentioned below less the then fair market value (as determined by the Board of Directors, whose determination shall be conclusive evidence of such fair market value and described in a Board Resolution) of the portion of the assets so distributed or of such subscription rights or warrants applicable to one share of Common Stock, and of which the denominator shall be such Current Market Price of the Common Stock. Such adjustment shall become effective immediately after the record date for the determination of the holders of Common Stock entitled to receive such distribution. Notwithstanding the foregoing, in case the Company shall issue rights or warrants to subscribe for additional shares of the Company's capital stock (other than those referred to in subsection (b) above) ("Rights") to substantially all holders of Common Stock, the Company may, in lieu of making any adjustment pursuant to this Section 5.06, make proper provision so that each holder of a Security who converts such Security (or any portion thereof) after the record date for such distribution and prior to the expiration or redemption of the Rights shall be entitled to receive upon such conversion, in addition to the shares of Common Stock issuable upon such conversion (the "Conversion Shares"), a number of Rights to be determined as follows: (i) if such conversion occurs on or prior to the date for the distribution to the holders of Rights of separate certificates evidencing such Rights (the "Distribution Date"), the same number of Rights to which a holder of a number of shares of Common Stock equal to the number of Conversion Shares is entitled at the time of such conversion in accordance with the terms and provisions of and applicable to the Rights; and (ii) if such conversion occurs after the Distribution Date, the same number of Rights to which a holder of the number of shares of Common Stock into which the principal amount of the Security so converted was convertible immediately prior to the Distribution Date would have been entitled on the Distribution Date in accordance with the terms and provisions of and applicable to the Rights. In the event the Company implements a shareholder rights plan, such rights plan must provide that upon conversion of the Securities the holders will receive, in addition to the Common Stock issuable upon such conversion, such rights (whether or not such rights have separated from the Common Stock at the time of such conversion).

(d) In case the Company shall, by dividend or otherwise, at any time distribute to all holders of its Common Stock cash (including any distributions of cash out of current or retained earnings of the Company but excluding any cash that is distributed as part of a distribution requiring a Conversion Price adjustment pursuant to paragraph (c) of this Section) in an aggregate amount that, together with the sum of (x) the aggregate amount of any other distributions to all holders of its Common Stock made in cash plus (y) all Excess Payments, in each case made within the 12 months preceding the date fixed for determining the shareholders entitled to such distribution (the "Distribution Record Date") and in respect of which no Conversion Price adjustment pursuant to paragraphs (c) or (e) of this Section or this paragraph (d) has been made, exceeds 15% of the product of the Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Distribution Record Date multiplied by the number of shares of Common Stock outstanding on the Distribution Record Date (excluding shares held in the treasury of the Company), the Conversion Price shall be reduced so that the same shall equal the price determined by multiplying such Conversion Price in effect immediately prior to the effectiveness of the Conversion Price reduction contemplated by this paragraph (d) by a fraction of which the numerator shall be the Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Distribution Record Date less the amount of such cash and other consideration (including any Excess Payments) so distributed applicable to one share of Common Stock (equal to the aggregate amount of such cash and other consideration (including any Excess Payments) divided by the number of shares of Common Stock outstanding on the Distribution Record Date) and the denominator shall be such Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Distribution Record Date, such reduction to become effective immediately prior to the opening of business on the day following the Distribution Record Date.

(e) In case a tender offer or other negotiated transaction made by the Company or any Subsidiary of the Company for all or any portion of the Common Stock shall be consummated, if an Excess Payment is made in respect of such tender offer or other negotiated transaction and the amount of such Excess Payment, together with the sum of (x) the aggregate amount of all Excess Payments plus (y) the aggregate amount of all distributions to all holders of the Common Stock made in cash (including any distributions of cash out of current or retained earnings of the Company), in each case made within the 12 months preceding the date of payment of such current negotiated transaction consideration or expiration of such current tender offer, as the case may be (the "Purchase Date"), and as to which no adjustment pursuant to paragraph (c) or paragraph (d) of this Section or this paragraph (e) has been made, exceeds 15% of the product of the Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Purchase Date multiplied by the number of shares of Common Stock outstanding (including any tendered shares but excluding any shares held in the treasury of the Company or any Subsidiary of the Company) on the Purchase Date, the Conversion Price shall be reduced so that the same shall equal the price determined by multiplying such Conversion Price in effect immediately prior to the effectiveness of the Conversion Price reduction contemplated by this paragraph (e) by a fraction of which the numerator shall be the Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Purchase Date less the amount of such Excess Payments and such cash distributions, if any, applicable to one share of Common Stock

(equal to the aggregate amount of such Excess Payments and such cash distributions divided by the number of shares of Common Stock outstanding on the Purchase Date) and the denominator shall be such Current Market Price per share (determined as provided in paragraph (f) of this Section) of the Common Stock on the Purchase Date, such reduction to become effective immediately prior to the opening of business on the day following the Purchase Date.

(f) The "Current Market Price" per share of Common Stock on any date shall be deemed to be the average of the Daily Market Prices for the shorter of (i) 30 consecutive Business Days ending on the last full Trading Day on the exchange or market referred to in determining such Daily Market Prices prior to the time of determination or (ii) the period commencing on the date next succeeding the first public announcement of the issuance of such rights or such warrants or such other distribution or such negotiated transaction through such last full Trading Day on the exchange or market referred to in determining such Daily Market Prices prior to the time of determination.

(g) In any case in which this Section 5.06 shall require that an adjustment be made immediately following a record date for an event, the Company may elect to defer, until such event, issuing to the holder of any Security converted after such record date the shares of Common Stock and other Capital Stock of the Company issuable upon such conversion over and above the shares of Common Stock and other Capital Stock of the Company issuable upon such conversion only on the basis of the Conversion Price prior to adjustment; and, in lieu of the shares the issuance of which is so deferred, the Company shall issue or cause its transfer agents to issue due bills or other appropriate evidence of the right to receive such shares.

SECTION 5.07 No Adjustment. No adjustment in the Conversion Price shall be required until cumulative adjustments amount to 1% or more of the Conversion Price as last adjusted; provided, however, that any adjustments which by reason of this Section 5.07 are not required to be made shall be carried forward and taken into account in any subsequent adjustment. All calculations under this Article V shall be made to the nearest cent or to the nearest one-hundredth of a share, as the case may be. No adjustment need be made for rights to purchase Common Stock pursuant to a Company plan for reinvestment of dividends or interest. No adjustment need be made for a change in the par value or no par value of the Common Stock.

SECTION 5.08 Other Adjustments. In the event that, as a result of an adjustment made pursuant to Section 5.06 above, the holder of any Security thereafter surrendered for conversion shall become entitled to receive any shares of Capital Stock of the Company other than shares of its Common Stock, thereafter the Conversion Price of such other shares so receivable upon conversion of any Securities shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to Common Stock contained in this Article V.

In the event that shares of Common Stock are not delivered after the expiration of any of the rights or warrants referred to in Section 5.06(b) and Section 5.06(c) hereof, the Conversion Price shall be readjusted to the Conversion Price which would otherwise be in effect had the adjustment made upon the issuance of such rights or warrants been made on the basis of delivery of only the number of shares of Common Stock actually delivered.

SECTION 5.09 Adjustments for Tax Purposes. The Company may, at its option, make such reductions in the Conversion Price, in addition to those required by Section 5.06 above, as it determines to be advisable in order that any stock dividend, subdivision of shares, distribution of rights to purchase stock or securities or distribution of securities convertible into or exchangeable for stock made by the Company to its shareholders will not be taxable to the recipients thereof

SECTION 5.10 Adjustments by the Company. The Company from time to time may, to the extent permitted by law, reduce the Conversion Price by any amount for any period of at least 20 days, in which case the Company shall give at least 15 days' notice of such reduction in accordance with Section 5.11, if the Board of Directors has made a determination that such reduction would be in the best interests of the Company, which determination shall be conclusive.

SECTION 5.11 Notice of Adjustment. Whenever the Conversion Price is adjusted, the Company shall promptly mail to Securityholders at the addresses appearing on the Registrar's books a notice of the adjustment and file with the Trustee an Officers' Certificate briefly stating the facts requiring the adjustment and the manner of computing it. The certificate shall be conclusive evidence of the correctness of such adjustment.

SECTION 5.12 Notice of Certain Transactions. In the event that:

- (1) the Company takes any action which would require an adjustment in the Conversion Price;
- (2) the Company takes any action that would require a supplemental indenture pursuant to Section 5.13; or
- (3) there is a dissolution or liquidation of the Company; a holder of a Security may wish to convert such Security into shares of Common Stock prior to the record date for or the effective date of the transaction so that he may receive the rights, warrants, securities or assets which a holder of shares of Common Stock on that date may receive. Therefore, the Company shall mail a notice to Securityholders at the addresses appearing on the Registrar's books and deliver to the Trustee an Officers' Certificate, in each case stating the proposed record or effective date, as the case may be. The Company shall mail the notice and deliver such Officers' Certificate at least 15 days before such date; however, failure to mail such notice or any defect therein shall not affect the validity of any transaction referred to in clause (1), (2) or (3) of this Section 5.12.

SECTION 5.13 Effect of Reclassifications, Consolidations, Mergers or Sales on Conversion Privilege. If any of the following shall occur, namely: (i) any reclassification or change of outstanding shares of Common Stock issuable upon conversion of Securities (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), (ii) any consolidation or merger to which the Company is a party other than a merger in which the Company is the continuing corporation and which does not result in any reclassification of, or change (other than a change in name, or par value, or from par value to no par value, or from no par value to par value or as a result of a subdivision or combination) in,

outstanding shares of Common Stock or (iii) any sale or conveyance of all or substantially all of the property or business of the Company as an entirety, then the Company, or such successor or purchasing Corporate Entity, as the case may be, shall, as a condition precedent to such reclassification, change, consolidation, merger, sale or conveyance, execute and deliver to the Trustee a supplemental indenture in form satisfactory to the Trustee providing that the holder of each Security then outstanding shall have the right to convert such Security into the kind and amount of shares of stock and other securities and property (including cash) receivable upon such reclassification, change, consolidation, merger, sale or conveyance by a holder of the number of shares of Common Stock deliverable upon conversion of such Security immediately prior to such reclassification, change, consolidation, merger, sale or conveyance. Such supplemental indenture shall provide for adjustments of the Conversion Price which shall be as nearly equivalent as may be practicable to the adjustments of the Conversion Price provided for in this Article V. The foregoing, however, shall not in any way affect the right a holder of a Security may otherwise have, pursuant to clause (ii) of the last sentence of subsection (c) of Section 5.06, to receive Rights upon conversion of a Security. If, in the case of any such consolidation, merger, sale or conveyance, the stock or other securities and property (including cash) receivable thereupon by a holder of Common Stock includes shares of stock or other securities and property of a corporation other than the successor or purchasing corporation, as the case may be, in such consolidation, merger, sale or conveyance, then such supplemental indenture shall also be executed by such other corporation and shall contain such additional provisions to protect the interests of the holders of the Securities as the Board of Directors shall reasonably consider necessary by reason of the foregoing. The provision of this Section 5.13 shall similarly apply to successive consolidations, mergers, sales or conveyances.

In the event the Company shall execute a supplemental indenture pursuant to this Section 5.13, the Company shall promptly file with the Trustee an Officers' Certificate briefly stating the reasons therefor, the kind or amount of shares of stock or securities or property (including cash) receivable by holders of the Securities upon the conversion of their Securities after any such reclassification, change, consolidation, merger, sale or conveyance and any adjustment to be made with respect thereto.

SECTION 5.14 Trustee's Disclaimer. The Trustee has no duty to determine when an adjustment under this Article V should be made, how it should be made or what such adjustment should be, but may accept as conclusive evidence of the correctness of any such adjustment, and shall be protected in relying upon the Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to Section 5.11, 5.12 or 5.13. Unless and until the Trustee receives any such Officers' Certificate, the Trustee may assume without inquiry that none of the events described in Sections 5.11, 5.12 and 5.13 has occurred. The Trustee makes no representation as to the validity or value of any securities or assets issued upon conversion of Securities, and the Trustee shall not be responsible for the Company's failure to comply with any provisions of this Article V.

The Trustee shall not be under any responsibility to determine the correctness of any provisions contained in any supplemental indenture executed pursuant to Section 5.13, but may accept as conclusive evidence of the correctness thereof, and shall be protected in relying upon, the

Officers' Certificate with respect thereto which the Company is obligated to file with the Trustee pursuant to Section 5.13.

SECTION 5.15 Automatic Conversion. The Company may elect to automatically convert ("Automatic Conversion") the Securities on or prior to maturity if the Daily Market Price of the Common Stock has exceeded 150% of the Conversion Price for at least 20 Trading Days out of the 30 consecutive Trading Days ending within five Trading Days prior to the date of (the "Notice Date") the notice of automatic conversion (the "Automatic Conversion Notice").

In order to effect an Automatic Conversion, the Company shall give to the holder of each Security to be so converted an Automatic Conversion Notice. Such Automatic Conversion Notice shall state:

- (i) the date on which the Securities identified in the Automatic Conversion Notice will be converted (the "Automatic Conversion Date");
- (ii) the CUSIP number or numbers of such Securities;
- (iii) the place or places where such Securities in certificated form are to be surrendered for exchange of the shares of Common Stock to be issued upon conversion thereof;
- (iv) the lowest Daily Market Price of the Common Stock for at least 20 Trading Days out of the 30 consecutive Trading Days ending within five Trading Days prior to the giving of the Automatic Conversion Notice; and
- (v) the Conversion Price at which such Automatic Conversion is to be effected.

If the Company elects to effect an Automatic Conversion Notice in respect of fewer than all the Securities, the Automatic Conversion Notice relating to such Automatic Conversion shall reference this Section 5.15 and shall identify the Securities to be converted. In case any Security is to be converted in part only, the Automatic Conversion Notice relating thereto shall state the portion of the principal amount thereof to be converted and shall state that on and after the date fixed for conversion, upon surrender of such Security, a new Securities in principal amount equal to the portion thereof not converted will be issued. In the case where the Company elects to effect an Automatic Conversion in respect of any portion of the Security evidenced by the Global Security, the beneficial interests in the Global Security to be subject to such Automatic Conversion shall be selected by the Depositary in accordance with the applicable standing procedures of the Depositary's book-entry conversion program, and in connection with such Automatic Conversion the Depositary shall arrange in accordance with such procedures for appropriate endorsements and transfer documents, if required by the Company or the Trustee or conversion agent, and payment of any transfer taxes if required hereunder.

The Company or, at the request and expense of the Company, the Trustee upon ten Business Days' notice prior to the date of the requested mailing (or upon such shorter notice period as may be

reasonably acceptable to the Trustee), shall give to each holder of Securities to be converted in an Automatic Conversion, at its last address as the same shall appear on the Registrar, an Automatic Conversion Notice in respect thereof. The date of Automatic Conversion of the Securities shall be not less than 7 days nor more than 15 days from the Notice Date. Such Automatic Conversion Notice shall be irrevocable and shall be mailed by first class mail and, if mailed in the manner herein provided, shall be conclusively presumed to have been given, whether or not the holder receives it. In any case, failure to give such notice or any defect in the notice to the holder of any Security designated for Automatic Conversion in whole or in part shall not affect the validity of the proceedings for the Automatic Conversion of any such Security. The Company shall also deliver a copy of each Automatic Conversion Notice given by it to the Trustee.

ARTICLE VI

Subordination

SECTION 6.01 Agreement to Subordinate. The Company, for itself and its successors, and each Securityholder, by his acceptance of Securities, agree that the payment of the principal of, premium, if any, or interest or any other amounts due on the Securities is subordinated in right of payment, to the extent and in the manner stated in this Article VI, to the prior payment in full of all existing and future Senior Debt.

SECTION 6.02 No Payment on Securities if Senior Debt in Default. Anything in this Indenture to the contrary notwithstanding, no payment on account of principal of, premium, if any, or interest, or any other amounts due on the Securities (including, without limitation, any Designated Event Payments), and no redemption, purchase, or other acquisition of the Securities (including, without limitation, pursuant to a Designated Event Offer or Repurchase Offer), shall be made by or on behalf of the Company (i) unless full payment of amounts then due for principal and interest and of all other amounts then due on all Senior Debt has been made or duly provided for pursuant to the terms of the instrument governing such Senior Debt, (ii) if, at the time of such payment, redemption, purchase or other acquisition, or immediately after giving effect thereto, there shall exist under any Senior Debt, or any agreement pursuant to which any Senior Debt is issued, any default, which default shall not have been cured or waived and which default shall have resulted in the full amount of such Senior Debt being declared due and payable or (iii) if, at the time of such payment, redemption, purchase or other acquisition, the Trustee shall have received written notice from the holders of Designated Senior Debt or a Representative of such holders (a "Payment Blockage Notice") that there exists under such Designated Senior Debt, or any agreement pursuant to which such Designated Senior Debt is issued, any default, which default shall not have been cured or waived, permitting the holders thereof to declare any amounts of such Designated Senior Debt due and payable, but only for the period (the "Payment Blockage Period") commencing on the date of receipt of the Payment Blockage Notice and ending (unless earlier terminated by notice given to the Trustee by the Representative of the holders of such Designated Senior Debt) on the earlier of (a) the date on which such event of default shall have been cured or waived or (b) 180 days from the receipt of the Payment Blockage Notice. Notwithstanding the provisions described in the immediately preceding sentence (other than in clauses (i) and (ii)), unless the holders of such Designated Senior

Debt or the Representative of such holders shall have accelerated the maturity of such Designated Senior Debt, the Company may resume payments on the Securities after the end of such Payment Blockage Period. Not more than one Payment Blockage Notice may be given in any consecutive 360-day period, irrespective of the number of defaults with respect to Senior Debt during such period.

In the event that, notwithstanding the provisions of this Section 6.02, payments are made by or on behalf of the Company in contravention of the provisions of this Section 6.02, such payments shall be held by the Trustee, any Paying Agent or the holders, as applicable, in trust for the benefit of, and shall be paid over to and delivered to the holders of Senior Debt or the Representative under the indenture or other agreement (if any) pursuant to which any instruments evidencing any Senior Debt may have been issued for application to the payment of all Senior Debt ratably according to the aggregate amounts remaining unpaid to the extent necessary to pay all Senior Debt in full in accordance with the terms of such Senior Debt, after giving effect to any concurrent payment or distribution to or for the holders of Senior Debt.

The Company shall give prompt written notice to the Trustee and any Paying Agent of any default or event of default under any Senior Debt or under any agreement pursuant to which any Senior Debt may have been issued. The Trustee and the Paying Agent may assume that all payments have been made with respect to all Senior Debt unless the Trustee or the Paying Agent, as the case may be, has received written notice that payment has not been made and three (3) Business Days have expired.

SECTION 6.03 Distribution on Acceleration of Securities; Dissolution and Reorganization: Subrogation of Securities. (a) If the Securities are declared due and payable because of the occurrence of an Event of Default, the Company shall give prompt written notice to the holders of all Senior Debt or to the trustee(s) for such Senior Debt of such acceleration. The Company may not pay the principal of or interest or any other amounts due on the Securities until five Business Days after such holders or trustee(s) of Senior Debt receive such notice and, thereafter, the Company may pay the principal of or interest or any other amounts due on the Securities only if the provisions of this Article VI permit such payment.

(b) Upon (i) any acceleration of the principal amount due on the Securities because of an Event of Default or (ii) any direct or indirect distribution of assets of the Company upon any dissolution, winding up, liquidation or reorganization of the Company (whether in bankruptcy, insolvency or receivership proceedings or upon an assignment for the benefit of creditors or any other dissolution, winding up, liquidation or reorganization of the Company):

(1) the holders of all Senior Debt shall first be entitled to receive payment in full of the principal thereof, the interest thereon and any other amounts due thereon before the holders are entitled to receive payment on account of the principal of or interest or any other amounts due on the Securities;

(2) any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities (other than securities of the Company as

reorganized or readjusted or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment the payment of which is subordinate, at least to the extent provided in this Article with respect to the Securities, to the payment in full without diminution or modification by such plan of all Senior Debt), to which the holders or the Trustee would be entitled except for the provisions of this Article, shall be paid by the liquidating trustee or agent or other person making such a payment or distribution, directly to the holders of Senior Debt (or Representative acting on their behalf), ratably according to the aggregate amounts remaining unpaid on account of the principal of or interest on and other amounts due on the Senior Debt held or represented by each, to the extent necessary to make payment in full of all Senior Debt remaining unpaid, after giving effect to any concurrent payment or distribution to the holders of such Senior Debt; and

(3) in the event that, notwithstanding the foregoing, any payment or distribution of assets of the Company of any kind or character, whether in cash, property or securities (other than securities of the Company as reorganized or readjusted, or securities of the Company or any other corporation provided for by a plan of reorganization or readjustment the payment of which is subordinate, at least to the extent provided in this Article with respect to the Securities, to the payment in full without diminution or modification by such plan of Senior Debt), shall be received by the Trustee or the holders before all Senior Debt is paid in full, such payment or distribution shall be held in trust for the benefit of, and be paid over to upon request by a holder of the Senior Debt, the holders of the Senior Debt remaining unpaid (or their Representative acting on their behalf), ratably as aforesaid, for application to the payment of such Senior Debt until all such Senior Debt shall have been paid in full, after giving effect to any concurrent payment or distribution to the holders of such Senior Debt.

Subject to the payment in full of all Senior Debt, the holders shall be subrogated to the rights of the holders of Senior Debt to receive payments or distributions of cash, property or securities of the Company applicable to the Senior Debt until the principal of and interest shall be paid in full and, for purposes of such subrogation, no such payments or distributions to the holders of Senior Debt of cash, property or securities which otherwise would have been payable or distributable to holders shall, as among the Company, its creditors other than the holders of Senior Debt, and the holders, be deemed to be a payment by the Company to or on account of the Senior Debt, it being understood that the provisions of this Article are and are intended solely for the purpose of defining the relative rights of the holders, on the one hand, and the holders of Senior Debt, on the other hand.

Nothing contained in this Article or elsewhere in this Indenture or in the Securities is intended to or shall (i) impair, as between the Company and its creditors other than the holders of Senior Debt, the obligation of the Company, which is absolute and unconditional, to pay to the holders the principal of, and interest as and when the same shall become due and payable in accordance with the terms of the Securities, (ii) affect the relative rights of the holders and creditors of the Company other than holders of Senior Debt or, as between the Company and the Trustee, the obligations of the Company to the Trustee, or (iii) prevent the Trustee or the holders from exercising all remedies otherwise permitted by applicable law upon default under this Indenture, subject to the

rights, if any, under this Article of the holders of Senior Debt in respect of cash, property and securities of the Company received upon the exercise of any such remedy.

Upon distribution of assets of the Company referred to in this Article, the Trustee, subject to the provisions of Section 9.01 hereof, and the holders shall be entitled to rely upon a certificate of the liquidating trustee or agent or other person making any distribution to the Trustee or to the holders for the purpose of ascertaining the persons entitled to participate in such distribution, the holders of the Senior Debt and other indebtedness of the Company, the amount thereof or payable thereon, the amount or amounts paid or distributed thereon and all other facts pertinent thereto or to this Article. The Trustee, however, shall not be deemed to owe any fiduciary duty to the holders of Senior Debt. Nothing contained in this Article or elsewhere in this Indenture, or in any of the Securities, shall prevent the good faith application by the Trustee of any moneys which were deposited with it hereunder, prior to its receipt of written notice of facts which would prohibit such application, for the purpose of the payment of or on account of the principal of, or interest unless, prior to the date on which such application is made by the Trustee, the Trustee shall be charged with actual notice under Section 6.03(d) hereof of the facts which would prohibit the making of such application.

(c) The provisions of this Article shall not be applicable to any cash, properties or securities received by the Trustee or by any holder when received as a holder of Senior Debt and nothing in Section 9.11 hereof or elsewhere in this Indenture shall deprive the Trustee or such holder of any of its rights as such holder of Senior Debt.

(d) The Company shall give prompt written notice to the Trustee of any fact known to the Company which would prohibit the making of any payment of money to or by the Trustee in respect of the Securities pursuant to the provisions of this Article. The Trustee, subject to the provisions of Section 9.01 hereof, shall be entitled to assume that no such fact exists unless the Company or any holder of Senior Debt or any Representative therefor has given written notice thereof to the Trustee. Notwithstanding the provisions of this Article or any other provisions of this Indenture, the Trustee shall not be charged with knowledge of the existence of any fact which would prohibit the making of any payment of moneys to or by the Trustee in respect of the Securities pursuant to the provisions in this Article, unless, and until three Business Days after, the Trustee shall have received written notice thereof from the Company or any holder or holders of Senior Debt or from any Representative therefor; and, prior to the receipt of any such written notice, the Trustee, subject to the provisions of Section 9.01 hereof, shall be entitled in all respects conclusively to assume that no such facts exist; provided that if on a date not less than three Business Days immediately preceding the date upon which, by the terms hereof, any such moneys may become payable for any purpose (including, without limitation, the principal of or interest), the Trustee shall not have received with respect to such moneys the notice provided for in this Section 6.03(d), then anything herein contained to the contrary notwithstanding, the Trustee shall have full power and authority to receive such moneys and to apply the same to the purpose for which they were received, and shall not be affected by any notice to the contrary which may be received by it on or after such prior date.

The Trustee shall be entitled to conclusively rely on the delivery to it of a written notice by a person representing himself to be a holder of Senior Debt (or a Representative on behalf of such holder) to establish that such notice has been given by a holder of Senior Debt (or a Representative on behalf of any such holder or holders). In the event that the Trustee determines in good faith that further evidence is required with respect to the right of any person as a holder of Senior Debt to participate in any payment or distribution pursuant to this Article, the Trustee may request such person to furnish evidence to the reasonable satisfaction of the Trustee as to the amount of Senior Debt held by such person, the extent to which such person is entitled to participate in such payment or distribution and any other facts pertinent to the rights of such person under this Article, and, if such evidence is not furnished, the Trustee may defer any payment to such person pending judicial determination as to the right of such person to receive such payment; nor shall the Trustee be charged with knowledge or the curing or waiving of any default of the character specified in Section 6.02 hereof or that any event or any condition preventing any payment in respect of the Securities shall have ceased to exist, unless and until the Trustee shall have received written notice to such effect.

(e) The provisions of this Section 6.03 applicable to the Trustee shall (unless the context requires otherwise) also apply to any Paying Agent for the Company.

SECTION 6.04 Reliance by Holders of Senior Debt on Subordination Provisions. Each holder of any Security by his acceptance thereof acknowledges and agrees that the foregoing subordination provisions are, and are intended to be, an inducement and a consideration for each holder of any Senior Debt, whether such Senior Debt was created or acquired before or after the issuance of the Securities, to acquire and continue to hold, or to continue to hold, such Senior Debt, and such holder of Senior Debt shall be deemed conclusively to have relied on such subordination provisions in acquiring and continuing to hold, or in continuing to hold, such Senior Debt. Notice of any default in the payment of any Senior Debt, except as expressly stated in this Article, and notice of acceptance of the provisions hereof are hereby expressly waived. Except as otherwise expressly provided herein, no waiver, forbearance or release by any holder of Senior Debt under such Senior Debt or under this Article shall constitute a release of any of the obligations or liabilities of the Trustee or holders of the Securities provided in this Article.

SECTION 6.05 No Waiver of Subordination Provisions. Except as otherwise expressly provided herein, no right of any present or future holder of any Senior Debt to enforce subordination as herein provided shall at any time in any way be prejudiced or impaired by any act or failure to act on the part of the Company or by any act or failure to act, in good faith, by any such holder, or by any noncompliance by the Company with the terms, provisions and covenants of this Indenture, regardless of any knowledge thereof any such holder may have or be otherwise charged with.

Without in any way limiting the generality of the foregoing paragraph, the holders of Senior Debt may, at any time and from time to time, without the consent of, or notice to, the Trustee or the holders of the Securities, without incurring responsibility to the holders of the Securities and without impairing or releasing the subordination provided in this Article VI or the obligations hereunder of the holders of the Securities to the holders of Senior Debt, do any one or more of the following:

(i) change the manner, place or terms of payment of, or renew or alter, Senior Debt, or otherwise amend or supplement in any manner Senior Debt or any instrument evidencing the same or any agreement under which Senior Debt is outstanding; (ii) sell, exchange, release or otherwise dispose of any property pledged, mortgaged or otherwise securing Senior Debt; (iii) release any person liable in any manner for the collection of Senior Debt; and (iv) exercise or refrain from exercising any rights against the Company or any other person.

SECTION 6.06 Trustee's Relation to Senior Debt. The Trustee in its individual capacity shall be entitled to all the rights set forth in this Article in respect of any Senior Debt at any time held by it, to the same extent as any holder of Senior Debt, and nothing in Section 9.11 hereof or elsewhere in this Indenture shall deprive the Trustee of any of its rights as such holder.

With respect to the holders of Senior Debt, the Trustee undertakes to perform or to observe only such of its covenants and obligations, as are specifically set forth in this Article, and no implied covenants or obligations with respect to the holders of Senior Debt shall be read into this Indenture against the Trustee. The Trustee shall not owe any fiduciary duty to the holders of Senior Debt but shall have only such obligations to such holders as are expressly set forth in this Article.

Each holder of a Security by his acceptance thereof authorizes and directs the Trustee on his behalf to take such action as may be necessary or appropriate to effectuate the subordination provided in this Article and appoints the Trustee his attorney-in-fact for any and all such purposes, including, in the event of any dissolution, winding up or liquidation or reorganization under any applicable bankruptcy law of the Company (whether in bankruptcy, insolvency or receivership proceedings or otherwise), the timely filing of a claim for the unpaid balance of such holder's Securities in the form required in such proceedings and the causing of such claim to be approved. If the Trustee does not file a claim or proof of debt in the form required in such proceedings prior to 30 days before the expiration of the time to file such claims or proofs, then any holder or holders of Senior Debt or their Representative or Representatives shall have the right to demand, sue for, collect, receive and receipt for the payments and distributions in respect of the Securities which are required to be paid or delivered to the holders of Senior Debt as provided in this Article and to file and prove all claims therefor and to take all such other action in the name of the holders or otherwise, as such holders of Senior Debt or Representative thereof may determine to be necessary or appropriate for the enforcement of the provisions of this Article.

SECTION 6.07 Other Provisions Subject Hereto. Except as expressly stated in this Article, notwithstanding anything contained in this Indenture to the contrary, all the provisions of this Indenture and the Securities are subject to the provisions of this Article. However, nothing in this Article shall apply to or adversely affect the claims of, or payment to, the Trustee pursuant to Section 9.07. Notwithstanding the foregoing, the failure to make a payment on account of principal of or interest by reason of any provision of this Article VI shall not be construed as preventing the occurrence of an Event of Default under Section 8.01.

SECTION 6.08 Certain Conversions and Repurchases Deemed Payment. For the purposes of this Article only, (i) the issuance and delivery of junior securities upon conversion of Securities in accordance with Article V shall not be deemed to constitute a payment or distribution

on account of the principal of or premium or interest or on account of the purchase or other acquisition of Securities, and (ii) the payment, issuance or delivery of cash (except in satisfaction of fractional shares pursuant to Section 5.03), property or securities (other than junior securities) upon conversion of a Security shall be deemed to constitute payment on account of the principal of such Security. For the purposes of this Section, the term "junior securities" means (a) shares of any stock of any class of the Company and securities into which the Securities are convertible pursuant to Article V and (b) securities of the Company which are subordinated in right of payment to all Senior Debt which may be outstanding at the time of issuance or delivery of such securities to substantially the same extent as, or to a greater extent than, the Securities are so subordinated as provided in this Article. Nothing contained in this Article or elsewhere in this Indenture or in the Securities is intended to or shall impair, as among the Company, its creditors other than holders of Senior Debt and the holders of the Securities, the right, which is absolute and unconditional, of the holder of any Security to convert such Security in accordance with Article V.

ARTICLE VII

Successors

SECTION 7.01 Merger, Consolidation or Sale of Assets. The Company may not consolidate or merge with or into any person (whether or not the Company is the surviving entity), or sell, assign, transfer, lease, convey or otherwise dispose of all or substantially all of its properties or assets unless:

- (a) the Company is the surviving Corporate Entity or the Corporate Entity formed by or surviving any such consolidation or merger (if other than the Company) or to which such sale, assignment, transfer, lease, conveyance or other disposition shall have been made is a Corporate Entity organized or existing under the laws of the United States, any state thereof or the District of Columbia;
- (b) the Corporate Entity formed by or surviving any such consolidation or merger (if other than the Company) or the Corporate Entity to which such sale, assignment, transfer, lease, conveyance or other disposition will have been made assumes all the Obligations of the Company, pursuant to a supplemental indenture in a form reasonably satisfactory to the Trustee, under the Securities and the Indenture;
- (c) immediately after such transaction no Default or Event of Default exists; and
- (d) the Company or such person shall have delivered to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that such transaction and the supplemental indenture comply with the Indenture and that all conditions precedent in the Indenture relating to such transaction have been satisfied.

SECTION 7.02 Successor Corporate Entity Substituted. Upon any consolidation or merger, or any sale, assignment, transfer, lease, conveyance or other disposition of all or substantially all of the assets of the Company in accordance with Section 7.01 hereof, the successor

Corporate Entity formed by such consolidation or into or with which the Company is merged or the person to which such sale, assignment, transfer, lease, conveyance or other disposition is made shall succeed to, and be substituted for and may exercise every right and power of, the Company under this Indenture with the same effect as if such successor Corporate Entity has been named as the Company herein; provided, however, that the predecessor Company in the case of a sale, assignment, transfer, lease, conveyance or other disposition shall not be released from the obligation to pay the principal of and interest.

ARTICLE VIII

Defaults and Remedies

SECTION 8.01 Events of Default. An "Event of Default" occurs if:

- (a) the Company defaults in the payment of interest when the same becomes due and payable, and the Default continues for a period of 30 days after the date due and payable;
- (b) the Company defaults in the payment of the principal of any Security when the same becomes due and payable at maturity, upon redemption or otherwise;
- (c) the Company defaults in the payment of the Designated Event Payment when the same becomes due and payable, whether or not such payment may be prohibited by Article VI;
- (d) the Company fails to provide timely notice of any Designated Event in accordance with Section 4.08;
- (e) the Company fails to observe or perform any other covenant or agreement contained in this Indenture or the Securities required by it to be performed and the Default continues for a period of 60 days after the receipt of written notice from the Trustee to the Company or from the holders of 25% in aggregate principal amount of the then outstanding Securities to the Company and the Trustee stating that such notice is a "Notice of Default";
- (f) there is a default under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any Indebtedness for money borrowed by the Company or any Subsidiary of the Company (or the payment of which is guaranteed by the Company or any Subsidiary of the Company), whether such Indebtedness or guarantee now exists or is created after the Issuance Date, which default (i) is caused by a failure to pay when due principal of or interest on such Indebtedness within the grace period provided for in such Indebtedness (which failure continues beyond any applicable grace period) (a "Payment Default") or (ii) results in the acceleration of such Indebtedness prior to its express maturity (without such acceleration being rescinded or annulled) and, in each case, the principal amount of any such Indebtedness, together with the principal amount of any other such Indebtedness under which there is a Payment Default or the maturity of which has been so accelerated, aggregates \$10 million or more;

(g) a final non-appealable judgment or final non-appealable judgments (other than any judgment as to which a reputable insurance company has accepted full liability) for the payment of money are entered by a court or courts of competent jurisdiction against the Company or any Subsidiary of the Company and remain undischarged for a period (during which execution shall not be effectively stayed) of 60 days, provided that the aggregate of all such judgments exceeds \$10 million;

(h) the Company or any Material Subsidiary pursuant to or within the meaning of any Bankruptcy Law: (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case in which it is the debtor, (iii) consents to the appointment of a Bankruptcy Custodian of it or for all or substantially all of its property, (iv) makes a general assignment for the benefit of its creditors, or (v) makes the admission in writing that it generally is unable to pay its debts as the same become due; or

(i) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that: (i) is for relief against the Company or any Material Subsidiary in an involuntary case, (ii) appoints a Bankruptcy Custodian of the Company or any Material Subsidiary or for all or substantially all of its property, and the order or decree remains unstayed and in effect for 60 days or (iii) orders the liquidation of the Company or any Material Subsidiary, and the order or decree remains unstayed and in effect for 60 days.

The term "Bankruptcy Law" means Title 11, U.S. Code or any similar Federal or state law for the relief of debtors. The term "Bankruptcy Custodian" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

SECTION 8.02 Acceleration. If an Event of Default (other than an Event of Default specified in clauses (h) and (i) of Section 8.01 hereof with respect to the Company) occurs and is continuing, the Trustee by notice to the Company, or the Securityholders of at least 25% in principal amount of the then-outstanding Securities by notice to the Company and the Trustee, may declare all the Securities to be due and payable. Upon such declaration, the principal of, premium, if any, and accrued and unpaid interest shall be due and payable immediately. If an Event of Default specified in clause (h) or (i) of

Section 8.01 hereof occurs with respect to the Company, such an amount shall ipso facto become and be immediately due and payable without any declaration or other act on the part of the Trustee or any Securityholder. The Securityholders of a majority in aggregate principal amount of the then-outstanding Securities by notice to the Trustee may rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree, if all amounts payable to the Trustee pursuant to Section 9.07 hereof have been paid and if all existing Events of Default have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration.

SECTION 8.03 Other Remedies. If an Event of Default occurs and is continuing, the Trustee may pursue any available remedy to collect the payment of principal or interest or to enforce the performance of any provision of the Securities or this Indenture.

The Trustee may maintain a proceeding even if it does not possess any of the Securities or does not produce any of them in the proceeding. A delay or omission by the Trustee or any Securityholder in exercising any right or remedy accruing upon an Event of Default shall not impair the right or remedy or constitute a waiver of or acquiescence in the Event of Default. All remedies are cumulative to the extent permitted by law.

SECTION 8.04 Waiver of Past Defaults. The Securityholders of a majority in aggregate principal amount of the then-outstanding Securities by notice to the Trustee may waive an existing Default or Event of Default and its consequences except a continuing Default or Event of Default in the payment of the Designated Event Payment or the principal of, or interest. When a Default or Event of Default is waived, it is cured and ceases; but no such waiver shall extend to any subsequent or other Default or impair any right consequent thereon.

SECTION 8.05 Control by Majority. The Securityholders of a majority in principal amount of the then-outstanding Securities may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on it. However, the Trustee may refuse to follow any direction that conflicts with law or this Indenture, is unduly prejudicial to the rights of other Securityholders, or would involve the Trustee in personal liability.

SECTION 8.06 Limitation on Suits. A Securityholder may pursue a remedy with respect to this Indenture or the Securities only if:

- (a) the Securityholder gives to the Trustee notice of a continuing Event of Default;
- (b) the Securityholders of at least 25% in principal amount of the then-outstanding Securities make a request to the Trustee to pursue the remedy;
- (c) such Securityholder or Securityholders offer to the Trustee indemnity satisfactory to the Trustee against any loss, liability or expense;
- (d) the Trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- (e) during such 60-day period the Securityholders of a majority in principal amount of the then-outstanding Securities do not give the Trustee a direction inconsistent with the request.

A Securityholder may not use this Indenture to prejudice the rights of another Securityholder or to obtain a preference or priority over another Securityholder.

SECTION 8.07 Rights of Securityholders to Receive Payment. Notwithstanding any other provision of this Indenture, the right of any Securityholder of a Security to receive payment of principal and interest on or after the respective due dates expressed in the Security, or to bring suit for the enforcement of any such payment on or after such respective dates, shall not be impaired or affected without the consent of the Securityholder made pursuant to this Section.

SECTION 8.08 Collection Suit by Trustee. If an Event of Default specified in Section 8.01 (a), (b) or (c) occurs and is continuing, the Trustee may recover judgment in its own name and as trustee of an express trust against the Company for the whole amount of principal and interest and such further amount as shall be sufficient to cover the costs and, to the extent lawful, expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel.

SECTION 8.09 Trustee May File Proofs of Claim. The Trustee may file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the Trustee and the Securityholders allowed in any judicial proceedings relative to the Company, its creditors or its property. Nothing contained herein shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Securityholder any plan of reorganization, arrangement, adjustment or composition affecting the Securities or the rights of any Securityholder thereof, or to authorize the Trustee to vote in respect of the claim of any Securityholder in any such proceeding.

SECTION 8.10 Priorities. If the Trustee collects any money pursuant to this Article, it shall pay out the money in the following order:

First: to the Trustee for amounts due under Section 9.07 hereof;

Second: to the holders of Senior Debt to the extent required by Article VI;

Third: to the Securityholders, for amounts due and unpaid on the Securities for principal and interest, ratably, according to the amounts due and payable on the Securities for principal and interest, respectively; and

Fourth: to the Company.

Except as otherwise provided in Section 2.12 hereof, the Trustee may fix a record date and payment date for any payment to Securityholders made pursuant to this Section.

SECTION 8.11 Undertaking for Costs. In any suit for the enforcement of any right or remedy under this Indenture or in any suit against the Trustee for any action taken or omitted by it as a Trustee, a court in its discretion may require the filing by any party litigant in the suit of an undertaking to pay the costs of the suit, and the court in its discretion may assess reasonable costs, including reasonable attorneys' fees, against any party litigant in the suit, having due regard to the merits and good faith of the claims or defenses made by the party litigant. This Section does not apply to a suit by the Trustee, a suit by a holder pursuant to Section 8.07 hereof, or a suit by Securityholders of more than 10% in principal amount of the then-outstanding Securities.

ARTICLE IX

Trustee

SECTION 9.01 Duties of Trustee.

- (a) If an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by this Indenture, and use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs.
- (b) Except during the continuance of an Event of Default: (i) the Trustee need perform only those duties that are specifically set forth in this Indenture and no others and (ii) in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed therein, upon certificates or opinions furnished to the Trustee and, if required by the terms hereof, conforming to the requirements of this Indenture. However, the Trustee shall examine the certificates and opinions to determine whether or not they conform to the requirements of this Indenture.
- (c) The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act, or its own willful misconduct, except that: (i) this paragraph does not limit the effect of paragraph (b) of this Section 9.01; (ii) the Trustee shall not be liable for any error of judgment made in good faith by a Trust Officer, unless it is proved that the Trustee was negligent in ascertaining the pertinent facts and (iii) the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it pursuant to Section 8.05 hereof.
- (d) Every provision of this Indenture that in any way relates to the Trustee is subject to paragraphs (a), (b) and (c) of this Section 9.01. No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.
- (e) The Trustee may refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense.
- (f) The Trustee shall not be liable for interest on any money received by it except as the Trustee may agree in writing with the Company. Money held in trust by the Trustee need not be segregated from other funds except to the extent required by law.

SECTION 9.02 Rights of Trustee.

- (a) The Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document.
- (b) Before the Trustee acts or refrains from acting, it (unless other evidence be herein specifically prescribed) may require an Officers' Certificate or an Opinion of Counsel, or both. The

Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on such Officers' Certificate or Opinion of Counsel.

(c) The Trustee may act through agents and nominees and shall not be responsible for the misconduct or negligence of any agent appointed with due care.

(d) The Trustee shall not be liable for any action it takes or omits to take in good faith which it believes to be authorized or within its rights or powers.

(e) The Trustee shall not be charged with knowledge of any Event of Default under subsection (d), (e), (f), (g), (h) or (i) of Section 8.01 unless either (1) a Trust Officer assigned to its Corporate Trust Department shall have actual knowledge thereof, or (2) the Trustee shall have received notice thereof in accordance with Section 12.02 hereof from the Company or any holder.

SECTION 9.03 Individual Rights of Trustee. The Trustee in its individual or any other capacity may become the owner or pledgee of Securities and may otherwise deal with the Company or an Affiliate with the same rights it would have if it were not Trustee. Any Agent may do the same with like rights. However, the Trustee is subject to Sections 9.10 and 9.11 hereof.

SECTION 9.04 Trustee's Disclaimer. The Trustee makes no representation as to the validity or adequacy of this Indenture or the Securities, it shall not be accountable for the Company's use of the proceeds from the Securities, and it shall not be responsible for any statement of the Company in the Indenture or any statement in the Securities other than its authentication.

SECTION 9.05 Notice of Defaults. If a Default or Event of Default occurs and is continuing and if it is known to the Trustee, the Trustee shall mail to Securityholders a notice of the Default or Event of Default within 90 days after it occurs. Except in the case of a Default or Event of Default in payment on any Security, the Trustee may withhold the notice if and so long as a committee of its Trust Officers in good faith determines that withholding the notice is in the interests of Securityholders.

SECTION 9.06 Reports by Trustee to Securityholders. Within 60 days after the reporting date stated in Section 12.10, the Trustee shall mail to Securityholders a brief report dated as of such reporting date that complies with TIA Section 313(a) if and to the extent required by such Section 313(a). The Trustee also shall comply with TIA Section 313(b)(2). The Trustee shall also transmit by mail all reports as required by TIA Section 313(c).

A copy of each report at the time of its mailing to Securityholders shall be filed with the SEC and each stock exchange on which the Securities are listed. The Company shall notify the Trustee when the Securities are listed on any stock exchange or automated quotation system.

SECTION 9.07 Compensation and Indemnity. The Company shall pay to the Trustee from time to time reasonable compensation for its services hereunder. The Trustee's compensation shall not be limited by any law on compensation of a trustee of an express trust. The Company shall reimburse the Trustee upon request for all reasonable disbursements, expenses and advances

incurred or made by it. Such disbursements and expenses may include the reasonable disbursements, compensation and expenses of the Trustee's agents and counsel.

The Company shall indemnify the Trustee and its officers, directors, employees and agents against any loss or liability incurred by it except as set forth in the next paragraph. The Trustee shall notify the Company promptly of any claim for which it may seek indemnity. The Company shall defend the claim and the Trustee shall cooperate in the defense. The Trustee may have separate counsel and the Company shall pay the reasonable fees, disbursements and expenses of such counsel. The Company need not pay for any settlement made without its consent, which consent shall not be unreasonably withheld.

The Company need not reimburse any expense or indemnify against any loss or liability incurred by the Trustee through negligence, bad faith or willful misconduct.

To secure the Company's payment obligations in this Section, the Trustee shall have a lien prior to the Securities on all money or property held or collected by the Trustee, except money or property held in trust to pay principal and interest.

When the Trustee incurs expenses or renders services after an Event of Default specified in Section 8.01(h) or (i) occurs, the expenses and the compensation for the services are intended to constitute expenses of administration under any Bankruptcy Law.

The provisions of this Section 9.07 shall survive the termination of this Indenture, as provided by Section 10.01 hereof.

SECTION 9.08 Replacement of Trustee. A resignation or removal of the Trustee and appointment of a successor Trustee shall become effective only upon the successor Trustee's acceptance of appointment as provided in this Section.

The Trustee may resign by so notifying the Company. The Securityholders of a majority in principal amount of the then-outstanding Securities may remove the Trustee by so notifying the Trustee and the Company. The Company may remove the Trustee if:

- (a) the Trustee fails to comply with Section 9.10 hereof, unless the Trustee's duty to resign is stayed as provided in TIA Section 310(b);
- (b) the Trustee is adjudged a bankrupt or an insolvent or an order for relief is entered with respect to the Trustee under any Bankruptcy Law;
- (c) a Bankruptcy Custodian or public officer takes charge of the Trustee or its property, or
- (d) the Trustee becomes incapable of acting.

If the Trustee resigns or is removed or if a vacancy exists in the office of Trustee for any reason, the Company shall promptly appoint a successor Trustee. Within one year after the successor Trustee takes office, the Securityholders of a majority in principal amount of the then-outstanding Securities may appoint a successor Trustee to replace the successor Trustee appointed by the Company.

If a successor Trustee does not take office within 60 days after the retiring Trustee resigns or is removed, the retiring Trustee, the Company or the Securityholders of at least 10% in principal amount of the then-outstanding Securities may petition any court of competent jurisdiction for the appointment of a successor Trustee.

If the Trustee fails to comply with Section 9.10 hereof, unless the Trustee's duty to resign is stayed as provided in TIA Section 310(b), any Securityholder who has been a bona fide holder of a Security for at least six months may petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Company. Thereupon the resignation or removal of the retiring Trustee shall become effective, the Company shall promptly pay all amounts due and payable to the retiring Trustee, and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture. The successor Trustee shall mail a notice of its succession to Securityholders. The retiring Trustee shall promptly transfer all property held by it as Trustee to the successor Trustee, subject to the lien provided for in

Section 9.07 hereof. Notwithstanding the resignation or replacement of the Trustee pursuant to this Section 9.08, the Company's obligations under Section 9.07 hereof shall continue for the benefit of the retiring Trustee with respect to expenses and liabilities incurred by it prior to such resignation or replacement.

SECTION 9.09 Successor Trustee by Merger, Etc. If the Trustee consolidates, merges or converts into, or transfers all or substantially all of its corporate trust business (including the administration of the Indenture) to, another corporation, the successor corporation without any further act shall be the successor Trustee.

SECTION 9.10 Eligibility; Disqualification. This Indenture shall always have a Trustee who satisfies the requirements of TIA Section 310(a)(1) and (5). The Trustee (or if the Trustee is a member of a bank holding system, its bank holding company) shall always have a combined capital and surplus as stated in Section 12.10 hereof. The Trustee is subject to TIA Section 310(b).

SECTION 9.11 Preferential Collection of Claims Against Company. The Trustee is subject to TIA Section 311(a), excluding any credit or relationship listed in TIA Section 311(b). A Trustee who has resigned or been removed shall be subject to TIA Section 311(a) to the extent indicated therein.

SECTION 9.12 Sections Applicable to Registrar, Paying Agent and Conversion Agent.

The term "Trustee" as used in Sections 6.3, 9.1, 9.2, 9.3, 9.4 and 9.7 hereof shall (unless the

context requires otherwise) be construed as extending to and including the Trustee acting in its capacity, if any, as Registrar, Paying Agent and Conversion Agent.

ARTICLE X

Discharge of Indenture

SECTION 10.01 Termination of Company's Obligation. This Indenture shall cease to be of further effect (except that the Company's obligations under Sections 9.07 and 10.02 hereof shall survive) when all outstanding Securities theretofore authenticated and issued have been delivered to the Trustee for cancellation and the Company has paid all sums payable hereunder.

Thereupon, the Trustee upon request of the Company, shall acknowledge in writing the discharge of the Company's obligations under this Indenture, except for those surviving obligations specified above.

SECTION 10.02 Repayment to Company. The Trustee and the Paying Agent shall promptly pay to the Company upon request any excess money or securities held by them at any time.

The Trustee and the Paying Agent shall pay to the Company upon request any money held by them for the payment of principal or interest that remains unclaimed for two years after the date upon which such payment shall have become due; provided, however, that the Company shall have first caused notice of such payment to the Company to be mailed to each Securityholder entitled thereto no less than 30 days prior to such payment. After payment to the Company, the Trustee and the Paying Agent shall have no further liability with respect to such money and Securityholders entitled to the money must look to the Company for payment as general creditors unless any applicable abandoned property law designates another person.

ARTICLE XI

Amendments, Supplements and Waivers

SECTION 11.01 Without Consent of Securityholders. The Company and the Trustee may amend or supplement this Indenture or the Securities without the consent of any Securityholder:

- (a) to cure any ambiguity, defect or inconsistency;
- (b) to comply with Sections 5.13 and 7.01 hereof;
- (c) to provide for uncertificated Securities in addition to certificated Securities;
- (d) to make any change that does not adversely affect the legal rights hereunder of any Securityholder;

(e) to qualify this Indenture under the TIA or to comply with the requirements of the SEC in order to maintain the qualification of the Indenture under the TIA; or

(f) to make any change that provides any additional rights or benefits to the holders of Securities.

An amendment under this Section may not make any change that adversely affects the rights under Article VI of any holder of Senior Debt then outstanding unless the holders of such Senior Debt (or any group or Representative thereof authorized to give a consent) consent to such change.

SECTION 11.02 With Consent of Securityholders. Subject to Section 8.07 hereof, the Company and the Trustee may amend or supplement this Indenture or the Securities with the written consent (including consents obtained in connection with any tender or exchange offer for Securities) of the Securityholders of at least a majority in principal amount of the then-outstanding Securities. Subject to Sections 8.04 and 8.07 hereof, the Securityholders of a majority in principal amount of the Securities then outstanding may also by their written consent (including consents obtained in connection with any tender offer or exchange offer for Securities) waive any existing Default as provided in Section 8.04 or waive compliance in a particular instance by the Company with any provision of this Indenture or the Securities. However, without the consent of each Securityholder affected, an amendment, supplement or waiver under this Section may not (with respect to any Securities held by a nonconsenting Securityholder):

(a) reduce the amount of Securities whose Securityholders must consent to an amendment, supplement or waiver;

(b) reduce the rate of or change the time for payment of interest on any Security;

(c) reduce the principal of or change the fixed maturity of any Security or alter the redemption provisions with respect thereto;

(d) make any Security payable in money other than that stated in the Security;

(e) make any change in Section 8.04, 8.07 or 11.02 hereof (this sentence);

(f) waive a default in the payment of principal of, premium, if any, or interest (other than as provided in Section 8.04);

(g) waive a redemption payment payable on any Security;

(h) make any change that impairs the right of Securityholders to convert Securities into Common Stock of the Company; or

(i) modify the conversion or subordination provisions set forth in Article V and Article VI, respectively, in a manner adverse to the holders of the Securities.

To secure a consent of the Securityholders under this Section 11.02, it shall not be necessary for the Securityholders to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if such consent approves the substance thereof.

An amendment under this Section may not make any change that adversely affects the rights under Article VI of any holder of Senior Debt then outstanding unless the holders of such Senior Debt (or any group or Representative thereof authorized to give a consent) consent to such change.

Neither the Company nor any of its Subsidiaries shall, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any holder of Securities or as an inducement to any consent, waiver or amendment of any of the terms or provisions of this Indenture or the Securities unless such consideration is offered to be paid or agreed to be paid to all holders of the Securities that consent, waive or agree to amend in the time frame set forth in the solicitation documents relating to such consent, waiver or agreement.

After an amendment, supplement or waiver under this Section becomes effective, the Company shall mail to Securityholders a notice briefly describing the amendment or waiver.

SECTION 11.03 Compliance with Trust Indenture Act. Every amendment to this Indenture or the Securities shall be set forth in a supplemental indenture that complies with the TIA as then in effect.

SECTION 11.04 Revocation and Effect of Consents. Until an amendment, supplement or waiver becomes effective, a consent to it by a Securityholder of a Security is a continuing consent by the Securityholder and every subsequent Securityholder of a Security or portion of a Security that evidences the same debt as the consenting Securityholder's Security, even if notation of the consent is not made on any Security. However, any such Securityholder or subsequent Securityholder may revoke the consent as to such Securityholder's Security or portion of a Security if the Trustee receives the notice of revocation before the date on which the Trustee receives an Officers' Certificate certifying that the Securityholders of the requisite principal amount of Securities have consented to the amendment, supplement or waiver.

The Company may, but shall not be obligated to, fix a record date for the purpose of determining the Securityholders entitled to consent to any amendment, supplement or waiver. If a record date is fixed, then notwithstanding the provisions of the immediately preceding paragraph, those persons who were Securityholders at such record date (or their duly designated proxies), and only those persons, shall be entitled to consent to such amendment, supplement or waiver or to revoke any consent previously given, whether or not such persons continue to be Securityholders after such record date. No consent shall be valid or effective for more than 90 days after such record date unless consents from Securityholders of the principal amount of Securities required hereunder for such amendment or waiver to be effective shall have also been given and not revoked within such 90-day period.

After an amendment, supplement or waiver becomes effective it shall bind every Securityholder, unless it is of the type described in any of clauses (a) through (i) of Section 11.02

hereof. In such case, the amendment or waiver shall bind each Securityholder who has consented to it and every subsequent Securityholder that evidences the same debt as the consenting Securityholder's Security.

SECTION 11.05 Notation on or Exchange of Securities. The Trustee may place an appropriate notation about an amendment or waiver on any Security thereafter authenticated. The Company in exchange for all Securities may issue and the Trustee shall authenticate new Securities that reflect the amendment or waiver.

SECTION 11.06 Trustee Protected. The Trustee shall sign all supplemental indentures, except that the Trustee may, but need not, sign any supplemental indenture that adversely affects its rights. As a condition to executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trust created by this Indenture, the Trustee shall be entitled to receive (in addition to those documents required by Section 12.04), and (subject to Section 315 of the TIA) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture.

ARTICLE XII

Miscellaneous

SECTION 12.01 Trust Indenture Act Controls. If any provision of this Indenture limits, qualifies or conflicts with another provision which is deemed to be incorporated in this Indenture by the TIA, the incorporated provision shall control.

SECTION 12.02 Notices. Any notice or communication by the Company or the Trustee to the other is duly given if in writing and delivered in person or mailed by first-class mail or overnight delivery to the other's address stated in Section 12.10 hereof. The Company or the Trustee by notice to the other may designate additional or different addresses for subsequent notices or communications.

Any notice or communication to a Securityholder shall be mailed by first-class mail or overnight delivery to his address shown on the register kept by the Registrar. Failure to mail a notice or communication to a Securityholder or any defect in it shall not affect its sufficiency with respect to other Securityholders.

If a notice or communication is mailed in the manner provided above within the time prescribed, it is duly given, whether or not the addressee receives it.

If the Company mails a notice or communication to Securityholders, it shall mail a copy to the Trustee and each Agent at the same time.

All other notices or communications shall be in writing.

In case by reason of the suspension of regular mail service, or by reason of any other cause, it shall be impossible to mail any notice as required by the Indenture, then such method of notification as shall be made with the approval of the Trustee shall constitute a sufficient mailing of such notice.

SECTION 12.03 Communication by Securityholders with Other Securityholders.

Securityholders may communicate pursuant to TIA Section 312(b) with other Securityholders with respect to their rights under this Indenture or the Securities. The Company, the Trustee, the Registrar and anyone else shall have the protection of TIA Section 312(c).

SECTION 12.04 Certificate and Opinion as to Conditions Precedent. Upon any request or application by the Company to the Trustee to take any action under this Indenture, the Company shall furnish to the Trustee:

- (a) an Officers' Certificate stating that, in the opinion of the signers, all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with; and
- (b) an Opinion of Counsel stating that, in the opinion of such counsel, all such conditions precedent have been complied with.

SECTION 12.05 Statements Required in Certificate or Opinion. Each certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than pursuant to Section 4.03) shall include:

- (a) a statement that the person signing such certificate or rendering such opinion has read such covenant or condition;
- (b) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;
- (c) a statement that, in the opinion of such person, such person has made such examination or investigation as is necessary to enable such person to express an informed opinion as to whether or not such covenant or condition has been complied with; and
- (d) a statement as to whether or not, in the opinion of such person, such condition or covenant has been complied with.

SECTION 12.06 Rules by Trustee and Agents. The Trustee may make reasonable rules for action by, or a meeting of, the Securityholders. The Registrar or Paying Agent may make reasonable rules and set reasonable requirements for its functions.

SECTION 12.07 Legal Holidays. A "Legal Holiday" is a Saturday, a Sunday or a day on which banking institutions in the State of New York or the State of California are not required to be open. If a payment date is a Legal Holiday at a place of payment, payment may be made at that

place on the next succeeding day that is not a Legal Holiday, and no interest shall accrue for the intervening period. If any other operative date for purposes of this Indenture shall occur on a Legal Holiday then for all purposes the next succeeding day that is not a Legal Holiday shall be such operative date.

SECTION 12.08 No Recourse Against Others. A director, officer, employee or shareholder, as such, of the Company shall not have any liability for any obligations of the Company under the Securities or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder by accepting a Security waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Securities.

SECTION 12.09 Counterparts. This Indenture may be executed in any number of counterparts and by the parties hereto in separate counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement.

SECTION 12.10 Variable Provisions. "Officer" means the Chairman of the Board, the President, any Vice-President (whether or not designated by a number or a word or words added before or after the title "Vice President"), the Chief Financial Officer, the Treasurer, the Secretary, any Assistant Treasurer or any Assistant Secretary of the Company.

The first certificate pursuant to Section 4.03 hereof shall be for the fiscal year ending on December 31, 2002.

The reporting date for Section 9.06 hereof is March 15 of each year. The first reporting date is March 15, 2003.

The Trustee (or if the Trustee is a member of a bank holding company system, its bank holding company) shall always have a combined capital and surplus of at least \$50,000,000 as set forth in its most recent published annual report of condition.

The Company's address for purposes of the Indenture is:

Chief Financial Officer
Intevac, Inc.
3550 Bassett Street
Santa Clara, California 95054 Telephone Number: (408) 986-9888 Telefax Number: (408) 988-8145

The Trustee's address is:

State Street Bank and Trust Company of California, N. A.

633 West 5th Street, 12th Floor
Los Angeles, CA 90071

Attention: Corporate Trust Administration

(Intevac, Inc. 6-1/2% Convertible Subordinated Notes due 2009)

Telephone Number: (213) 362-7334 Telefax Number: (213) 362-7357

The Company or the Trustee may change its address for purposes of this Indenture by written notice to the other.

SECTION 12.11 GOVERNING LAW. THIS INDENTURE AND THE SECURITIES ISSUED HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

SECTION 12.12 No Adverse Interpretation of Other Agreements. This Indenture may not be used to interpret another indenture, loan or debt agreement of the Company or an Affiliate. Any such indenture, loan or debt agreement may not be used to interpret this Indenture.

SECTION 12.13 Successors. All agreements of the Company in this Indenture and the Securities shall bind its successor. All agreements of the Trustee in this Indenture shall bind its successor.

SECTION 12.14 Severability. In case any provision in this Indenture or in the Securities shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

SECTION 12.15 Table of Contents, Headings, Etc. The Table of Contents and headings of the Articles and Sections of this Indenture have been inserted for convenience of reference only, are not to be considered a part hereof, and shall in no way modify or restrict any of the terms or provisions hereof.

ARTICLE XIII

Repurchase Offer

SECTION 13.01 Repurchase Offer.

(a) In the event that, pursuant to Section 4.09 hereof, the Company shall commence a Repurchase Offer, the Company shall follow the procedures in this Section 13.01.

(b) The Repurchase Offer shall remain open for a period specified by the Company which shall be no less than 30 calendar days and no more than 40 calendar days prior to the Repurchase Payment Date, except to the extent that a longer period is required by applicable law. The first day of such period is referred to as the "Repurchase Commencement Date". On the Repurchase Payment Date the Company shall purchase the principal amount of any Securities required to be purchased pursuant to Section 4.09 hereof (the "Repurchase Offer Amount").

(c) If the Repurchase Payment Date is on or after an interest payment record date and on or before the related interest payment date, any accrued interest, to the related interest payment date will be paid to the person in whose name a Security is registered at the close of business on such record date, and no additional interest, will be payable to Securityholders who tender Securities pursuant to the Repurchase Offer.

SECTION 13.02 Repurchase Notice.

(a) The Company shall provide the Trustee with written notice of the Repurchase Offer at least 10 Business Days prior to the mailing of the notice of the Repurchase Offer to the Securityholders.

(b) On or before the date that is 90 days prior to the Repurchase Payment Date, the Company or the Trustee (at the request and expense of the Company) shall send, by first class mail, a notice to each of the Securityholders, which shall govern the terms of the Repurchase Offer and shall state:

(i) that the Repurchase Offer is being made pursuant to Section 13.01 and Section 4.09 hereof and that all Securities tendered will be accepted for payment;

(ii) the Repurchase Payment (as determined in accordance with Section 4.09 hereof), the length of time the Repurchase Offer will remain open and the Repurchase Payment Date;

(iii) that any Security or portion thereof not tendered or accepted for payment will continue to accrue interest;

(iv) that, unless the Company defaults in the payment of the Repurchase Payment, any Security or portion thereof accepted for payment pursuant to the Repurchase Offer shall cease to accrue interest after the Repurchase Payment Date;

(v) that Securityholders electing to have a Security or portion thereof purchased pursuant to any Repurchase Offer will be required to surrender the Security, with the form entitled "Option of Securityholder To Elect Purchase" on the reverse of the Security completed, to the Paying Agent at the address specified in the notice prior to the close of business on the third Business Day preceding the Repurchase Payment Date;

(vi) that Securityholders will be entitled to withdraw their election if the Paying Agent receives, not later than the close of business on the second Business Day preceding the Repurchase Payment Date, or such longer period as may be required by law, a letter or a telegram, telex, facsimile transmission (receipt of which is confirmed and promptly followed by a letter) setting forth the name of the Securityholder, the principal amount of the Security or portion thereof the Securityholder delivered for purchase and a statement that such Securityholder is withdrawing his election to have the Security or portion thereof purchased; and

(vii) that Securityholders whose Securities are being purchased only in part will be issued new Securities equal in principal amount to the unpurchased portion of the Securities surrendered, which unpurchased portion must be equal to \$1,000 in principal amount or an integral multiple thereof.

In addition, the notice shall contain all instructions and materials that the Company shall reasonably deem necessary to enable such Securityholders to tender Securities pursuant to the Repurchase Offer.

SECTION 13.03 Deposit of Repurchase Offer Amount.

On or prior to the Repurchase Payment Date, the Company shall irrevocably deposit with the Trustee or a Paying Agent in immediately available funds an amount equal to the Repurchase Payment to be held for payment in accordance with the terms of this Section 13.03. On the Repurchase Payment Date, the Company shall, to the extent lawful, (i) accept for payment the Securities or portions thereof tendered pursuant to the Repurchase Offer, (ii) deliver or cause to be delivered to the Trustee Securities so accepted and (iii) deliver to the Trustee an Officers' Certificate stating that such Securities or portions thereof have been accepted for payment by the Company in accordance with the terms of this Section 13.03. The Paying Agent shall promptly (but in any case not later than five calendar days after the Repurchase Payment Date) mail or deliver to each tendering Securityholder an amount equal to the Repurchase Payment of the Securities tendered by such Securityholder, and the Trustee shall promptly authenticate and mail or deliver to such Securityholders a new Security equal in principal amount to any unpurchased portion of the Security surrendered, if any; provided, that each new Security shall be in a principal amount of \$1,000 or an integral multiple thereof. Any Securities not so accepted shall be promptly mailed or delivered by or on behalf of the Company to the holder thereof. The Company will publicly announce the results of the Repurchase Offer on, or as soon as practicable after, the Repurchase Payment Date.

SECTION 13.04 Compliance with Applicable Laws.

The Repurchase Offer shall be made by the Company in compliance with all applicable provisions of the Exchange Act, and all applicable tender offer rules promulgated thereunder, and shall include all instructions and materials that the Company shall reasonably deem necessary to enable such Securityholders to tender their Securities.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed, all as of the date first written above.

**INTEVAC, INC.,
AS COMPANY,**

By: /s/ Charles B. Eddy III

Name: Charles Eddy
Title: CFO

**STATE STREET BANK AND TRUST
COMPANY OF CALIFORNIA, N.A.,
AS TRUSTEE,**

By: /s/ Joni D'Amico

Name: Joni D'Amico
Title: Vice President

EXHIBIT A

FORM OF CONVERTIBLE SUBORDINATED NOTE

[FORM OF FACE OF NOTE]

[GLOBAL SECURITIES LEGEND]

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO THE COMPANY OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO., OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC) ANY TRANSFER, PLEDGE OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

TRANSFERS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS IN WHOLE, BUT NOT IN PART, TO NOMINEES OF DTC OR TO A SUCCESSOR THEREOF OR SUCH SUCCESSOR'S NOMINEE AND TRANSFERS OF PORTIONS OF THIS GLOBAL SECURITY SHALL BE LIMITED TO TRANSFERS MADE IN ACCORDANCE WITH THE RESTRICTIONS SET FORTH IN THE INDENTURE REFERRED TO ON THE REVERSE HEREOF.

No. _____ Cusip No.

INTEVAC, INC.

6-1/2% CONVERTIBLE SUBORDINATED NOTE DUE 2009

Intevac, Inc., a California corporation (the "Company") for value received promises to pay to _____ or its registered assigns, the principal sum [indicated on Schedule A hereof]* [of _____ Dollars]** on March 1, 2009 at the office or agency of the Company maintained for that purpose in the Borough of Manhattan, The City of New York, State of New York, and to pay interest on said principal sum at the rate of 6-1/2% per annum, as more specifically described on the reverse hereof.

Interest Payment Dates: March 1 and September 1, commencing September 1, 2002. Record Dates: February 15 and August 15.

Reference is hereby made to the further provisions of this Note set forth on the reverse hereof, which further provisions shall for all purposes have the same effect as if set forth at this place.

* Applicable to Global Securities only.

** Applicable to certificated Securities only.

IN WITNESS WHEREOF, Intevac, Inc. has caused this Note to be signed manually or by facsimile by its duly authorized Officers.

Dated: _____

INTEVAC, INC.

By: _____

By: _____

TRUSTEE'S CERTIFICATE OF AUTHENTICATION

This is one of the 6-1/2% Convertible Subordinated Notes due 2009 described in the within-mentioned Indenture.

State Street Bank and Trust Company of California, N.A., as Trustee

By: _____

Authorized Officer

A-3

INTEVAC, INC.

6-1/2% CONVERTIBLE SUBORDINATED NOTE DUE 2009

1. Interest. INTEVAC, INC., a California corporation (the "Company"), is the issuer of the 6-1/2% Convertible Subordinated Notes due 2009 (the "Notes"), of which this Note is a part. The Company promises to pay interest on the Notes in cash semiannually on each March 1 and September 1, commencing on September 1, 2002, to holders of record on the immediately preceding February 15 and August 15.

Interest on the Notes will accrue from the most recent date to which interest has been paid or duly provided for, or if no interest has been paid or duly provided for, from July 12, 2002 until payment of said principal sum has been made or duly provided for. Interest will be computed on the basis of a 360-day year of twelve 30-day months. To the extent lawful, the Company shall pay interest (including post-petition interest in any proceeding under any Bankruptcy Law) on overdue installments of interest (without regard to any applicable grace period) at the rate borne by the Notes, compounded annually.

2. Method of Payment. The Company will pay interest on the Notes (except defaulted interest) to the persons who are registered holders of the Notes at the close of business on the record date for the next interest payment date even though Notes are canceled after the record date and on or before the interest payment date. The Securityholder hereof must surrender Notes to a Paying Agent to collect principal payments. The Company will pay principal and interest in money of the United States that at the time of payment is legal tender for payment of public and private debts. However, the Company may pay principal and interest by check payable in such money. It may mail a check for interest to a holder's registered address; provided that a holder of Notes with an aggregate principal amount in excess of \$2,000,000 will be paid by wire transfer in immediately available funds at the election of the holder.

3. Paying Agent and Registrar. The Trustee will act initially as Paying Agent, Registrar and Conversion Agent. The Company may change any Paying Agent, Registrar, co-registrar or Conversion Agent without prior notice. The Company or any of its Affiliates may act in any such capacity.

4. Indenture. The Company issued the Notes under an indenture, dated as of July 12, 2002 (the "Indenture"), between the Company and State Street Bank and Trust Company of California, N.A., as Trustee. The terms of the Notes include those stated in the Indenture and those incorporated into the Indenture from the Trust Indenture Act of 1939, and rules and regulations thereunder. The Notes are subject to, and qualified by, all such terms, certain of which are summarized hereon, and Securityholders are referred to the Indenture and such Act for a statement of such terms. The Notes are general unsecured obligations of the Company limited to an aggregate principal amount at maturity of \$29,543,000. The Indenture does not limit the ability of the Company or any of its Subsidiaries to incur indebtedness or to grant security interests or liens in respect of their assets.

5. Optional Redemption. The Notes are subject to redemption at the option of the Company, in whole or from time to time in part (in any integral multiple of \$1,000), on any date on or after March 1, 2005 at 100% of the principal amount, but excluding the redemption date (subject to the right of holders of record on the relevant record date to receive interest due on an interest payment date). On or after the redemption date, interest will cease to accrue on the Notes, or portion thereof, called for redemption.

6. Notice of Redemption. Notice of redemption will be mailed at least 15 days but not more than 60 days before the redemption date to each holder of the Notes to be redeemed at his address of record. The Notes in denominations larger than \$1,000 may be redeemed in part but only in integral multiples of \$1,000. In the event of a redemption of less than all of the Notes, the Notes will be chosen for redemption by the Trustee in accordance with the Indenture. Unless the Company defaults in making such redemption payment, or the Paying Agent is prohibited from making such payment pursuant to the Indenture, by law or otherwise, interest shall cease to accrue on the Notes or portions of them called for redemption on and after the redemption date. If this Note is redeemed subsequent to a record date with respect to any interest payment date specified above and on or prior to such interest payment date, then any accrued interest will be paid to the person in whose name this Note is registered at the close of business on such record date.

7. Mandatory Redemption. The Company will not be required to make mandatory redemption payments with respect to the Notes. There are no sinking fund payments with respect to the Notes.

8. Repurchase at Option of Holder. If there is a Designated Event, the Company shall be required to offer to purchase on the Designated Event Payment Date all outstanding Notes at a purchase price equal to 101% of the principal amount thereof on the date of purchase, plus accrued and unpaid interest to the Designated Event Payment Date. Holders of Notes that are subject to an offer to purchase will be mailed a Designated Event Offer from the Company prior to any related Designated Event Payment Date and may elect to have such Notes or portions thereof in authorized denominations purchased by completing the form entitled "Option of Securityholder To Elect Purchase" appearing below. Securityholders have the right to withdraw their election by delivering a written notice of withdrawal to the Company or the Paying Agent in accordance with the terms of the Indenture.

If there is a Triggering Distribution (as defined in the Indenture), the Company shall be required to offer to purchase on the Repurchase Payment Date all outstanding Notes at a purchase price equal to 100% of the principal amount thereof together with any accrued and unpaid interest to the Repurchase Payment Date. Holders of Notes that are subject to an offer to purchase will be mailed a Repurchase Offer from the Company on or before the date that is 90 days prior to any related Repurchase Payment Date and may elect to have such Notes or portions thereof in authorized denominations purchased by completing the form entitled "Option of Securityholder To Elect Purchase" appearing below. Securityholders have the right to withdraw their election by delivering a written notice of withdrawal to the Company or the Paying Agent in accordance with the terms of the Indenture.

9. Subordination. The payment of the principal of, interest on or any other amounts due on the Notes is subordinated in right of payment to all existing and future Senior Debt of the Company, as described in the Indenture. Each Securityholder, by accepting a Note, agrees to such subordination and authorizes and directs the Trustee on its behalf to take such action as may be necessary or appropriate to effectuate the subordination so provided and appoints the Trustee as its attorney-in-fact for such purpose.

10. Conversion. The holder of any Note has the right, exercisable at any time prior to the close of business on the Note's maturity, to convert the principal amount thereof (or any portion thereof that is an integral multiple of \$1,000) into shares of Common Stock at the initial Conversion Price of \$7.00 per share, subject to adjustment under certain circumstances, except that if a Note is called for redemption, the conversion right will terminate at the close of business (New York time) on the Business Day immediately preceding the date fixed for redemption.

To convert a Note, a holder must (1) complete and sign a notice of election to convert substantially in the form set forth below, (2) surrender the Note to a Conversion Agent, (3) furnish appropriate endorsements or transfer documents if required by the Registrar or Conversion Agent and (4) pay any transfer or similar tax, if required. Upon conversion, no adjustment or payment will be made for interest or dividends, but if any Securityholder surrenders a Note for conversion after the close of business on the record date for the payment of an installment of interest and prior to the opening of business on the next interest payment date, then, notwithstanding such conversion, the interest payable on such interest payment date will be paid to the registered holder of such Note on such record date. In such event, such Note, when surrendered for conversion, must be accompanied by payment in funds acceptable to the Company of an amount equal to the interest payable on such interest payment date on the portion so converted, unless such Security has been called for redemption on or prior to such interest payment date. The number of shares of Common Stock issuable upon conversion of a Note is determined by dividing the principal amount of the Note converted by the Conversion Price in effect on the Conversion Date. No fractional shares will be issued upon conversion but a cash adjustment will be made for any fractional interest.

A Note in respect of which a holder has delivered an "Option of Securityholder to Elect Purchase" form appearing below exercising the option of such holder to require the Company to purchase such Note may be converted only if the notice of exercise is withdrawn as provided above and in accordance with the terms of the Indenture. The above description of conversion of the Notes is qualified by reference to, and is subject in its entirety by, the more complete description thereof contained in the Indenture.

11. Automatic Conversion. The Company may elect to automatically convert the Notes on or prior to maturity if the Daily Market Price of the Common Stock has exceeded 150% of the Conversion Price for at least 20 Trading Days out of the 30 consecutive Trading Days ending within five Trading Days prior to the Automatic Conversion Notice.

12. Denominations Transfer, Exchange. The Notes are in registered form, without coupons, in denominations of \$1,000 and integral multiples of \$1,000. The transfer of Notes may be registered, and Notes may be exchanged, as provided in the Indenture. The Registrar may require a

Securityholder, among other things, to furnish appropriate endorsements and transfer documents and to pay any taxes and fees required by law or permitted by the Indenture. The Company is not required to exchange or register the transfer of (i) any Note for a period of 15 days next preceding any selection of Notes to be redeemed, (ii) any Note or portion thereof selected for redemption or (iii) any Note or portion thereof surrendered for repurchase (and not withdrawn) in connection with a Designated Event.

13. Persons Deemed Owners. Except as provided in paragraph 2 of this Note, the registered Securityholder of a Note may be treated as its owner for all purposes.

14. Unclaimed Money. If money for the payment of principal or interest remains unclaimed for two years, the Trustee and the Paying Agent shall pay the money back to the Company at its request. After that, Securityholders of Notes entitled to the money must look to the Company for payment, unless an abandoned property law designates another person, and all liability of the Trustee and such Paying Agent with respect to such money shall cease.

15. Defaults and Remedies. The Notes shall have the Events of Default as set forth in Section 8.01 of the Indenture. Subject to certain limitations in the Indenture, if an Event of Default occurs and is continuing, the Trustee by notice to the Company or the Securityholders of at least 25% in aggregate principal amount of the then-outstanding Notes by notice to the Company and the Trustee may declare all the Notes to be due and payable immediately, except that in the case of an Event of Default arising from certain events of bankruptcy or insolvency, Notes shall become due and payable immediately without further action or notice. Upon acceleration as described in either of the preceding sentences, the subordination provisions of the Indenture preclude any payment being made to Securityholders for at least 5 Business Days after holders of Senior Debt receive notice of such acceleration except as otherwise provided in the Indenture.

The Securityholders of a majority in principal amount of the Notes then outstanding by written notice to the Trustee may rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree and if all existing Events of Default have been cured or waived except nonpayment of principal or interest that has become due solely because of the acceleration. Securityholders may not enforce the Indenture or the Notes except as provided in the Indenture. Subject to certain limitations, Securityholders of a majority in principal amount of the then-outstanding Notes issued under the Indenture may direct the Trustee in its exercise of any trust or power. The Company must furnish compliance certificates to the Trustee annually. The above description of Events of Default and remedies is qualified by reference to, and subject in its entirety by, the more complete description thereof contained in the Indenture.

16. Amendments, Supplements and Waivers. Subject to certain exceptions, the Indenture or the Notes may be amended or supplemented with the consent of the Securityholders of at least a majority in principal amount of the then-outstanding Notes (including consents obtained in connection with a tender offer or exchange offer for Notes), and any existing default may be waived with the consent of the Securityholders of a majority in principal amount of the then-outstanding Notes, including consents obtained in connection with a tender offer or exchange offer for Notes. Without the consent of any Securityholder, the Indenture or the Notes may be amended, among other

things, to cure any ambiguity, defect or inconsistency, to provide for assumption of the Company's obligations to Securityholders in the case of a merger, consolidation or sale or transfer of all or substantially all of the Company's properties or assets pursuant to Article VII of the Indenture, to make any change that would provide any additional rights or benefits to Securityholders or that does not adversely affect the legal rights under the Indenture of any Securityholder, to qualify the Indenture under the TIA, or to comply with the requirements of the SEC in order to maintain the qualification of the Indenture under the TIA.

17. Trustee Dealings with the Company. The Trustee, in its individual or any other capacity, may become the owner or pledgee of the Notes and may otherwise deal with the Company or an Affiliate with the same rights it would have, as if it were not Trustee, subject to certain limitations provided for in the Indenture and in the TIA. Any Agent may do the same with like rights.

18. No Recourse Against Others. A director, officer, employee or shareholder, as such, of the Company shall not have any liability for any obligations of the Company under the Notes or the Indenture or for any claim based on, in respect of or by reason of such obligations or their creation. Each Securityholder, by accepting a Note, waives and releases all such liability. The waiver and release are part of the consideration for the issue of the Notes.

19. Governing Law. THE INDENTURE AND THE SECURITIES ISSUED HEREUNDER SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

20. Authentication. The Notes shall not be valid until authenticated by the manual signature of an authorized officer of the Trustee or an authenticating agent.

21. Abbreviations. Customary abbreviations may be used in the name of a Securityholder or an assignee, such as: TEN COM (for tenants in common), TENANT (for tenants by the entireties), JT TEN (for joint tenants with right of survivorship and not as tenants in common), CUST (for Custodian), and U/G/M/A (for Uniform Gifts to Minors Act).

22. Definitions. Capitalized terms not defined in this Note have the meaning given to them in the Indenture.

The Company will furnish to any Securityholder of the Notes upon written request and without charge a copy of the Indenture and the Registration Agreement. Request may be made to:

Investor Relations
Intevac, Inc.
3560 Bassett Street
Santa Clara, California 95054
Telephone Number: (408) 986-9888

ASSIGNMENT AND CERTIFICATE OF TRANSFER FORM

To assign this Note, fill in the form below:

(I) or (we) assign and transfer this Note to

(Insert assignee's social security or tax I.D. no.)

(Print or type assignee's name, address and zip code)

and irrevocably appoint _____ agent to transfer this Note on the books of the Company. The agent may substitute another to act for him.

Your Signature: _____ (Sign exactly as your name appears on the other side of this Note) Date: _____

Signature Guarantee***: _____

*** Signature must be guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

[TO BE ATTACHED TO GLOBAL SECURITIES]

SCHEDULE A

The initial principal amount at maturity of this Global Security shall be \$29,543,000. The following increases or decreases in the principal amount of this Global Security have been made:

DATE MADE	AMOUNT OF INCREASE IN PRINCIPAL	AMOUNT OF THIS GLOBAL SECURITY INCLUDING UPON EXERCISE OF OVERALLOTMENT	AMOUNT OF DECREASE IN PRINCIPAL	AMOUNT OF THIS GLOBAL SECURITY FOLLOWING SUCH DECREASE OR INCREASE	PRINCIPAL AMOUNT OF THIS GLOBAL SECURITY FOLLOWING SUCH DECREASE OR INCREASE	SIGNATURE OF AUTHORIZED OFFICER OF TRUSTEE OR CUSTODIAN
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OPTION OF SECURITYHOLDER TO ELECT PURCHASE

If you want to elect to have this Note or a portion thereof repurchased by the Company pursuant to Section 3.08 or 4.08 of the Indenture, check the box: / /

If you want to elect to have this Note or a portion thereof repurchased by the Company pursuant to Article XIII and Section 4.09 of the Indenture, check the box: / /

If the purchase is in part, indicate the portion (\$1,000 or any integral multiple thereof) to be purchased:

Your Signature: _____ (Sign exactly as your name appears on the other side of this Note)

Date: _____

Signature Guarantee*: _____

* Signature must be guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

ELECTION TO CONVERT

To: Intevac, Inc.

The undersigned owner of this Note hereby irrevocably exercises the option to convert this Note, or the portion below designated, into Common Stock of Intevac, Inc. in accordance with the terms of the Indenture referred to in this Note, and directs that the shares issuable and deliverable upon conversion, together with any check in payment for fractional shares, be issued in the name of and delivered to the undersigned, unless a different name has been indicated in the assignment below. If shares are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto.

Date: _____

In whole _____ Or Portion of Note to be converted
(\$1,000 or any integral multiple
thereof):
\$ _____

Your Signature: _____ (Sign exactly as your name appears on the other side
of this Note)

Please print or typewrite name and address, including zip code, and Social Security or other identifying number

Signature Guarantee*: _____

* Signature must be guaranteed by a commercial bank, trust company or member firm of the New York Stock Exchange.

SUBSIDIARIES OF THE REGISTRANT

1. Lotus Technologies, Inc. — California
2. Intevac Foreign Sales Corporation — Barbados
3. Intevac Asia Private Limited — Singapore
4. Intevac Malaysia Sdn Bhd — Malaysia
5. IRPC, Inc. — California

CONSENT OF GRANT THORNTON LLP, INDEPENDENT AUDITORS

We consent to the incorporation by reference in the Registration Statements (Form S-8 Nos. 33-99648, 333-35801, 333-65421, 333-96529 and 333-50166) pertaining to the 1995 Stock Option/ Stock Issuance Plan and the Employee Stock Purchase Plan and in the Registration Statement (Form S-3 No. 333-24275) of Intevac, Inc. of our report dated January 29, 2003, with respect to the consolidated financial statements and schedule of Intevac, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2002.

/s/ GRANT THORNTON LLP

San Jose, California
March 11, 2003

Exhibit 99.1

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER AND CHIEF FINANCIAL OFFICER
PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO**

SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Kevin Fairbairn, 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 Intevac, Inc. on Form 10-K for the fiscal year ended December 31, 2002 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Intevac, Inc.

By: /s/ KEVIN FAIRBAIRN

Name: Kevin Fairbairn
Title: President, Chief Executive Officer and Director

I, Charles B. Eddy III, 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 Intevac, Inc. on Form 10-K for the fiscal year period ended December 31, 2002 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Intevac, Inc.

By: /s/ CHARLES B. EDDY III

Name: Charles B. Eddy III
Title: Vice President, Finance and Administration,
Chief Financial Officer, Treasurer and Secretary