



Orthodontics

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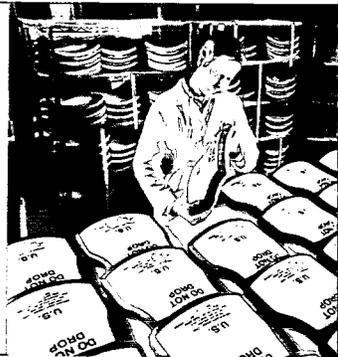
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Armor



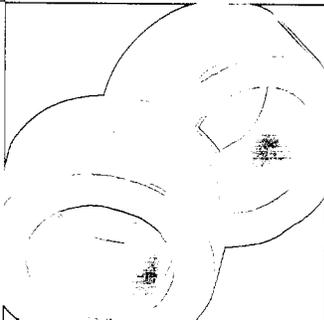
 ceradyne, inc.



Automotive



Annual Report 2001



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FINANCIAL



ceradyne, inc.

CORPORATE PROFILE

Ceradyne, Inc. develops, manufactures and markets advanced technical ceramics for industrial, electronic, defense and consumer applications.

Advanced technical ceramics, because of their lightweight, temperature resistance, hardness and other enhanced properties, permit advancements in many fields as a substitution for less durable metals, plastics and other ceramics.

Ceradyne is a broad-based corporation serving diverse markets including defense, industrial and semiconductor equipment components, glass making furnace components, orthodontic appliances, microwave tube parts and applications in automotive and diesel engines.

Ceradyne serves a wide range of emerging markets from its three domestic manufacturing locations and international marketing offices.

FINANCIAL HIGHLIGHTS

		Years Ended December 31,		
		2001	2000	1999
<i>Amounts in thousands, except per share data</i>				
For the Year	Net sales	\$ 45,339	\$ 45,930	\$ 30,382
	Income from operations	4,471	4,874	1,231
	Income before provision (benefit) for income taxes	4,837	5,197	1,559
	Provision (benefit) for income taxes	808	104	(44)
	Net income	4,029	5,093	1,603
	Basic net income per share	0.48	0.62	0.20
	Diluted net income per share	0.46	0.61	0.20
	Working capital	23,167	20,883	15,156
	Total assets	47,951	38,463	32,893
	Long-term obligations	158	258	358
	Stockholders' equity	\$ 39,657	\$ 34,989	\$ 29,137

“In my 35 years since the founding of Ceradyne, I have never seen the opportunities that are now presenting themselves. Ceradyne’s challenge will be to successfully convert these volume production opportunities into sales and earnings, yet maintain the Company’s historic entrepreneurial technology focus.”

Joel P. Moskowitz,
Chief Executive Officer

Letter to Our Stockholders

Joel P. Moskowitz
Chief Executive Officer,
President,
Chairman of the Board



The year 2001 can be characterized as a year in which Ceradyne laid the groundwork for future growth through its expansion of capacity in the form of plant and equipment, as well as new products including an Army Small Arms Protective Insert (SAPI) armor award and additional diesel engine component opportunities. In anticipation of a resumption in growth, Ceradyne strengthened its management team, as well as added several highly-qualified outside directors to its Board. The expansion, including capital expenditures of approximately \$7 million, was financed primarily through internal funds.

This annual report will focus on our expansion efforts, particularly at the Costa Mesa, California, Advanced Ceramic Operations center. We will also describe certain significant opportunities in our three product lines, which we believe are the core drivers of Ceradyne's projected growth:

- ▷ Lightweight ceramic armor
- ▷ Diesel engine components
- ▷ Clarity™ ceramic orthodontic brackets

First, let's look back at 2001.

After a 51% increase in sales and a threefold increase in earnings from 1999 to 2000, operating performance in 2001 essentially mirrored 2000.

- ▷ Sales were \$45.3 million in 2001 versus \$45.9 million in 2000.
- ▷ Operating income of \$4.5 million in 2001 compared to the prior year's \$4.9 million.
- ▷ Net income of \$4.0 million or \$.46 per diluted share compared to 2000's \$5.1 million or \$.61 per diluted share. The tax provision rate for the year 2001 was 16.7% versus 2.0% in 2000.
- ▷ Incoming new orders were \$46.7 million compared to \$50.9 million in 2000.
- ▷ Total year-end backlog was \$28 million (including \$1.7 million in unexercised options) compared to 2000's \$26.7 million (including \$.7 million in unexercised options).

We dedicated much of our efforts in 2001 to certain areas of growth forecasted for 2002 and beyond. These opportunities, especially in SAPI and ceramic diesel engine components, became more defined as the year progressed and the Company reacted to the increased demand through additional personnel, a new leased (with an option to buy) factory, new equipment and automation.

GROWTH CHALLENGES

Armor

As the year progressed, it became increasingly apparent that the military's need for lightweight ceramic armor would continue to grow with demand accelerating, particularly for personnel body armor and in future years for ground-based vehicles where weight and ballistic requirements would dictate lightweight ceramic systems.

Diesel Engine Parts

Ceradyne's entry into volume production of Sintered Reaction Bonded Silicon Nitride (SRBSN) diesel engine components in 2001 allowed us to bid and win several new SRBSN diesel engine contracts that are projected to increase our production from an average of 7000 components per month in 2001 to over 90,000 components per month in the summer of 2002.

Ceramic Orthodontic Brackets

Ceradyne's shipments in 2001 of its patented Clarity ceramic orthodontic brackets increased 23% over 2000. This strong growth rate is in line with the previous year's rate and we are anticipating growth next year. In our opinion, Clarity is the premier cosmetic orthodontic bracket device, and working together with our exclusive marketing partner, the Unitek Division of 3M, we believe that Clarity's growth rate will continue.

What are we doing to meet these growth challenges?

Armor

September 11, 2001 changed forever America's understanding of security, both domestically and militarily. As many of you know, police protective vests, "armored" cars, military "flak" jackets, and other security and defense applications make use of products such as Kevlar, steel and composites without the need for ceramics. However, once the enemy's threat is determined to be an automatic weapon, such as .30 or .50 caliber machine guns, AK-47 rifles or others (e.g., armor piercing weapons), it becomes necessary to use a ceramic "strike face" as the key component of the armor system to break up the bullet at a weight savings of up to 70% compared to steel.

Some of the specific markets and products Ceradyne is addressing now and in the future include:

Body Armor

- ▷ Special Operations Forces
- ▷ Army
- ▷ Marines
- ▷ Helicopter pilots
- ▷ Other (including foreign governments with U.S.A. approval)

Military Helicopters

- ▷ Black Hawk
- ▷ Apache
- ▷ Cobra
- ▷ Super Puma
- ▷ Gazelle
- ▷ Others

Military Vehicles

- ▷ (AAAV) Advanced Amphibious Assault Vehicle (Marines)
- ▷ Future Combat Vehicles
- ▷ Others

Domestic Automobiles

- ▷ In development

Armor Manufacturing Technology

In order to meet the anticipated demand for armor products, Ceradyne doubled its ceramic armor producing capacity during 2001.

Ceradyne's primary technology involves the application of heat and pressure simultaneously to a ceramic powder (i.e., hot pressing) which results in an extremely hard, lightweight ceramic block, such as boron carbide. Our large hot pressing equipment is designed by Ceradyne engineers. Most of our hot presses were built and installed in Costa Mesa in the 1980's and 1990's. However, in 2001, we designed, built and installed an entirely new hot pressing line using the most up-to-date computer controls and a furnace design which ensures uniform heat distribution over 2000°C. The result of this design is a dramatic increase in quality yields and production throughput.

This new hot pressing system was brought into production in late 2001. This new line (with 8 furnaces) has the capacity to produce about \$20 million of product annually.

As part of our armor expansion, the Company increased its Costa Mesa armor assembly area by 10,000 sq. ft. This additional manufacturing space was "freed up" as a result of the Company's late 2001 lease of a 40,000 sq. ft. plant in nearby Irvine, California.

The Company has developed proprietary armor systems for both military vehicles and personnel armor. We are currently filing for armor-related patents on several of these novel innovations.

Unless requirements for personnel armor take another significant increase, we believe our lightweight ceramic armor capacity is now sufficient to meet demands over the next few years. Depending on the product mix, Ceradyne's armor capacity is now about \$35 million annually.

Our progress in armor growth was interrupted in March 2002 due to quality and testing methodology issues regarding our SAPI armor plates. These issues are described in our Report on Form 10-Q for the quarter ended March 31, 2002, as filed with the Securities and Exchange Commission, and in our press release issued on April 3, 2002. Recently, the Company successfully qualified a new SAPI design that will be used on future orders.

We believe there will be a continuing increased demand for ceramic armor both for military and non-military uses for years to come.

Diesel Engine Components

Ceradyne's development of SRBSN ceramic components in the early 1990's provided us with one of the strongest, most robust technical ceramics for use in diesel engine, fuel pump, internal combustion engine, and roller and ball bearing applications where wear resistance, low coefficient of friction, light weight and other superior mechanical and chemical properties are demanded. Furthermore, the Ceradyne technology is extremely cost efficient as its starting material is widely available, inexpensive, elemental silicon (Si).

This already growing area has recently accelerated for Ceradyne due to the demand for valve train components in heavy-duty diesel engines. This demand is due primarily to the increasing need of diesel engine manufacturers to meet new environmental requirements through a more efficient, cleaner engine. One of the technologies developed is a more efficient engine which requires increased internal forces of metal-against-metal parts which can create unacceptable levels of friction and wear.

A solution for the metal-against-metal friction is the substitution of Ceradyne's SRBSN ceramic for one of the metal components, resulting in a long lasting, low friction metal-against-ceramic subassembly.

The demand for Ceradyne's SRBSN parts have increased over tenfold in the last 12 months.

To meet this demand:

1. Ceradyne leased an additional 40,000 sq. ft. of manufacturing space in Irvine, California. We have an option to buy this facility.
2. It is anticipated that all diamond machining work cells will be moved to the new facility by mid-2002.
3. The new work cell installations will include productivity-enhancing operations including Ceradyne's first robots, as well as the advantages of a dedicated SRBSN diesel component workflow.

Board of Directors



Ceradyne's Board of Directors
 (Clockwise) Joel P. Moskowitz,
 Chairman, CEO and President
 of Ceradyne; Frank Edelstein,
 Richard Alliegro; Christopher D.
 Johnson; Eduard Bagdasarian,
 Willford D. Godbold, Jr.,
 Milton L. Lohr (front right)

4. Ceradyne has invested over \$1.3 million in SRBSN ceramic processing equipment to meet the increasing demand. In 2001, this included:

- ▷ Additional presses
- ▷ Four nitriding furnaces
- ▷ A fourth large sintering furnace
- ▷ Enlarged powder handling and parts handling manufacturing space
- ▷ Increased quality assurance capacity under Ceradyne's ISO 9001 certification

5. To precision diamond grind the diesel engine and SRBSN bearing parts, the Company invested \$1.2 million in state-of-the-art machines for high volume precision throughput. This equipment is slated to be moved to the new Irvine facility in 2002. We anticipate this equipment will be sufficient to finish approximately 90,000 engine valve train cam rollers per month, thereby meeting current demands.

Clarity Ceramic Orthodontic Brackets

Ceramic orthodontic brackets are Ceradyne's only consumer product. These brackets are marketed under the Clarity brand name by our exclusive marketing partner, the Unitek Division of 3M. Clarity ceramic orthodontic brackets have been highly successful with shipments having grown consistently since their introduction.

To meet current and projected demand for Clarity ceramic orthodontic brackets, Ceradyne:

- ▷ Will move production and research efforts into the new manufacturing plant in Irvine, California.
- ▷ Installed excess capacity and redundant equipment in all critical areas.
- ▷ Dedicated an R&D team to work together with its partner, Unitek, on next generation designs.

Development Projects

In addition to the above identified "growth drivers" where Ceradyne has established a clearly defined product and marketing path, we have a number of products in various stages of development where the current markets are less well defined or in earlier stages of maturity. The following describes some of Ceradyne's activities in these emerging areas:

Semiconductor Equipment Components: Several years ago, Ceradyne identified a market for its non-oxide advanced technical ceramic components as a replacement for more conventional oxide materials such as fused quartz and aluminum oxide ceramics in semiconductor manufacturing equipment. Due to the downturn in the general semiconductor market, Ceradyne's shipments in 2001 were less than 4% of sales. However, we have maintained our R&D and marketing efforts in order to be ready when the anticipated upturn in semiconductor equipment occurs.

It is interesting to note that the hot pressing equipment installed in 2001 has multiple end product uses, including large (over 26" diameter) semiconductor components.

Crucibles for Photovoltaic Cells: A key manufacturing methodology in the fabrication of photovoltaic electric energy cells is to use silicon wafers which convert sunlight into electricity. An emerging production technology is to use large, high purity fused silica ceramic crucibles as the receptacle for the molten silicon. Ceradyne's Thermo Materials division is one of the few companies that can supply this consumable product.

During 2001, the Company invested considerable R&D effort to develop the next generation crucible for this rapidly growing industry. We anticipate shipping production-certified crucibles in mid-2002.

Ball and Roller Bearings: The market for ball bearings and roller bearings is a multi-billion dollar market and is at the heart of much of modern production processes and equipment. The overwhelming majority of these bearings use an all steel design (i.e., steel balls within a steel "race"). In recent years, a smaller but growing market has developed for hybrid bearings which use silicon nitride ceramic balls (or rollers) within a steel matrix.

The use of ceramic components reduces weight and allows for much higher operating speeds, reduces dependence on lubricants, allows for longer life due to the ceramic's strength and hardness and, where electrical conductivity is a problem, acts as an insulator.

In 2001, Ceradyne continued its bearing development which included the installation of a high-speed press capable of producing large volumes of small diameter SRBSN balls. The Company plans to establish strategic relationships in 2002 with bearing producers or others in order to market its balls or rollers as subcomponents.

Personnel and Management Change

To effectively manage expansion and expected growth, Ceradyne increased staffing by over 14% in 2001 to 463 employees. Certain key organizational changes were made to strengthen our management team. A reorganization of our Thermo Materials division in Scottdale, Georgia was implemented in 2001, including the hiring of Bruce Lockhart as Thermo Materials' new president, whose directive is to restructure the division to enhance short-term performance, while allocating resources to successfully develop and market a line of photovoltaic crucibles.

During the last year and one-half, Ceradyne made certain changes to its Board of Directors, which we believe strengthens the Board's expertise in evaluating strategic and financial opportunities.

New Board members include:

- ▷ Mr. Wilford D. Godbold, Jr., formerly President and CEO of Zero Corporation. Prior to Zero, Mr. Godbold was an attorney with the law firm of Gibson, Dunn & Crutcher engaged in mergers and acquisitions, corporate finance and general corporate law.
- ▷ Mr. Eduard Bagdasarian, Managing Director and Chief Operating Officer of the investment banking firm of Barrington Associates. Mr. Bagdasarian chairs Barrington Associates' Executive Committee and serves on its Board of Directors.
- ▷ Mr. Christopher D. Johnson, Technology Venture Fund Manager of Ford Motor Company. Mr. Johnson currently manages Ford Motor Company's strategic venture capital fund and has led various financial transactions involving third parties.

Late in 2001, long-time Board member Mr. Leonard Allenstein left Ceradyne's Board to pursue other interests. Mr. Allenstein had been associated with Ceradyne and its predecessor company as an investor and Board member almost since the Company's founding. Mr. Allenstein's experience and business acumen are greatly appreciated.

Summary

Your Company is changing. As sales volume increases in areas such as armor, diesel engine components and ceramic orthodontic brackets, we are finally seeing the realization of opportunities we have been working toward for so many years. Our new challenges include making 90,000 diesel engine parts per month rather than last year's 7000 parts per month; 1000 body armor plates per week rather than last year's 1000 plates per month; and several hundred thousand ceramic orthodontic brackets per month—all with excellent quality, on-time deliveries, and good profit margins.

This transition to high volume production requires discipline, skills and structure far beyond that which was needed in the formerly smaller, technology focused, entrepreneurial Ceradyne.

Our challenge is to succeed in these production opportunities, while not losing the niche marketing, technical emphasis and entrepreneurial skills that have always characterized Ceradyne.

The future looks exciting and real.

Very truly yours,

CERADYNE, INC.



Joel P. Moskowitz
*Chief Executive Officer,
President,
Chairman of the Board*

Lightweight Ceramic Armor

America's fighting forces, whether Army, Marines, Air Force or Special Forces, are being equipped with armor systems that incorporate ceramic upgrade plates. Ceradyne's ceramic armor is designed to take multiple hits of machine-gun bullets at pointblank range.



Jerry Cantarini (left), Armor Production Manager, and Jon Miller, Armor Design/Manufacturing Engineer, examine personnel ceramic body armor in Ceradyne's Costa Mesa, California, armor assembly area. Ceradyne now has the capacity to produce over 6000 ceramic armor plates per month.

Ceradyne has been producing lightweight ceramic armor since the early 1970's. Until recent years, the Company's emphasis had been armor-ing military helicopters. A major change occurred in 1995 when Ceradyne received its first production body armor contract for producing SARVIP protection for helicopter pilots. Since then, the Department of Defense has determined that its fighting forces

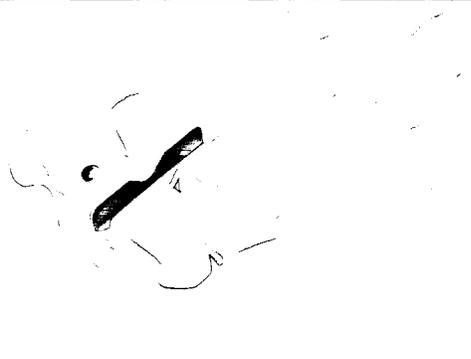
should be equipped with lightweight ceramic armor capable of defeating battlefield threats. There are now specific requirements for U.S. Army, Marines, Air Force and Special Forces for ceramic body armor. Ceradyne has developed a wide range of body armor products and is working with the military in order to meet the increasing demand for personnel protection.

Furthermore, since September 11, there is increasing awareness of the need for protection against high velocity projectiles which could be the result of a non-conventional attack, such as a terrorist explosion. If weight is a consideration in the protective device, ceramic armor may be a solution. Ceradyne is currently working on an architectural component to protect a strategic structure.

The Company has increased its R&D efforts to develop various ceramic, composite or metal systems to provide protection for military as well as non-military ground-based vehicles.

Ceramic Orthodontic Brackets

Clarity cosmetic ceramic orthodontic brackets have positively impacted the market for aesthetic orthodontic treatment by replacing the traditional unsightly metal brackets. Ceradyne's marketing partner, the Unitek Division of 3M, is targeting the teenage market as well as young adults.



The strategic relationship between Ceradyne, Inc. and our exclusive partner, the Unitek division of 3M, is an excellent example of a synergistic long-running relationship between technical and production experience (Ceradyne) combined with a world-class orthodontic design and marketing company (Unitek/3M). Clarity is a proprietary ceramic orthodontic product, protected by a basic patent owned jointly by Ceradyne and Unitek.

The Clarity product is now being produced by Ceradyne at the rate of several million components annually. We believe the success of this product is due principally to the inherent aesthetics during treatment and the professional expertise of the Ceradyne/Unitek team.

Although the cosmetic ceramic orthodontic bracket market has been growing significantly greater than the total orthodontic market in general, ceramics still maintain only a relatively small percentage of the market. We believe this is a positive factor as it portends continued "above the normal" growth rate.

Ceradyne and Unitek are collaborating on R&D efforts for next generation cosmetic orthodontic components.

Chinh Garza (below), Production Manager Volume Products, is responsible for production of the Clarity product line. The volume and product line complexity require production discipline and structure. The Clarity production line will be relocated to the Irvine facility in 2002.



Diesel Engine Components



John Mangels (center), Advanced Ceramic Operations Director of Sales and Marketing, reviewing our high volume diesel engine component production line. Bruce Revers (right), Sr. Lead Machinist, has been instrumental in the Company's "ramp-up" of engine component production which has increased tenfold from last year's run rate.

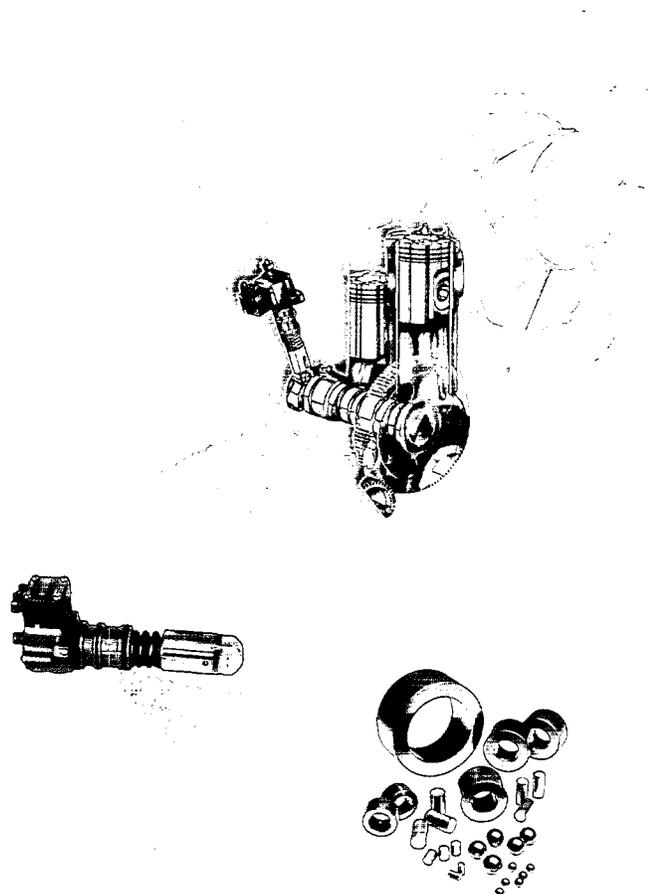
Shown below is a schematic of a diesel engine depicted with various SRBSN components, including cam followers, fuel pump rollers and bearing parts. Ceradyne's SRBSN diesel engine parts are now running over 500,000 miles without failure.

Ceradyne's Sintered Reaction Bonded Silicon Nitride (SRBSN) ceramic is increasingly being used in industrial equipment and in diesel truck engines as components which are subject to unusual abrasive wear, extremely high loads and elevated temperatures, or in areas requiring high levels of lubrication. In 2001, SRBSN sales amounted to 12% of total Ceradyne sales and are expected to increase in 2002 and beyond, particularly in the high volume markets of engine components and ball and roller bearing sub-components.

In 2001, the Company invested over \$2.5 million in order to increase capacity for manufacturing ceramic blanks, as well as final precision diamond machining.

We believe that the market for SRBSN is open-ended with the ultimate market being determined by absolute cost and life cycle cost. Usually, Ceradyne's SRBSN is incorporated into a design that would normally use a steel or other metal part. SRBSN is used because of its superior operating properties. However, these same SRBSN properties (e.g., hardness and high fracture energy) also contribute to its cost of manufacture, particularly precision diamond grinding.

Ceradyne intends to continue to automate and increase productivity to serve the increasing SRBSN market.



New Equipment and Facility



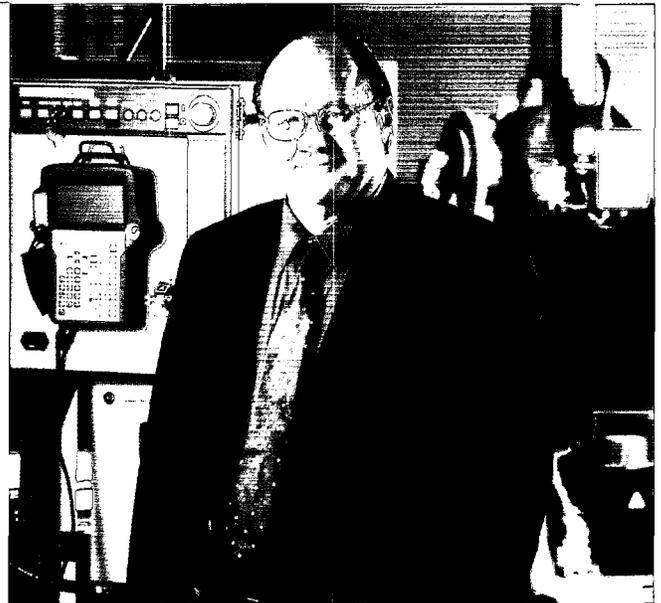
Mr. Stephen Kokenes, Process Engineer, is shown by Ceradyne's computer-controlled hot pressing line designed, built and installed by Ceradyne engineers in 2001. This new production line has the capacity to produce high volume body armor plates.

Ceradyne's 2001 was marked by the most significant expansion of plant and equipment in our recent history. Much of this expansion was done at our Advanced Ceramic Operations in Costa Mesa, California. It is at this location that we see the opportunities for increasing shipments in 2002 and beyond.

The changing nature of our product lines are requiring the installation of facilities and equipment dedicated to long production runs of a limited number of parts. Our customers are generally large corporations that have instituted a reduced inventory or "just-in-time" inventory policy. The obligation of a smooth, uninterrupted supply line falls on Ceradyne as a key component supplier.

In order to insure an uninterrupted supply, we continue to expand production capacity as well as install backup or redundant equipment to insure that Ceradyne will not be the cause of a customer line shutdown.

In 2001, this strategy resulted in multiple furnace installations, a new hot pressing line, several state-of-the-art dedicated diamond grinding work cells as well as robotics, and associated materials handling equipment and factory space.



Dr. Al Gerk, Director of Operations, is responsible for implementing the Company's Advanced Ceramic Operations production and expansion. Dr. Gerk is shown at Ceradyne's Irvine facility with our first G.E. Fanuc robot to be used in the fabrication of diesel engine parts.

SELECTED FINANCIAL DATA

		Years Ended December 31,				
		2001	2000	1999	1998	1997
<i>Amounts in thousands, except per share data</i>						
Statements of Operations Data	Net sales	\$ 45,339	\$ 45,930	\$ 30,382	\$ 26,279	\$ 28,693
	Cost of product sales	32,852	33,743	23,674	21,292	23,274
	Gross profit	12,487	12,187	6,708	4,987	5,419
	Operating expenses:					
	Selling	2,036	1,605	1,480	1,494	1,515
	General and administrative	4,897	4,456	3,400	3,239	3,660
	Research and development	1,083	1,252	597	344	—
		8,016	7,313	5,477	5,077	5,175
	Income (loss) from operations	4,471	4,874	1,231	(90)	244
	Other income (expense):					
	Other income	392	357	344	382	265
	Interest expense	(26)	(34)	(16)	—	(134)
		366	323	328	382	131
	Income before provision (benefit) for income taxes	4,837	5,197	1,559	292	375
	Provision (benefit) for income taxes	808	104	(44)	10	(1,675)
	Net income	\$ 4,029	\$ 5,093	\$ 1,603	\$ 282	\$ 2,050
	Basic net income per share	\$ 0.48	\$ 0.62	\$ 0.20	\$ 0.04	\$ 0.26
Diluted net income per share	\$ 0.46	\$ 0.61	\$ 0.20	\$ 0.04	\$ 0.26	
Weighted average number of common shares outstanding (diluted):	8,713	8,395	8,189	8,068	8,035	
Balance Sheet Data	Working capital	\$ 23,167	\$ 20,883	\$ 15,156	\$ 15,051	\$ 15,327
	Total assets	47,951	38,463	32,893	29,493	29,017
	Long-term obligations	158	258	358	—	—
	Stockholders' equity	\$ 39,657	\$ 34,989	\$ 29,137	\$ 27,352	\$ 26,760

MANAGEMENT'S DISCUSSION AND ANALYSIS

of Financial Condition and Results of Operations

The percentage relationships to net sales of certain income and expense items for the three years ended December 31, 2001, 2000 and 1999 are contained in the following table.

	Years Ended December 31,		
	2001	2000	1999
Net sales	100.00%	100.00%	100.00%
Cost of product sales	72.46	73.47	77.92
Gross profit	27.54	26.53	22.08
Operating expenses:			
Selling	4.49	3.49	4.87
General and administrative	10.80	9.70	11.19
Research and development	2.39	2.73	1.97
	17.68	15.92	18.03
Income from operations	9.86	10.61	4.05
Other income	.86	.78	1.14
Interest expense	(.05)	(.07)	(.05)
Income before provision for income taxes	10.67	11.32	5.14
Provision (benefit) for income taxes	1.78	.23	(.14)
Net income	8.89%	11.09%	5.28%

Years Ended December 31, 2001 and 2000 *Net Sales.* Net sales for the year ended December 31, 2001 were \$45.3 million, a decrease of \$.6 million, or 1.3% compared to the prior year.

Advanced Ceramic Operations in Costa Mesa, California, had a decrease in sales for the year ended December 31, 2001 of \$.2 million as compared to the year ago period. The sales decrease was mainly in ceramic armor for defense customers due to the delay of armor vest orders, which were not received until late in the fourth quarter. Also, sales of semiconductor products decreased from the prior year because of the downturn in this industry. However, these sales decreases were nearly offset by growth in orthodontic products due to an increasing demand by orthodontists for our translucent ceramic brackets. Also, sales increased for the Research and Development contracts awarded by the Department of Defense over the prior year.

The Company's Semicon Associates Division in Lexington, Kentucky, posted a sales increase of \$.5 million. Increases were mainly due to demand by the Company's customers for dispenser cathodes, which are used in microwave tubes for radar and satellite communications. In addition, sales increases were due to modest price increases and a contract award from the Department of Defense.

Additionally, the Company's Thermo Materials Division in Scottdale, Georgia, posted a sales decrease of \$.9 million as compared to the prior year period. The decrease in sales was mainly caused by less demand for fused silica products due to downsizing domestically by the glass, steel and aluminum making industries.

International sales have been, and are expected to be, an important part of the Company's business, representing 16% of total sales for the year ended 2001 as compared to 13% in 2000. The reasons for the increase were due to the Company's relatively new sales efforts in England and China, and increases in armor components for Israel.

Gross Profit. The Company's gross profit was \$12.5 million, or 28% of net sales, for the year ended December 31, 2001, compared to \$12.2 million, or 27% of net sales, for the prior year. The increase in gross profit for the year ended December 31, 2001 as compared to the prior year was \$.3 million or 2%.

The Company's Advanced Ceramic Operations in Costa Mesa, California, posted gross profit of \$9.2 million compared to \$8.4 million, or a 10% increase over the prior year. The favorable results were mainly due to higher volume of parts and higher capacity utilization resulting in economies of scale. However, the Company recently leased a new facility containing approximately 40,000 square feet, most of which will be used for manufacturing, and it will take time to absorb this additional capacity and realize the same level of economies of scale as were achieved in 2001. Moreover, the Company has been experiencing low product yields and other manufacturing inefficiencies as production capacities are being increased to meet rising demand for personnel armor and diesel engine components. Consequently, gross profit margins are expected to decrease in the first six months of 2002 as compared to 2001, but gradually improve thereafter. However, gross profit dollars are expected to be higher in 2002 as compared to 2001 because of increases in sales volume.

Semicon Associates in Lexington, Kentucky, posted gross profit of \$2.4 million, compared to \$1.7 million, or a 41% increase over the prior year. The increase over the prior year is attributed to better quality and process control and greater capacity utilization and is being partially funded by a contract award from the Department of Defense. The mission of this Department of Defense Production Act Title III Program is to create assured, affordable and commercially viable production capabilities for items essential for national defense. Additionally, modest price increases were contributing factors. The Company expects the trend of gross profit as a percent of sales to stabilize.

Thermo Materials in Scottdale, Georgia, posted gross profit of \$.9 million, compared to \$2.1 million, or a 57% decrease over the prior year. The decreases were attributable to lower production volume and to a process control problem in fused silica products. The process control concern has subsequently been corrected by diligent testing of raw materials.

Selling Expenses. Selling expenses were \$2.0 million for the year ended December 31, 2001, as compared to \$1.6 million in the prior year. Salary and personnel increases, commissions and travel account for the increased selling expenses.

General and Administrative Expenses. General and administrative expenses were \$4.9 million for the year ended December 31, 2001, a \$.4 million increase from the prior year. Salary and personnel increases accounted primarily for the increased expenses.

Research and Development Expenses. Research and development expenses were approximately \$1.1 million for the year ended December 31, 2001, as compared to \$1.3 million for the prior year. The expenses incurred for both years are related to wages for engineering, technicians and production personnel, materials, outside services, small tools and travel. Approximately \$.9 million of Research and Development cost is in Cost of Sales due to Small Business Innovation Research (SBIR) grants, which are recorded as sales.

In addition, the Company historically has and continues to engage in application engineering and internally funded research to improve and reduce the cost of production and to develop new products. The costs associated with application engineering and research are expensed as incurred and are included in cost of product sales.

Other Income. Other income was \$392,000 and \$357,000 for the years ended 2001 and 2000, respectively. An increase in royalty income over the prior year due to greater demand for orthodontic brackets and miscellaneous scrap income was partially offset by a decrease in interest income due to less cash reserves.

Interest Expense. Interest expense was \$26,000 for the year ended December 31, 2001, compared to \$34,000 in the prior year.

Income Taxes. The Company made a fourth quarter year-to-date adjustment to its tax provision based upon the pre-tax income for the full year of 2001. The Company used a combined Federal and State tax rate of 16.7% for the twelve months ended December 31, 2001, resulting in a provision for taxes of \$808,000. Because the Company used an estimated combined tax rate of 25% for the nine months ended September 30, 2001, which resulted in a tax provision of \$1,034,000, the Company reported a tax provision credit in the fourth quarter of \$226,000. The decrease in the tax provision was the result of decreasing gross profit in the fourth quarter, mainly from the tardiness in armor orders received late in the fourth quarter for Advanced Ceramic Operations.

Net Income. Reflecting all of the matters discussed above, net income was \$4.0 million (or \$0.48 per share basic and \$0.46 per share diluted) for the year ended December 31, 2001 compared to a net income of \$5.1 million (or \$.62 per share basic and \$.61 per share diluted) for the prior year.

Years Ended December 31, 2000 and 1999 *Net Sales.* Net sales for the year ended December 31, 2000 were \$45.9 million, an increase of \$15.5 million, or 51% compared to the prior year.

The increase in sales was primarily attributable to the Company's Advanced Ceramic Operations in Costa Mesa, California. This increase was approximately \$13.4 million over the prior year. The major increase was in armor products due to increasing demand for protective body armor by the U.S. military services. The industrial/automotive products recorded strong increases in sales, mainly due to demand for ceramic cam rollers for diesel engines. Additionally, orthodontic products contributed to the increase over the prior year due to continually increased demand by orthodontists for the Clarity orthodontic brackets.

The Company's Semicon Associates Division in Lexington, Kentucky, posted a sales increase of \$.8 million, or 13% over the prior year. Increases were mainly due to demand by the Company's customers for dispenser cathodes, which are used in microwave tubes for radar and satellite communications. In addition, sales increases were due to modest price increases.

Additionally, the Company's Thermo Materials Division in Scottdale, Georgia, posted a sales increase of \$1.3 million, or 22% over the prior year. The increases were attributable to demand from a major customer because of their low fused silica inventory. Also contributing was an increase in demand from existing and new customers for the fused silica product line that the Company acquired from Harbison Walker Refractories Company in 1998. There were slight increases in the defense sector for ceramic missile radomes for the Patriot PAC-3 and Standard Missile Block IV and Block IVA programs. Furthermore, a new product line for high purity fused silica ceramic crucibles for melting silicon for incorporation into photovoltaic cells for energy production had slight sales increases over the prior year initial startup.

International sales have been, and are expected to be, an important part of the Company's business, representing 13% of total sales for the year ended 2000 as compared to 11% in 1999. In April 2000, the Company opened a European sales and marketing office located in England and hired a new European marketing director. Also, in January 2001, the Company opened its sales and marketing office in Beijing, China and hired a new director for this location.

Gross Profit. The Company's gross profit was \$12.2 million, or 27% of net sales, for the year ended December 31, 2000, compared to \$6.7 million, or 22% of net sales, for the prior year. The increase in gross profit for the year ended December 31, 2000 as compared to the prior year was \$5.5 million or 82%.

The Company's Advanced Ceramic Operations in Costa Mesa, California, posted gross profit of \$8.4 million compared to \$4.2 million, or a 100% increase over the prior year. The favorable results were mainly due to higher volume and higher capacity utilization resulting in economies of scale.

Semicon Associates in Lexington, Kentucky, posted gross profit of \$1.7 million, compared to \$1.1 million, or a 55% increase over the prior year. The increase over the prior year is attributed to higher volume and greater capacity utilization. Additionally, price increases and improvements in production yields were contributing factors.

Thermo Materials in Scottdale, Georgia, posted gross profit of \$2.1 million, compared to \$1.4 million, or a 50% increase over the prior year. The increases were attributable to volume and the product mix of larger quantities yielding better manufacturing efficiencies than in the prior year.

Selling Expenses. Selling expenses were \$1.6 million for the year ended December 31, 2000, as compared to \$1.5 million in the prior year. Increases in salaries, travel expenses, product literature, consulting, and the addition of a new marketing director in the United Kingdom contributed to the increase in selling expenses over the prior year.

General and Administrative Expenses. General and administrative expenses were \$4.5 million for the year ended December 31, 2000, a \$1.1 million increase from the prior year. Approximately 42% of the increase was attributable to the increase in employee bonuses which was charged to general and administrative expense. Bonuses were resumed in the year 2000 because of the increased profitability of the Company. The other increases involved two additional personnel at the Thermo Materials division, investor relations consulting fees, salary increases and fringe benefits.

Research and Development Expenses. Research and development expenses were approximately \$1.3 million for the year ended December 31, 2000, as compared to \$6 million for the prior year. The expenses incurred for both years are related to wages for engineering, technicians and production personnel, materials, outside services, small tools and travel. The increased expenses over the prior year are directly related to the Company being awarded \$2.4 million in Small Business Innovation Research (SBIR) grants in 2000 for military ceramic armor systems and microwave ceramics.

In addition, the Company historically has and continues to engage in application engineering and internally funded research to improve and reduce the cost of production and to develop new products. The costs associated with application engineering and research are expensed as incurred and are included in cost of product sales.

Other Income. Other income was \$36 million and \$34 million for the years ended 2000 and 1999, respectively. An increase in interest income over the prior year due to greater cash reserves was offset by a decrease in royalty income.

Interest Expense. Interest expense was \$34,000 for the year ended December 31, 2000, compared to \$16,000 in the prior year. The increase was caused by having a capital equipment loan in place for the full year in 2000, as compared to partial year in 1999.

Income Taxes. The Company has recorded a \$104,000 provision for income tax for the year ended December 31, 2000. The Company's net deferred tax asset of \$1.7 million at December 31, 2000 relates primarily to its tax net operating loss carryforwards, which total approximately \$5.2 million. The Company expects to use its remaining net operating loss carryforward in 2001. (See Note 3 of Notes to Consolidated Financial Statements).

Net Income. Reflecting all of the matters discussed above, net income was \$5.1 million (or \$0.62 per share basic and \$0.61 per share diluted) for the year ended December 31, 2000 compared to a net income of \$1.6 million (or \$.20 per share basic and diluted) for the prior year.

Accounting Policies Our significant accounting policies are summarized in Note 1 to the Consolidated Financial Statements. In applying those policies, estimates and judgments affect the amounts at which accounts receivable and inventory and certain liabilities are recorded and the useful lives of property and equipment.

We apply our accounting policies on a consistent basis. As circumstances change, they are considered in our estimates and judgments, and future changes in circumstances could result in changes in amounts at which assets and liabilities are recorded. They could also affect the estimated useful levels of property and equipment, which could result in changes in depreciation expense or write offs or write downs of such assets.

Liquidity and Capital Resources The Company generally meets its operating and capital requirements for cash flow from operating activities and borrowings under its credit facility.

The Company has a \$4,000,000 revolving credit agreement with Comerica Bank. As of December 31, 2001, there had been no borrowings under this credit facility. However, in the first quarter of 2002, the credit line was used for operation needs. Under a separate credit facility with Comerica Bank, the Company entered into a \$500,000 capital equipment loan agreement during the third quarter of 1999. The term of the loan is for 60 months with no prepayment penalty and as of December 31, 2001, this loan balance is \$258,000.

The Company's net cash balance decreased by \$5.6 million during the year ended December 31, 2001, compared to a net increase of \$5.2 million in the prior year. The largest component of this change was the Company's investment of \$7.0 million in machinery, equipment and leasehold improvements in 2001, compared to \$2.4 million in 2000, to expand production capacity, primarily at the Company's Advanced Ceramic Operations in Costa Mesa, California. Another major use of cash was a \$6.4 million increase in inventories in 2001, compared to the prior year period, as the Company manufactured products and has raw materials and work-in-process for production orders to be shipped in the first quarter of 2002.

Management believes that its current cash and cash equivalents on hand, as well as cash generated from operations and the ability to borrow under the existing credit facilities, will be sufficient to finance anticipated capital and operating requirements for at least the next 12 months.

New Accounting Pronouncements In June 1998, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities." SFAS No. 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designed as part of a hedge transaction and, if it is, the type of hedge transaction. In June 1999, the FASB issued SFAS No. 137, "Accounting for Derivative Instruments and Hedging Activities — Deferral of the Effective Date of FASB Statement No. 133." SFAS No. 137 delays the effective date of SFAS No. 133 to fiscal years beginning after June 15, 2000. In June 2000, the FASB issued SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities — an amendment of FASB Statement No. 133." SFAS No. 138 is effective concurrent with the delayed effective date of SFAS No. 133. SFAS No. 138 amends the accounting and reporting standards for certain derivative instruments and certain hedging activities. The Company adopted SFAS Nos. 133, 137 and 138 on January 1, 2001. The adoption did not have a material impact, as the Company does not currently hold any derivative instruments.

In June 2001, the FASB issued SFAS No. 141, "Business Combinations." This Statement addresses financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, "Business Combinations," and SFAS No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises." All business combinations in the scope of this Statement are to be accounted for using one method, the purchase method. We will adopt SFAS 141 for all business combinations initiated after June 30, 2001.

Also in June 2001, the FASB issued SFAS No. 142, "Goodwill and Other Intangible Assets." SFAS 142 addresses financial accounting and reporting for acquired goodwill and other intangible assets and supersedes APB Opinion No. 17, "Intangible Assets." This pronouncement addresses, among other things, how goodwill and other intangible assets should be accounted for after they have been initially recognized in the financial statements. Goodwill would no longer be amortized but would be assessed at least annually for impairment using a fair value methodology. We will adopt this statement for all goodwill and other intangible assets acquired after June 30, 2001 and for all existing cost in excess of net assets acquired (goodwill) and other intangible assets beginning January 1, 2002. Upon adoption of this standard on January 1, 2002, we will cease recording amortization of goodwill, which is expected to increase gross income in 2002 by approximately \$200,000, or approximately \$0.01 per diluted share after tax. Other than ceasing the amortization of goodwill, we do not anticipate that the adoption of SFAS 142 will have a significant effect on our financial position nor the results of our operations, as we do not currently anticipate any impairment charges for existing goodwill.

In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 addresses the financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed of and is effective for fiscal years beginning after December 15, 2001. This statement supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," however, it retains the fundamental provision of SFAS No. 121 for (i) recognition and measurement of the impairment of long-lived assets to be held and used and (ii) measurement of long-lived assets to be disposed of by sale. This statement also supersedes the accounting and reporting provisions of APB Opinion No. 30, "Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" for the disposal of a segment of a business. The Company does not believe SFAS No. 144 will have a material impact on the Company's financial position or results of operations.

Quantitative and Qualitative Disclosure About Market Risk The Company is exposed to market risks related to fluctuations in interest rates on its debt. Currently, the Company does not utilize interest rate swaps, forward or option contracts on foreign currencies or commodities, or other types of derivative financial instruments. The purpose of the following analysis is to provide a framework to understand the Company's sensitivity to hypothetical changes in interest rates as of December 31, 2000. Many of the statements contained in this section are forward looking and should be read in conjunction with the Company's disclosures under the heading "Risk Factors."

The Company utilized debt financing during 2001 primarily for the purpose of acquiring manufacturing equipment. For fixed rate debt, changes in interest rates generally affect the fair market value of the debt instrument, but not the Company's earnings or cash flows. The Company does not have an obligation to prepay fixed rate debt prior to maturity, and as a result, interest rate risk and changes in fair market value should not have a significant impact on the fixed rate debt until the Company would be required to refinance such debt. The fair market value estimates for debt securities are based on discounting future cash flows utilizing current rates offered to the Company for debt of the same type and remaining maturity.

As of December 31, 2001, the Company's debt consisted of a \$258,000 capital equipment loan at a fixed interest rate of 8.18% due July 28, 2004. The carrying amount is a reasonable estimate of fair value as the rate of interest paid on the note approximates the current rate available for financing with similar terms and maturity.

We do not have any significant foreign currency risk. Sales to foreign distributors are all denominated in U.S. dollars.

Forward-Looking Statements This Management's Discussion and Analysis of Financial Condition and Results of Operations, the Letter to Stockholders, and other sections of this Annual Report contain forward-looking statements that are based on current expectations, estimates, and projections about the markets in which Ceradyne operates. In addition, other written or oral statements which constitute forward-looking statements may be made by or on behalf of the Company. Words such as "expects," "anticipates," "intends," "plans," "believes," "projects," "estimates," or variations of such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. The Company undertakes no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

The risks and uncertainties that could cause actual results to differ materially from such forward-looking statements are described above and in the Company's Annual Report on Form 10-K for Fiscal Year Ended December 31, 2001 in "Item 1 - Business," including the section therein entitled "Risk Factors."

CONSOLIDATED BALANCE SHEETS

For the Years Ended December 31, 2001 and 2000

Assets <i>Amounts in thousands</i>	2001	2000
Current assets:		
Cash and cash equivalents	\$ 1,017	\$ 6,656
Accounts receivable, net of allowances for doubtful accounts of \$101 and \$84 in 2001 and 2000, respectively	8,305	6,290
Other receivables	215	63
Inventories, net	14,581	8,193
Production tooling	2,889	1,655
Prepaid expenses and other	1,689	795
Deferred tax asset	1,728	447
Total current assets	30,424	24,099
Property, plant and equipment:		
Land	422	422
Buildings and improvements	1,851	1,825
Machinery and equipment	30,126	25,450
Leasehold improvements	3,224	2,280
Office equipment	3,291	2,975
Construction in progress	1,067	197
	39,981	33,149
Less—accumulated depreciation and amortization	(23,965)	(21,751)
	16,016	11,398
Costs in excess of net assets acquired, net of accumulated amortization of \$2,406 and \$2,239 in 2001 and 2000, respectively	1,511	1,678
Deferred tax asset	—	1,261
Other assets, net of accumulated amortization of \$698 and \$671 in 2001 and 2000, respectively	—	27
Total assets	\$ 47,951	\$ 38,463

Liabilities and Stockholders' Equity *Amounts in thousands, except per share data*

Current liabilities:		
Current maturities of long-term debt	\$ 100	\$ 100
Accounts payable	5,361	1,953
Accrued expenses:		
Payroll and payroll related	1,320	914
Other	476	249
Total current liabilities	7,257	3,216
Long-term debt, less current maturities	158	258
Deferred revenue	270	—
Deferred tax liability	609	—
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$.01 par value:		
Authorized— 12,000,000 shares		
Outstanding— 8,402,705 and 8,288,142 shares in 2001 and 2000, respectively	39,298	38,659
Retained earnings (deficit)	359	(3,670)
Total stockholders' equity	39,657	34,989
Total liabilities and stockholders' equity	\$ 47,951	\$ 38,463

The accompanying notes are an integral part of these consolidated balance sheets.

CONSOLIDATED STATEMENTS OF OPERATIONS

For the Years Ended December 31, 2001, 2000 and 1999

Amounts in thousands, except per share data

	2001	2000	1999
Net sales	\$ 45,339	\$ 45,930	\$ 30,382
Cost of product sales	32,852	33,743	23,674
Gross profit	12,487	12,187	6,708
Operating expenses:			
Selling	2,036	1,605	1,480
General and administrative	4,897	4,456	3,400
Research and development	1,083	1,252	597
	8,016	7,313	5,477
Income from operations	4,471	4,874	1,231
Other income (expense):			
Royalty income	165	148	200
Interest income	186	209	144
Miscellaneous	41	—	—
Interest expense	(26)	(34)	(16)
	366	323	328
Income before provision (benefit) for income taxes	4,837	5,197	1,559
Provision (benefit) for income taxes	808	104	(44)
Net income	\$ 4,029	\$ 5,093	\$ 1,603
Basic net income per share	\$ 0.48	\$ 0.62	\$ 0.20
Diluted income per share	\$ 0.46	\$ 0.61	\$ 0.20
Weighted average number of common shares outstanding:			
Basic	8,345	8,212	8,070
Diluted	8,713	8,395	8,189

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For the Years Ended December 31, 2001, 2000 and 1999

Amounts in thousands, except per share data

	Common Stock		Retained Earnings (Deficit)	Total Stockholders' Equity
	Number of Shares	Amount		
BALANCE, December 31, 1998	8,054,838	\$ 37,718	\$ (10,366)	\$ 27,352
Issuance of common stock	30,741	154	—	154
Exercise of stock options	10,269	28	—	28
Net income	—	—	1,603	1,603
BALANCE, December 31, 1999	8,095,848	\$ 37,900	\$ (8,763)	\$ 29,137
Issuance of common stock	64,304	190	—	190
Exercise of stock options	127,990	569	—	569
Net income	—	—	5,093	5,093
BALANCE, December 31, 2000	8,288,142	\$ 38,659	\$ (3,670)	\$ 34,989
Issuance of common stock	60,863	409	—	409
Exercise of stock options	53,700	230	—	230
Net income	—	—	4,029	4,029
BALANCE, December 31, 2001	8,402,705	\$ 39,298	\$ 359	\$ 39,657

The accompanying notes are an integral part of these consolidated statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

For the Years Ended December 31, 2001, 2000 and 1999

<i>Amounts in thousands</i>	2001	2000	1999
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income	\$ 4,029	\$ 5,093	\$ 1,603
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	2,485	2,212	1,835
Gain on sale of equipment	(12)	—	—
Changes in operating assets and liabilities:			
Accounts receivable, net	(2,015)	(453)	(1,456)
Other receivables	(152)	35	69
Inventories	(6,388)	259	(932)
Production tooling	(1,234)	(312)	(239)
Prepaid expenses and other assets	(305)	352	(352)
Accounts payable	3,408	(261)	1,130
Accrued expenses	633	349	27
Deferred revenue	270	(270)	—
Net cash provided by operating activities	719	7,004	1,685
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of property, plant and equipment	(6,965)	(2,414)	(3,788)
Proceeds from sale of equipment	68	—	—
Net cash used in investing activities	(6,897)	(2,414)	(3,788)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from issuance of common stock	409	190	154
Proceeds from exercise of stock options	230	569	28
Borrowings on long-term debt	—	—	500
Payments on long-term debt	(100)	(100)	(42)
Net cash provided by financing activities	539	659	640
(Decrease) increase in cash and cash equivalents	(5,639)	5,249	(1,463)
Cash and cash equivalents, beginning of year	6,656	1,407	2,870
Cash and cash equivalents, end of period	\$ 1,017	\$ 6,656	\$ 1,407
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Interest paid	\$ 26	\$ 34	\$ 16
Income taxes paid	\$ 253	\$ 78	\$ 39

The accompanying notes are an integral part of these consolidated statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the Year Ended December 31, 2001

Note 1 Summary of Significant Accounting Policies

Principles of Consolidation and Nature of Operations: The consolidated financial statements include the financial statements of Ceradyne, Inc. (a Delaware Corporation), and its subsidiaries. Ceradyne, Inc. and its subsidiaries are collectively referred to herein as the "Company." All significant intercompany accounts and transactions have been eliminated.

The Company develops, manufactures and markets advanced technical ceramic products and components for industrial, defense, consumer and microwave applications. The products are sold primarily to industrial, consumer, and defense concerns globally.

Cash and Cash Equivalents: The Company considers all highly liquid investments with an initial maturity of three months or less when purchased to be cash equivalents.

Accounts Receivable: The allowance for doubtful accounts includes management's estimate of the amount expected to be uncollectable on specific accounts and unidentified accounts included in accounts receivable. In estimating the potential losses on specific accounts, management relies on in-house prepared analysis and review of other available information. The amounts the Company will ultimately realize could differ from the amounts assumed in arriving at the allowance for doubtful accounts in the accompanying financial statements.

Inventories, Net: Inventories are valued at the lower of cost (first-in, first-out) or market. The write down of inventory for obsolete items is based on management's estimate of the amount considered obsolete based on specific reviews of inventory items. In estimating the allowance, management relies on its knowledge of the industry as well as its current inventory levels. The amounts the Company will ultimately realize could differ from amounts estimated by management. Inventory costs include the cost of material, labor and manufacturing overhead. The following is a summary of inventories by component:

	December 31,	
	2001	2000
Raw materials	\$ 8,143,000	\$ 4,815,000
Work-in-process	5,616,000	2,800,000
Finished goods	822,000	578,000
	\$14,581,000	\$ 8,193,000

Production Tooling: The Company's production tooling primarily consists of graphite tooling used in the manufacturing and furnacing processes. This tooling is being amortized over three to nine months.

Property, Plant and Equipment: Depreciation and amortization of property, plant and equipment are provided using the straight-line method over the following estimated useful lives:

Buildings and improvements	20 years
Machinery and equipment	3 to 12 years
Office equipment	5 years
Leasehold improvements	Shorter of 10 years or the term of the Lease

Maintenance, repairs and minor renewals are charged to expense as incurred. Repairs and maintenance expense approximated \$1,061,000, \$965,000, and \$720,000 in 2001, 2000 and 1999, respectively. Additions and improvements are capitalized. When assets are disposed of, the applicable costs and accumulated depreciation and amortization are removed from the accounts and any resulting gain or loss is included in the results of operations. Depreciation expense approximated \$2,291,000, \$2,018,000 and \$1,645,000 in 2001, 2000 and 1999, respectively.

Costs in Excess of Net Assets Acquired: The cost in excess of net assets acquired (goodwill) amount presented on the financial statements primarily resulted from the acquisition of the Company's divisions. The acquisitions were accounted for as purchases and were valued based on the estimated fair value of the assets acquired and liabilities assumed with respect to each acquisition at the dates of acquisition. Goodwill represents the excess of cost over the fair value of assets acquired. Prior to January 1, 2002, the goodwill was amortized using the straight-line method between 20 and 27 years. As of January 1, 2002, new accounting pronouncement SFAS 142 will be applied. See footnote 1.q., New Accounting Pronouncements. The Company periodically assesses the recoverability of goodwill for any impairment.

Sales Recognition: The Company recognizes sales as of the date shipments are made and title passes to the customer. Shipping and handling costs billed to a customer are recorded as sales and cost of product sales.

Deferred Revenue: In October 2001, Ford Motor Company contributed \$270,000 for 2002 to the Joint Product Development Program. The Company will amortize this amount to revenue during 2002. In January 2001 and October 1999 and 1998, Ford also contributed \$270,000 for each year and the Company fully amortized these amounts to revenue during 2001, 2000 and 1999.

Net Income Per Share: Basic net income per share is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding. Diluted net income per share is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding plus the effect of any dilutive stock options and common stock warrants using the treasury stock method.

The following is a summary of the number of shares entering into the computation of net income per common and common equivalent share:

	December 31,		
	2001	2000	1999
Weighted average number of shares outstanding	8,344,874	8,211,568	8,070,225
Dilutive stock options and common stock warrants	368,160	183,769	119,174
Number of shares used in diluted computation	8,713,034	8,395,337	8,189,399

Accounting for Long-Lived Assets: As prescribed by Statement of Financial Accounting Standards (SFAS) No. 121, "Accounting for the Impairment of Long-lived Assets and for Long-lived Assets to be Disposed of," the Company assesses the recoverability of its long-lived assets (including costs in excess of net assets acquired) by determining whether the asset balance can be recovered over the remaining depreciation or amortization period through projected undiscounted future cash flows. Cash flow projections, although subject to a degree of uncertainty, are based on trends of historical performance and management's estimate of future performance, giving consideration to existing and anticipated competitive and economic conditions. There were no impairment charges in any of the three years ended December 31, 2001, 2000 and 1999.

Pre-Production Engineering: Effective for design and development costs incurred after December 31, 1999, the Emerging Issues Task Force (EITF) released issue No. 99-5, "Accounting for Pre-Production Costs Related to Long Term Supply Arrangements." The task force reached a consensus that design and development costs for products to be sold under long-term supply arrangement should be expenses as incurred. The effect of adoption was immaterial to the Company's financial statements.

In 1998, the Company capitalized \$188,000 in pre-production engineering costs relating to a new government contract for the armor vest product line. In November 1999, the Company commenced shipments of the product and began to amortize these costs. The remaining amount capitalized of \$172,000 was completely amortized by March 31, 2000.

Use of Estimates: The preparation of financial statements in accordance with accounting principles generally accepted in the United States 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. Actual results could differ from those estimates.

Engineering and Research: The costs associated with application engineering and internally-funded research are expensed as incurred and are included in cost of product sales or other operating expenses. The Company established a new research and development department in 1998 to focus on new materials technology. Costs associated with the research and development department were \$1,083,000, \$1,252,000, and \$597,000 for years ended December 31, 2001, 2000 and 1999, respectively. In addition, the Company historically has and continues to engage in application engineering and internally funded research to improve and reduce the cost of products and to develop new products. Costs associated with the engineering department were approximately \$497,000, \$358,000 and \$281,000 in 2001, 2000 and 1999, respectively, and are included in cost of product sales.

Fair Value of Financial Instruments: The carrying value of accounts receivable and trade payables approximates the fair value due to their short-term maturities. The carrying value of the Company's unused line of credit is considered to approximate fair market value, as the interest rates of these instruments are based predominantly on variable reference rates. The carrying value of the Company's long-term debt is a reasonable estimate of fair value as the rate of interest paid on the note approximates the current rate available for financing with similar terms and maturities.

Income Taxes: The Company accounts for income taxes using the asset and liability approach. Under this approach, deferred taxes are determined based on the differences between the financial statements and the tax bases using rates as enacted in tax laws. A valuation allowance is established if it is "more likely than not" that all or a portion of the deferred tax asset will not be realized.

New Accounting Pronouncements: In June 1998, the Financial Accounting Standards Board (FASB) issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." SFAS No. 133 requires that all derivative instruments be recorded on the balance sheet at their fair value. Changes in the fair value of derivatives are recorded each period in current earnings or other comprehensive income, depending on whether a derivative is designed as part of a hedge transaction and, if it is, the type of hedge transaction. In June 1999, the FASB issued SFAS No. 137, "Accounting for Derivative Instruments and Hedging Activities - Deferral of the Effective Date of FASB Statement No. 133." SFAS No. 137 delays the effective date of SFAS No. 133 to fiscal years beginning after June 15, 2000. In June 2000, the FASB issued SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities - an amendment of FASB Statement No. 133." SFAS No. 138 is effective concurrent with the delayed effective date of SFAS No. 133. SFAS No. 138 amends the accounting and reporting standards for certain derivative instruments and certain hedging activities. The Company adopted SFAS Nos. 133, 137 and 138 on January 1, 2001. The adoption did not have a material impact, as the Company does not currently hold any derivative instruments.

In June 2001, the FASB issued SFAS No. 141, "Business Combinations." This Statement addresses financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, "Business Combinations," and SFAS No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises." All business combinations in the scope of this Statement are to be accounted for using one method, the purchase method. The Company adopted SFAS 141 for all business combinations initiated after June 30, 2001.

Also in June 2001, the FASB issued SFAS No. 142, "Goodwill and Other Intangible Assets." SFAS 142 addresses financial accounting and reporting for acquired goodwill and other intangible assets and supersedes APB Opinion No. 17, "Intangible Assets." This pronouncement addresses, among other things, how goodwill and other intangible assets should be accounted for after they have been initially

recognized in the financial statements. Goodwill would no longer be amortized but would be assessed at least annually for impairment using a fair value methodology. The Company adopted this statement for all goodwill and other intangible assets acquired after June 30, 2001 and for all existing goodwill and other intangible assets beginning January 1, 2002. Upon adoption of this standard on January 1, 2002 the Company will cease recording amortization of goodwill, which is expected to increase gross income in 2002 by approximately \$200,000 or approximately \$0.01 per diluted share after tax. Other than ceasing the amortization of goodwill, the Company does not anticipate that the adoption of SFAS 142 will have a significant effect on the financial position or the results of operations, as the Company does not currently anticipate any impairment charges for existing goodwill.

In August 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 addresses the financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed of and is effective for fiscal years beginning after December 15, 2001. This statement supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of"; however, it retains the fundamental provision of SFAS No. 121 for (i) recognition and measurement of the impairment of long-lived assets to be held and used and (ii) measurement of long-lived assets to be disposed of by sale. This statement also supersedes the accounting and reporting provisions of APB Opinion No. 30, "Reporting the Results of Operations—Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" for the disposal of a segment of a business. The Company does not believe SFAS No. 144 will have a material impact on the Company's financial position or results of operations.

Note 2 Debt and Bank Borrowing Arrangements

In November 1997, the Company entered into a revolving credit agreement with Comerica Bank. The unused credit facility amount remains at \$4,000,000 as of December 31, 2001.

The Company entered into a \$500,000 capital equipment loan agreement during the third quarter of 1999. The capital equipment loan bears interest at a fixed interest rate of 8.18%, as of December 31, 2001, and is payable in monthly installments of \$8,333 expiring July 2004. There is no prepayment penalty on the loan. The equipment serves as the collateral for the loan. Pursuant to the loan, the Company is subject to certain covenants, which include, among other things, the maintenance of minimum net worth, minimum ratio of quick assets to current liabilities, and maximum ratio of total liabilities to net worth.

Future scheduled capital equipment loan payments are as follows:

	Year Ending December 31:	
	2002	\$ 100,000
	2003	100,000
	2004	58,000
		<u>\$ 258,000</u>

Note 3 Income Taxes

The provision (benefit) for income taxes is comprised of the following for the year ended December 31:

	2001	2000	1999
Current	\$ 167,000	\$104,000	\$ (44,000)
Deferred	641,000	—	—
	<u>\$ 808,000</u>	<u>\$104,000</u>	<u>\$ (44,000)</u>

The Company's net deferred tax asset (liability) of \$1.1 million at December 31, 2001 relates primarily to its tax net operating loss carryforwards, which total approximately \$2.0 million and expire as follows:

Year	Amount
2009	380,000
2010	1,620,000
	<u>\$ 2,000,000</u>

The components of the Company's deferred tax asset liability as of December 31, 2001 and 2000 are as follows:

	December 31,	
	2001	2000
Current asset:		
Inventory adjustments	\$ 379,000	\$ 299,000
Vacation accrual	121,000	113,000
Bad debt allowance	47,000	33,000
Net operating loss and tax credit carryforwards	1,129,000	—
Other	52,000	2,000
	1,728,000	447,000
Noncurrent (liability) asset:		
Depreciation and amortization	(609,000)	42,000
Net operating loss and tax credit carryforwards	—	2,371,000
Valuation allowance	—	(1,152,000)
	\$ (609,000)	\$ 1,261,000

The effective income tax rate for the years ended December 31, 2001, 2000 and 1999 differs from the Federal statutory income tax rate due to the following items:

	December 31		
	2001	2000	1999
Income before taxes	\$ 4,837,000	\$ 5,197,000	\$ 1,559,000
Provision for income taxes at federal statutory rate (34%)	1,644,580	1,766,980	530,060
State income taxes, net of federal benefit	234,595	252,055	75,612
Reduction of valuation allowance	(1,152,000)	(1,839,000)	(708,000)
Other	80,825	(76,035)	58,328
Provision (benefit) for income taxes	\$ 808,000	\$ 104,000	\$ (44,000)
Effective tax rate	16.70%	2.00%	(2.82)%

Note 4 Commitments and Contingencies

Operating Lease Obligations: The Company leases certain of its manufacturing facilities under noncancelable operating leases expiring at various dates through October 2015. The Company incurred rental expense under these leases of \$792,458, \$691,365 and \$653,433 for the years ended 2001, 2000 and 1999, respectively. The approximate minimum rental commitments required under existing noncancelable leases as of December 31, 2001 are as follows:

Year	Amount
2002	\$ 1,113,000
2003	1,171,000
2004	1,225,000
2005	1,148,000
2006	544,000
Thereafter	2,593,000
	\$ 7,794,000

Employment Agreement: The Company had an employment agreement with its Chief Executive Officer which expired on July 5, 2001. In addition to a base salary, the agreement provides for a bonus to be determined by the Compensation Committee of the Board of Directors. No maximum compensation limit exists. Compensation expense pursuant to this agreement in 2001, 2000 and 1999 was \$323,838, \$310,970 and \$256,112, respectively.

Legal Proceedings: The Company is, from time to time, involved in various legal and other proceedings that relate to the ordinary course of operating its business, including, but not limited to, employment-related actions and workers' compensation claims.

From October 1995 through November 2000, the Company, along with other companies, was served with eight different complaints that were filed by eleven former employees of one of the Company's customers, and eight spouses. The complaints, all filed in the United States District Court, Eastern District of Tennessee, alleged that the customers' employees contracted chronic beryllium disease as a result of their exposure to beryllium-containing products sold by Ceradyne and other companies. As of December 7, 2001, all of these cases had been terminated without liability to Ceradyne; summary judgment in favor of Ceradyne was granted in seven cases, and the other one case was dismissed voluntarily by the plaintiff without prejudice to file the suit in the future.

On December 21, 2001, the Company was served with a complaint filed by the Company's insurance carrier in the Superior Court of California in Santa Ana, California. The complaint seeks a declaration that the Company is obligated to reimburse the insurance carrier for defense expenses that the insurance carrier has or will pay on behalf of the Company's prior lessor. The lessor was sued by an employee of the Company alleging he contracted chronic beryllium disease while employed at the lessor's facility in the 1980's. The Company's insurance carrier has or will pay the lessor's defense costs under a reservation of rights to seek reimbursement from the Company if it is determined by the Court that the Company's insurance carrier is not obligated to pay.

The Company believes that the insurance carrier's claim is without merit and is vigorously defending against this claim. The case is in the early stage of discovery and no trial date has been set. The complaint does not state the amount of legal expenses for which reimbursement is sought, but the Company believes that the resolution of this matter will not have a material adverse effect on the financial condition or operations of the Company.

Note 5 Disclosure About Segments of Enterprise and Related Information

The Company serves its markets and manages its business through three divisions, each of which has its own manufacturing facilities and administrative and selling functions. The Company's Advanced Ceramic Operations, located in Costa Mesa and Irvine, California, primarily produces armor and orthodontic products, components for semiconductor equipment, and houses the Company's SRBSN research and development activities. The Company's cathode development and production are handled through its Semicon Associates division located in Lexington, Kentucky. Fused silica products, including missile radomes, are produced at the Company's Thermo Materials division located in Scottdale, Georgia.

Ceradyne's manufacturing structure is summarized in the following table:

FACILITY LOCATION	PRODUCTS
Advanced Ceramic Operations Costa Mesa and Irvine, California Approximately 126,000 square feet	<ul style="list-style-type: none"> ▷ Semiconductor Equipment Components ▷ Lightweight ceramic armor ▷ Orthodontic ceramic brackets ▷ Ceralloy® 147 SRBSN wear parts ▷ Precision ceramics ▷ Ceralloy® 147 SRBSN diesel/automotive engine parts ▷ Research and Development
Semicon Associates Lexington, Kentucky Approximately 35,000 square feet	<ul style="list-style-type: none"> ▷ Microwave ceramic-impregnated dispenser cathodes ▷ Ion laser ceramic-impregnated dispenser cathodes ▷ Samarium cobalt magnets
Thermo Materials Scottdale, Georgia Approximately 85,000 square feet	<ul style="list-style-type: none"> ▷ Glass tempering rolls (fused silica ceramics) ▷ Metallurgical tooling (fused silica ceramics) ▷ Missile radomes (fused silica ceramics) ▷ Castable and other fused silica product

SEGMENT STATEMENT OF OPERATIONS

For the Years Ended December 31, 2001, 2000, and 1999 (amounts in thousands)

	Advanced Ceramic Ops			Semicon Associates			Thermo Materials			TOTAL		
	2001	2000	1999	2001	2000	1999	2001	2000	1999	2001	2000	1999
Revenue from external customers	\$ 31,026	\$ 31,250	\$ 17,839	\$ 7,709	\$ 7,191	\$ 6,385	\$ 6,604	\$ 7,489	\$ 6,158	\$ 45,339	\$ 45,930	\$ 30,382
Depreciation and amortization	\$ 1,641	\$ 1,564	\$ 1,272	\$ 451	\$ 362	\$ 347	\$ 393	\$ 286	\$ 216	\$ 2,485	\$ 2,212	\$ 1,835
Segment income (loss) before provision (benefit) for income taxes	\$ 3,754	\$ 3,389	\$ 762	\$ 1,493	\$ 895	\$ 395	\$ (410)	\$ 913	\$ 402	\$ 4,837	\$ 5,197	\$ 1,559
Segment assets	\$ 35,398	\$ 27,298	\$ 23,196	\$ 6,575	\$ 5,994	\$ 5,877	\$ 5,978	\$ 5,171	\$ 3,820	\$ 47,951	\$ 38,463	\$ 32,893
Expenditures for segment assets of PP&E	\$ 5,746	\$ 1,211	\$ 2,989	\$ 384	\$ 394	\$ 322	\$ 835	\$ 809	\$ 477	\$ 6,965	\$ 2,414	\$ 3,788

The following is revenue by product line for Advanced Ceramic Operations for the year ended December 31,

	2001	2000	1999
Semiconductor	\$ 1,667	\$ 2,407	\$ 2,113
Armor	12,446	14,489	4,772
Orthodontics	7,992	6,511	5,623
Other	8,921	7,843	5,331
	\$ 31,026	\$ 31,250	\$ 17,839

SEGMENT STATEMENT FOR NET SALES BY AREA

For the Years Ended December 31, 2001, 2000, and 1999 (in %)

	Advanced Ceramic Ops			Semicon Associates			Thermo Materials			TOTAL		
	2001	2000	1999	2001	2000	1999	2001	2000	1999	2001	2000	1999
U.S. net sales	60%	63%	54%	14%	12%	18%	10%	12%	17%	84%	87%	89%
Western Europe net sales	4%	3%	3%	2%	2%	2%	1%	1%	1%	7%	6%	6%
Asia net sales	1%	1%	1%	1%	1%	1%	3%	2%	2%	5%	4%	4%
Israel net sales	3%	1%	—	—	—	—	—	—	—	3%	1%	—
Canada net sales	—	—	1%	—	1%	—	1%	1%	—	1%	2%	1%
Other	—	—	—	—	—	—	—	—	—	—	—	—
Total net sales	68%	68%	59%	17%	16%	21%	15%	16%	20%	100%	100%	100%

One customer accounted for approximately 18%, 14% and 18% of net sales for the years ended 2001, 2000 and 1999, respectively.

Note 6

Stock Options

The Company has a stock option plan, the 1994 Stock Incentive Plan, and an employee stock purchase plan, the 1995 Employee Stock Purchase Plan. The Company accounts for these plans under APB Opinion No. 25, under which no compensation cost has been recognized. Had compensation cost for these plans been determined consistent with SFAS No. 123, the Company's net income and earnings per share would have been reduced to the following pro forma amounts:

	2001	2000	1999
Net income: As reported	\$ 4,029,000	\$ 5,093,000	\$ 1,603,000
Pro forma	\$ 3,385,000	\$ 4,696,000	\$ 1,276,000
Basic income per share:			
As reported	\$ 0.48	\$ 0.62	\$ 0.20
Pro forma	\$ 0.41	\$ 0.57	\$ 0.16
Diluted income per share:			
As reported	\$ 0.46	\$ 0.61	\$ 0.20
Pro forma	\$ 0.39	\$ 0.56	\$ 0.16

Because the SFAS No. 123 method of accounting has not been applied to options granted prior to January 1, 1995, the resulting pro forma compensation cost may not be representative of that to be expected in future years. Additionally, the 2001, 2000 and 1999 pro forma net income include immaterial amounts related to the purchase discount offered under the 1995 Employee Stock Purchase Plan.

The Company may sell up to 250,000 shares of stock to its full-time employees under the 1995 Employee Stock Purchase Plan. The Company has sold 21,765 shares, 27,925 shares and 26,793 shares in 2001, 2000 and 1999, respectively, under the 1995 Employee Stock Purchase Plan. Employees may purchase shares at the lower of 85 percent of the quoted market value of the shares as determined on the first or last day of the plan year. As of December 31, 2001, the Company has 113,657 shares available under the 1995 Employee Stock Purchase Plan. The weighted average fair value of shares sold in 2001, 2000 and 1999 was \$6.88, \$3.88 and \$3.88, respectively.

The Company may grant options for up to 950,000 shares under the 1994 Stock Incentive Plan. The Company has granted options for 1,035,100 shares and has had cancellations of 143,705 shares through December 31, 2001. Options are granted at or above the fair market value at the date of grant and generally become exercisable over a five-year period for Incentive Options and three months for Non-Qualified Options.

A summary of the status of the Company's stock option plan at December 31, 1999, 2000 and 2001 and changes during the years then ended is presented in the table and narrative below:

	Shares	Weighted Average Exercise Price
OUTSTANDING, December 31, 1998	498,150	\$ 4.24
Granted	151,000	3.39
Exercised	(10,200)	(2.63)
Canceled	(10,400)	(4.66)
OUTSTANDING, December 31, 1999	628,550	\$ 4.06
Granted	107,900	\$ 6.83
Exercised	(127,990)	(4.23)
Canceled	(11,000)	(4.16)
OUTSTANDING, December 31, 2000	597,460	\$ 4.57
Granted	169,500	\$ 6.83
Exercised	(53,700)	4.00
Canceled	(7,500)	4.84
OUTSTANDING, December 31, 2001	705,760	\$ 5.15

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions used for grants in 2001, 2000, and 1999, respectively: risk free interest rates of 4.92, 5.76 and 6.51 percent; expected life for 2001, 2000 and 1999 of 7 years; expected volatility of 64.97, 66.53 and 65.06 percent. The assumed dividend yield in 2001, 2000 and 1999 is zero percent.

Of the 705,760 options outstanding at December 31, 2001, 300,900 have exercise prices between \$2.00 and \$4.38, with a weighted average exercise price of \$3.17, and a weighted average remaining contractual life of six years. The remaining 404,860 options have exercise prices between \$4.75 and \$7.62, with a weighted average exercise price of \$6.53, and a weighted average remaining contractual life of eight years.

Note 7 Supplemental Retirement Plan

In December 1988 the Board of Directors of the Company approved the adoption of a supplemental retirement plan, the Ceradyne SMART 401(k) Plan (the Plan), in which substantially all employees are eligible to participate after completing 90 days of employment. Participation in the Plan is voluntary. An employee may elect to contribute up to fifteen percent (15% or the maximum deferred tax amount of \$10,500 in 2001, whichever is less) of the employee's pretax compensation as a basic contribution. The Company may contribute any amount which the Board of Directors annually determines appropriate. Company contributions fully vest and are nonforfeitable after the participant has completed five years of service. During the years ended December 31, 2001, 2000 and 1999, the related Company contribution was \$259,024, \$82,052 and \$14,601, respectively.

The Company's contribution is in the form of shares of its common stock. The number of shares to be contributed will be determined by dividing the total Company match for the Plan year by the higher of the market value per share of common stock as of the end of that Plan year (December 31), or the audited book value per share of common stock as of the end of that Plan year. The participants' cash contributions may be invested, at their discretion, in several funds. The member can elect to allocate the accumulated and future contributions to their accounts among these funds in increments of 10 percent.

The Company has reserved 250,000 shares of its common stock for possible issuance under the Plan. At December 31, 2001, 64,966 shares were available for issuance under the Plan.

Note 8 Joint Venture and Joint Development Agreement

On March 11, 1986, the Company sold 526,316 shares of its common stock to Ford Motor Company (Ford) for a gross sales price of \$10,000,000. In addition, Ford and the Company formed a joint venture, Ceradyne Advanced Products, Inc. (CAPI), in which the Company acquired a 20 percent interest for \$200,000. Ford contributed certain technology in exchange for its 80 percent interest in the joint venture. The Company granted Ford an option to have Ford's 80 percent interest in the joint venture to the Company in exchange for 608,020 shares of the Company's common stock. Ford granted the Company an option to call Ford's 80 percent interest in the joint venture in exchange for 680,983 shares of the Company's common stock.

On February 13, 1988, the Company exercised its call option and issued 680,983 shares of its common stock to Ford. The value of the shares issued (\$2,043,000) was allocated to the technology acquired and is being amortized over a 20 year period utilizing the purchase method of accounting.

Ford and the Company have also entered into a joint development program to develop a prototype production facility to produce ceramics with automotive applications. Under the terms of the joint development agreement, Ford and the Company share equally in the cost of this project. Ford contributed \$270,000 for each of the years ended December 31, 2001, 2000 and 1999. In addition, Ford contributed \$270,000 in October 2001 for fiscal year 2002.

Note 9 Interim Financial Information (unaudited)

The results by quarter for 2001 and 2000 are as follows:

	Quarter Ending			
	March 31, 2001	June 30, 2001	September 30, 2001	December 31, 2001
Net sales	\$ 11,949,000	\$ 11,137,000	\$ 10,178,000	\$ 12,075,000
Gross profits	3,826,000	3,293,000	2,801,000	2,567,000
Net income	1,189,000	1,257,000	658,000	925,000
Diluted income per share	\$ 0.14	\$ 0.14	\$ 0.08	\$ 0.10

	Quarter Ending			
	March 31, 2000	June 30, 2000	September 30, 2000	December 31, 2000
Net sales	\$ 11,148,000	\$ 11,699,000	\$ 11,493,000	\$ 11,590,000
Gross profits	\$ 2,885,000	\$ 3,164,000	\$ 3,230,000	\$ 2,908,000
Net income	1,156,000	1,338,000	1,409,000	1,190,000
Diluted income per share	\$ 0.14	\$ 0.16	\$ 0.17	\$ 0.14

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Stockholders and Directors of Ceradyne, Inc.:

We have audited the accompanying consolidated balance sheets of Ceradyne, Inc. (a Delaware corporation) and subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2001. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Ceradyne, Inc. and subsidiaries as of December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001, in conformity with accounting principles generally accepted in the United States.

ARTHUR ANDERSEN LLP

Orange County, California
February 27, 2002

MARKET PRICES OF COMMON STOCK

By Quarter	2001	High	Low
	First Quarter	10.06	6.63
	Second Quarter	9.42	6.95
	Third Quarter	8.53	6.45
	Fourth Quarter	11.43	8.10
	2000		
	First Quarter	9.88	4.38
	Second Quarter	11.75	6.63
	Third Quarter	10.50	7.50
	Fourth Quarter	9.50	5.88

The present policy of Ceradyne is to retain earnings for the operation and expansion of its business. Ceradyne has never paid cash dividends, and management does not anticipate that it will do so in the foreseeable future.

The Company did not sell any equity securities during the year ended December 31, 2001 that were not registered under the Securities Act of 1933.

CORPORATE DIRECTORY

Directors	Joel P. Moskowitz	<i>Chairman of the Board, Chief Executive Officer and President</i>
	Richard A. Alliegro	<i>Director, Ceramic Technology Consultant</i>
	Eduard Bagdasarian	<i>Director, COO, Barrington Associates</i>
	Frank Edelstein	<i>Director, Vice President, StoneCreek Capital, Inc.</i>
	Wilford D. Godbold, Jr.	<i>Director, Private Investor</i>
	Christopher D. Johnson	<i>Director, Technology Venture Fund Manager, Ford Motor Company</i>
Milton L. Lohr	<i>Director, Partner of L.F. Global Investments</i>	

Officers	Joel P. Moskowitz	<i>Chairman of the Board, Chief Executive Officer and President</i>
	Earl E. Conabee	<i>Vice President, and Director of Marketing at Thermo Materials</i>
	Howard F. George	<i>Vice President Finance, Chief Financial Officer and Secretary</i>
	David P. Reed	<i>Vice President, and General Manager of Advanced Ceramic Operations</i>

Transfer Agent and Registrar	American Stock Transfer and Trust Co. 59 Maiden Lane New York, NY 10038-4667
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General Counsel	Stradling, Yocca, Carlson & Rauth 660 Newport Center Drive, 16th Floor Newport Beach, California 92660-6401
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Independent Public Accountants	PricewaterhouseCoopers LLP 2020 Main Street, Suite 400 Irvine, California 92614 Change from Arthur Andersen LLP to PricewaterhouseCoopers LLP was made by the Board of Directors, effective May 20, 2002.
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Corporate Offices	Ceradyne, Inc. 3169 Redhill Avenue Costa Mesa, California 92626 (714) 549-0421 www.ceradyne.com
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Manufacturing Facilities	Ceradyne Advanced Ceramic Operations 3169 Redhill Avenue Costa Mesa, CA 92626
	Ceradyne Advanced Ceramic Operations 17466 Daimler Avenue Irvine, CA 92614
	Ceradyne Thermo Materials 3449 Church Street Scottdale, GA 30079
	Ceradyne Semicon Associates 695 Laco Drive Lexington, KY 40510

Annual Meeting	The annual stockholders' meeting will be held at the Radisson Hotel, 4545 MacArthur Blvd., Newport Beach, CA 92660 on Monday, July 29, 2002, at 10:00 A.M.
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Form 10-K	The Company's Form 10-K annual report for the fiscal year 2001, as filed with the Securities and Exchange Commission, which contains information in greater detail than is presented in the annual report to stockholders, is available to stockholders without charge upon written request, addressed to Vice-President, Chief Financial Officer, Ceradyne, Inc., 3169 Redhill Avenue, Costa Mesa, California 92626.
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ceradyne, inc.

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