

PART I

ITEM 1. BUSINESS.

INTRODUCTION

Certain of the statements contained in this report are forward-looking statements based on current expectations which involve a number of uncertainties. The events described herein may not occur due to risks inherent in research and product development, the uncertainty of market acceptance of Company products, the possible inability to obtain financing, and other factors. Accordingly, the Company's future activities may differ materially from those projected in the forward-looking statements.

OXIS International, Inc., (the "Company"), a Delaware corporation, is a leader in the discovery, development and commercialization of therapeutic and diagnostic products to diagnose, treat and prevent diseases of oxidative stress. Oxidative stress occurs when the concentration of free radicals and reactive oxygen species ("ROS"), highly reactive molecules produced during oxidative processes, exceed the body's antioxidant defense mechanisms.

The Company consists of two closely related operating units: an international diagnostic business which markets research and commercial diagnostic assays and fine chemicals to research and clinical laboratories; and a drug discovery business focused on new drugs to treat diseases associated with tissue damage from free radicals and reactive oxygen species.

The Company has targeted its drug discovery and development programs to address diseases that have underlying pathologies based on oxidative stress, and for which there is currently no optimum treatment. The Company has identified lead molecules from two series of small molecular weight antioxidants. The first of these lead molecules has completed Phase I clinical trials, and the second is in preclinical development. In addition, the Company is developing a series of earlier stage compounds for the treatment of cancer.

The Company derives current business revenues from its diagnostic assays and two fine chemicals, ergothioneine and bovine superoxide dismutase ("bSOD"). The Company's diagnostic products portfolio includes fourteen commercial therapeutic drug monitoring ("TDM") assays based on fluorescence polarization immunoassay technology ("FPIA"); twelve drugs of abuse assays which utilize an enzyme-multiplied immunoassay technique ("EMIT"); and six assays to measure oxidative stress.

The Company's twelve FDA-cleared therapeutic drug monitoring ("TDM") assays are sold to clinical and reference laboratories, primarily through a network of international distributors. The assays for markers of oxidative stress are sold through international distribution and catalog sales to basic researchers and clinicians working in oxidative stress research. The Company's TDM assays are designed to run on Abbott's TDx(R) and TDx/FLx(R) instruments, while the enzyme immunoassays and colorimetric assays run on a variety of commercially available instruments.

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The Company has invested significant resources to build an early and substantial patent position on both its antioxidant therapeutic technologies and selected oxidative stress assays.

The Company's corporate offices are located in a 15,000 sq. ft. facility at 6040 N. Cutter Circle, Suite 317, Portland, OR 97217. Research operations of the Company are located outside of Paris at Z.A. des Petits Carreaux, 2, av. des Coquelicots, 94385 Bonneuil-Sur-Marne, Cedex, France.

ACQUISITIONS/MERGERS

In September 1994, the Company acquired Bioxytech S.A. located in Paris, France, and merged with International BioClinical, Inc. ("IBC"), an Oregon corporation, and changed its name from DDI Pharmaceuticals, Inc. to OXIS International, Inc. Bioxytech S.A. was subsequently renamed OXIS International S.A. ("OXIS S.A."). At the time of the acquisition, OXIS S.A.'s research and development programs were focused on the synthesis of novel antioxidant therapeutic molecules and assays to measure markers of oxidative stress. OXIS S.A. was also selling six research assays for measuring specific markers of oxidative stress. IBC was selling thirteen therapeutic drug monitoring ("TDM") assays at the time of its acquisition by the Company. It was also developing one additional TDM assay and a (beta)-lactamase rapid detection test, both of which were completed during 1995.

In July 1995, OXIS acquired Therox Pharmaceuticals, Inc. ("Therox"), a Delaware corporation, through an exchange of stock. Therox was merged into a subsidiary of the Company. Therox was founded in 1994 by S.R. One, Limited (the venture investment arm of SmithKline Beecham) and Brantley Venture Partners II, L.P. Therox was focused on the development of membrane active antioxidants and molecules that combine antioxidant activity with other key therapeutic effects. The acquisition provided the Company with complimentary therapeutic technologies, seven patents and several relationships with university scientists.

Prior to the acquisitions of Bioxytech S.A. and International BioClinical, Inc. in 1994, substantially all of the Company's research and development efforts involved superoxide dismutase ("SOD") and poly-ethylene glycol ("PEG"). The 1994 and 1995 acquisitions substantially expanded the Company's research and development capabilities in the areas of synthetic chemistry, biochemistry and diagnostic assay development.

RESEARCH AND DEVELOPMENT

The Company's research and development programs are focused primarily on the discovery and development of new therapeutic molecules to combat diseases related to damage from oxidative stress. OXIS believes that the control or elimination of oxidative stress represents an important but largely untapped area for drug development. The Company's technical

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approach is to supplement the natural defense systems through unique, synthetic molecules which, because of their pharmacological and/or distribution properties, will reduce oxidative stress in target cells and tissues.

The Company has designed and synthesized several series of novel compounds, including: low-molecular-weight biomimetic antioxidants (Glutathione Peroxidase Mimics Program) and pro-oxidants (Cancer Therapeutics Program) that are based on unique selenium chemistry; and lipid soluble antioxidants and combination enzyme inhibitors/lipid soluble antioxidants (Lipid Soluble Antioxidants Program). OXIS has demonstrated that certain of its therapeutic molecules may act via two mechanisms to reduce oxidative stress in cells: through direct control of oxidative damage; and by decreasing specific signals that trigger the inflammatory cycle. Both of the Company's lead therapeutic molecules have been shown to inhibit levels of NF-(kappa)B, a transcription factor believed to be activated by elevated concentrations of ROS. NF-(kappa)B is known to activate genes involved in initiating the inflammatory response. The Company believes that the control of ROS, and associated decreases in NF-(kappa)B activation, will block the initiation of the inflammatory response earlier in the cycle than most drugs currently used to treat certain complex inflammatory diseases.

A brief summary of the Company's synthetic therapeutics research and development programs follows:

GLUTATHIONE PEROXIDASE MIMICS PROGRAM (GPX). The GPx mimics are small molecular weight, orally bioavailable compounds that were designed to catalyze the inactivation of toxic hydroperoxides. These molecules act as chemical catalysts. The lead molecule, BXT-51072, has demonstrated significant protection of endothelial cells from direct peroxidase damage and down regulates various inflammatory mediators and neutrophil adhesion.

An oral formulation of BXT-51072 is being developed for the treatment of Inflammatory Bowel Disease ("IBD"), with Acute Respiratory Distress Syndrome ("ARDS") projected to be a secondary indication for the intravenous formulation of the drug. BXT-51072 has demonstrated activity in animal models of IBD, and in a porcine model of restenosis. A Phase I clinical trial was just completed at the end of 1996 and an investigational new drug application has been filed with the Food and Drug Administration (the "FDA") for a Phase II study in patients with IBD. This trial is expected to begin in mid-1997.

A patent on this class of compounds has been issued in France and patent applications are pending in the United States, Japan, Canada, Australia and Europe.

LIPID SOLUBLE ANTIOXIDANTS PROGRAM (LSA). The LSA compounds were designed to combine the antioxidant capabilities of ascorbic acid with the membrane-protecting effects of vitamin E. The lead molecule from this series, TX-153, has also shown significant protection of endothelial cells from direct peroxide damage, and, like BXT-51072, suppresses various inflammatory mediators and reduces neutrophil adhesion. Although TX-153 apparently acts to control ROS in cells through a different pathway than the GPx mimics, it also appears to inhibit NF-(kappa)B.

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TX-153 is entering preclinical toxicology studies, with Phase I clinical studies anticipated to begin in 1998.

The Company has four issued U.S. patents, and patent applications pending in the United States, Mexico, Japan, Canada and Europe on these compounds.

CANCER THERAPEUTICS PROGRAM. The Company has designed compounds which utilize the destructive nature of free radicals to treat hormone-dependent cancers by selectively killing tumor cells by activating ROS. Hormone-dependent cancers such as breast and prostate cancer were chosen as potential indications for this series of molecules due to the specific hormone receptors on their cell membranes. Molecules that mimic the enzyme glutathione oxidase have been synthesized, and two strategies are being investigated to deliver the molecules to tumor cells and initiate the production of ROS inside these cells. Specific steroid molecules are being tested for their ability to target tumor cells, and a prodrug approach is being used to provide a source of ROS that can be turned on inside the cell. A lead molecule has not yet been selected for this series. The indications for this series of drugs include breast and prostate cancer, but the approach may also be applicable to other tumors.

The Company has filed patent applications on this series of pro-oxidant molecules in the United States and France.

In addition to its research and development programs in synthetic antioxidants, OXIS also has conducted research programs in the development of oxidative stress assays, bovine superoxide dismutase and poly-ethylene glycol technology. The status of these programs are as follows:

OXIDATIVE STRESS ASSAYS. The Company has developed six research assay kits for markers of oxidative stress that are designed to ultimately facilitate diagnosis and optimize therapy of free radical-associated diseases. These assays also provide developmental synergy for the pharmaceutical research and development programs by facilitating the assessment of oxidative stress in laboratory studies and in patients. The Company intends to develop additional assays for key markers of oxidative stress as part of its ongoing research and development efforts in oxidative stress diagnostics.

BOVINE SUPEROXIDE DISMUTASE (BSOD). The Company also has extensive experience in developing, manufacturing and marketing bovine superoxide dismutase ("bSOD"). Bovine superoxide dismutase has been previously studied in numerous clinical trials by OXIS and other companies. OXIS is not currently pursuing an active research program in bSOD, but supplies bulk bSOD for human use and sells an injectable dosage form of the drug for veterinary applications under the registered trademark Palosein(R).

POLY-ETHYLENE GLYCOL TECHNOLOGY (PEG). Additionally, the Company has developed a patented, high-molecular weight PEG technology that extends the

half-life of SOD and other therapeutic proteins. These derivatives reduce the immunogenicity of and extend the life of

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therapeutic proteins in the body . (The Company's PEG has been shown to extend the life of its bSOD in vivo by 250 times.) The Company has four issued U.S. patents as well as numerous issued patents world-wide on this technology. The Company is not currently pursuing an active research program in PEG technology, but is seeking potential partners for this technology for possible license or sale.

Overall, the Company has an extensive portfolio of patents that cover its synthetic antioxidant therapeutic molecules, superoxide dismutase, polyethylene glycol technology, markers of oxidative stress and fine chemicals. The Company currently holds fifteen U.S. patents and eight French patents and has filed for eight additional U.S. patents.

The Company's overall research and development strategy is to discover and advance its therapeutic molecules through early stage clinical trials to demonstrate efficacy in the target disease populations. The Company expects to seek strategic pharmaceutical partners for later stage clinical development and commercialization of its therapeutics, but, to date, has not entered into any such partnership.

Much of the Company's success depends on its potential products which are in research and development and from which no material revenues have yet been generated. The Company must successfully partner, develop, obtain regulatory approval for and market or sell its potential therapeutic products to achieve profitable operations. No assurances can be given that the Company's product development efforts will be successfully completed, that required regulatory approvals will be obtained, or that any such products, if developed and introduced will be successfully marketed. Competition in the pharmaceutical industry is intense, and no assurances can be given that OXIS' competitors will not develop technologies and products that are more effective than those being developed by OXIS.

Research and development expenses were \$4,908,000, \$4,299,000 and \$1,670,000 for the years ended December 31, 1996, 1995 and 1994, respectively.

PRODUCTS

DIAGNOSTIC ASSAYS

Revenues from sales of the Company's assays comprised 49% of 1996 revenues, and 44% of 1995 revenues.

OXIDATIVE STRESS ASSAYS

The Company has six research assays available for sale which measure key markers in free radical biochemistry (markers of oxidative stress). Specifically, these assays measure levels of antioxidant protection, oxidative alterations, and pro-oxidant activation of specific white blood cells. OXIS' research assays include:

- SOD-525 (superoxide dismutase)
- GSH-400 (reduced glutathione)
- pl-GPx-EIA (human plasma-specific glutathione peroxidase)
- LPO-586 (lipid peroxidation)
- MPO-EIA (human myeloperoxidase)
- Lactoferrin-EIA (human lactoferrin).

These assay kits utilize either chemical (colorimetric) or immunoenzymatic (EIA) reactions that can be read using laboratory spectrophotometers and microplate readers, respectively. The

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Company's assays offer advantages over conventional laboratory methods, including ease of use, speed, specificity and accuracy.

The assays for markers of oxidative stress are currently being sold to researchers in Europe, Japan and the United States, primarily through distributors. The Company estimates that there are more than 3,500 scientists and clinicians who are working directly in research on free radical biochemistry, and who are potential customers for these research assays.

Through June 1996, assays for markers of oxidative stress were manufactured at the Company's facility in France. Since July 1996, these assays have been manufactured at the Company's facility in Portland, Oregon. All of the oxidative stress assays are manufactured in batches in anticipation of customer orders. Orders are generally filled within a few days; therefore, the Company does not have any significant backlog of orders. The Company believes that adequate supplies of raw materials are either currently on hand, available from commercial suppliers or available through development on a custom basis by commercial contractors, as needed.

The Company's assays for markers of oxidative stress are protected by trade secrets and patents. Seven French patent applications have been filed with respect to these assays, two of which have resulted in the issuance of patents. The oxidative stress assays are sold under the registered trademark "Bioxytech(R)".

Several companies other than OXIS have developed assays for markers of oxidative stress. One company offers assays for superoxide dismutase and glutathione peroxidase which compete directly with the Company's products; and a few competitive assays for lipid peroxidation are available from selected companies. The Company believes that the number and range of its assay kits for markers of oxidative stress is a distinct competitive advantage.

THERAPEUTIC DRUG MONITORING (TDM) ASSAYS

The Company sells fourteen TDM assays which are based on FPIA technology. These products are sold under the trade name INNOFLUOR(TM). The Company's test menu encompasses approximately 90% of the TDM tests performed by clinical and reference laboratories worldwide. These assays are designed for use on the Abbott Laboratories TDx(R) and TDx/FLx(R) analyzers.

The TDM products are sold through a combination of direct customer sales and distributors in the United States, and through a network of distributors outside the United States, principally in Europe.

The TDM assays are manufactured at the Company's facility in Portland, Oregon. All of the TDM assays are manufactured in batches in anticipation of customer orders. Orders are generally filled within a few days; therefore, the Company does not have any significant backlog of orders. The Company believes that adequate supplies of raw materials are either

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currently on hand, available from commercial suppliers or available through development on a custom basis by commercial contractors as needed.

The Company has one pending U.S. patent application, in addition to relying on trade secrets, know-how and trademark laws to protect its TDM assays. The Company's TDM assays have been sold under the trade name INNOFLUOR(TM) since the mid-1980s.

Six major diagnostic companies dominate the therapeutic drug monitoring market. Each of these six companies provides a range of both instrumentation and assays to clinical laboratories. Of these, Abbott Laboratories holds the largest market share. OXIS competes most directly with Abbott Laboratories, because OXIS' assays are designed to be run on Abbott's analyzers. The Company competes based on high product quality, an aggressive pricing strategy and technical services. Abbott Laboratories and certain of the Company's other competitors have substantially greater financial and other resources than the Company and there can be no assurances that the Company can effectively compete with Abbott Laboratories and such other competitors.

THERAPEUTIC PRODUCTS

Revenues from sales of bulk bSOD, royalties on bSOD products sold by licensees, and sales of Palosein(R), the Company's veterinary bSOD product, comprised approximately 50% of the Company's total revenues in 1996, 48% in 1995 and 76% in 1994.

BOVINE SOD (BSOD) PRODUCTS

Commercial-scale manufacture and quality control of bulk bSOD, as well as subsequent quality control and processing of United States Department of Agriculture-inspected edible beef liver into highly purified bulk bSOD requires a complex, multi-step process, OXIS has significant knowledge regarding the manufacture of bSOD that is protected through trade secrets and proprietary know-how.

The Company has an agreement with Diosynth B.V., a Dutch contract manufacturer of pharmaceutical ingredients, to manufacture bulk bSOD and supply it to OXIS under the terms of a license based on the Company's processes. Diosynth B.V. is an affiliate of AKZO-Nobel N.V., a large, Dutch multinational chemical and health care company. The Company believes that its present source of bSOD is adequate for its near-term foreseeable needs.

With the exception of recently developed, patent protected long-acting SOD derivatives, the Company's older patents protecting the manufacture of bSOD have expired. Expiration of the Company's patents may enable other companies to benefit from research and development efforts of the Company, but such other companies would not receive the benefits of the Company's unpatented trade secrets and know-how or unpublished preclinical or clinical data. Such Companies would still be required to expend considerable resources to conduct preclinical

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and clinical studies of their own pharmaceutical preparations of SOD to gain regulatory approval.

The Company sells bulk bSOD for human use, but does not market dosage forms of bSOD for human use. Palosein(R) is OXIS' registered trademark for its veterinary brand of bSOD. Although there are other sources of bSOD and other laboratory and pilot-scale processes to produce bSOD, the Company believes that it is the only company manufacturing bSOD on a commercial scale for pharmaceutical uses.

The Company's Spanish licensee, Tedec-Meiji Farma, S.A., which distributes bSOD for human use in Spain, has been responsible for a substantial portion of the Company's revenues in recent years. Sales of bSOD to Tedec-Meiji were 39% of the Company's revenues in 1996, 16% in 1995 and 18% in 1994.

EMPLOYEES

As of December 31, 1996, the Company had 51 employees (30 in the United States and 21 in France). Employees of the Company's French subsidiary are covered by a government-sponsored collective bargaining agreement. None of the United States employees are subject to a collective bargaining agreement. The Company has never experienced a work interruption.

FOREIGN OPERATIONS AND EXPORT SALES

For information regarding the Company's foreign operations and export sales, see Note 10 to the consolidated financial statements.

ITEM 2. PROPERTIES.

The Company occupies, pursuant to leases, office and laboratory space in Portland, Oregon and near Paris, France.

The Company's Portland, Oregon lease expires in 1997; the lease of the facility in France expires in 1998.

Although the premises currently occupied are suitable for the Company's present requirements, other equally suitable premises are readily available.

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ITEM 3. LEGAL PROCEEDINGS.

There are no material legal proceedings to which the Company is a party or to which any of its property is subject.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS.

No matters were submitted to a vote of security holders of the Company during the fourth quarter of the year ended December 31, 1996.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON STOCK AND RELATED SHAREHOLDER MATTERS.

The Company's common stock is traded on the NASDAQ National Market System using the symbol OXIS.

Recent quarterly prices of the Company's common stock are as follows:

<TABLE>
<CAPTION>

	1996				1995			
	4TH	3RD	2ND	1ST	4TH	3RD	2ND	1ST
<S> High	<C> 1 25/32	<C> 2 1/8	<C> 2 11/16	<C> 2	<C> 2 13/16	<C> 3 1/2	<C> 4 1/2	<C> 2 7/8
Low	1 7/32	1 1/2	1 7/16	1 1/2	1 1/8	2 1/4	1 3/4	1 5/8

The Company has an estimated 7,800 shareholders, including approximately 3,500 shareholders who have shares in the names of their stockbrokers. The Company utilizes its assets to develop its business and, consequently, has never paid a dividend and does not expect to pay dividends in the foreseeable future.

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ITEM 6. SELECTED FINANCIAL DATA.

<TABLE>
<CAPTION>

	FOR YEARS ENDED					
DECEMBER 31:	1996	1995	1994	1993	1992	
<S> Total Revenues ^{1/}	<C> \$ 4,867,000	<C> \$ 5,136,000	<C> \$ 3,470,000	<C> \$ 3,044,000	<C> \$ 2,772,000	--
Net income (loss)	\$ (5,992,000)	\$ (8,892,000) ^{2/}	\$ (5,567,000) ^{3/}	\$ (1,485,000) ^{4/}	\$ (339,000)	--
Net income (loss) per share	\$ (.47)	\$ (.82) ^{2/}	\$ (.88) ^{3/}	\$ (.30) ^{4/}	\$ (.07)	--

</TABLE>
<TABLE>
<CAPTION>

	1996	1995	1994	1993	1992
<S> AS OF DECEMBER 31:	<C>	<C>	<C>	<C>	<C>
Total assets	\$ 7,997,000	\$ 9,870,000	\$ 11,194,000	\$ 3,124,000	\$ 4,864,000

Long-term obligations	\$ 2,000	\$ 1,332,000	\$ 376,000	--	--
Common shares outstanding	13,790,736	12,124,423	9,322,762	4,982,670	4,982,670

</TABLE>

1/ Earned interest not included in revenue.

2/ Includes a charge of \$3,329,000 (\$.31 per share) for the write off of certain technology of an acquired company.

3/ Includes a charge of \$3,675,000 (\$.58 per share) for the write off of certain technology of acquired companies.

4/ Includes a charge of \$1,531,000 (\$.31 per share) for control contest expense.

As explained under the caption "ACQUISITIONS" in Management's Discussion and Analysis of Financial Condition and Results of Operations below, the Company made significant acquisitions during 1994 and 1995 that affect the comparability of the amounts reflected in the table above.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

ACQUISITIONS

In September 1994, the Company significantly increased its scientific and technical staff, patent application portfolio, current product offerings, research and development programs, research and manufacturing facilities and its customer base by acquiring Bioxytech S.A. (now "OXIS S.A.") and International BioClinical, Inc. ("IBC") (together the "1994 acquired businesses"). Both acquisitions were completed through the exchange of stock, and were accounted for as purchases; accordingly, the acquired assets and liabilities were recorded at

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their estimated fair values as of the date of acquisition. IBC was merged into the Company. OXIS S.A. operates as a subsidiary of the Company.

In July 1995, in a transaction which was also accounted for as a purchase, the Company acquired Therox Pharmaceuticals, Inc. ("Therox") through an exchange of stock. Therox was merged into a wholly-owned subsidiary of the Company. The acquisition of Therox provided the Company with a technology portfolio complementary to its novel therapeutics for treatment of free radical associated diseases together with university relationships and seven patents.

Because the acquisitions have been accounted for as purchases, the Company's consolidated results of operations include the operating results of the acquired businesses from the dates of acquisition only. Therefore, the results of operations of the 1994 acquired businesses are included in the consolidated statements of operations from September 7, 1994, and the results of Therox's operations are included in the consolidated statements of operations from July 19, 1995.

Costs relating to the acquisitions and the Company's more complex corporate structure and the increased research and development investments have placed significant demand on the Company's limited financial resources. See "Financial Condition, Liquidity and Capital Resources" below.

FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

During 1996 the Company's working capital deficit decreased slightly from \$1,469,000 at December 31, 1995, to \$1,405,000 at December 31, 1996. This decrease in the Company's working capital deficit resulted primarily from the effect of the net loss for 1996 (\$5,992,000 less non-cash charges of \$1,381,000), offset by proceeds from issuance of stock (\$4,305,000) and convertible term notes (\$1,000,000).

Cash and cash equivalents declined from \$727,000 at December 31, 1995, to \$422,000 at December 31, 1996.

The Company expects to continue to report losses in 1997 as the level of expenses is expected to continue to exceed revenues. The Company can give no assurances as to when and if its revenues will exceed its expenses. The Company must raise additional capital during the first half of 1997. Failure to raise such additional capital would cause the Company to severely curtail or cease operations. For more information concerning the Company's ability to continue as a going concern, see Note 1 to the consolidated financial statements.

While the Company believes that its new products and technologies show considerable promise, its ability to realize significant revenues therefrom is dependent upon the Company's success in developing business alliances with biotechnology and/or

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pharmaceutical companies that have the required resources to develop and market certain of these products. There is no assurance that the Company's effort to develop such business alliances will be successful. Although the Company is currently seeking additional capital (described below), it cannot predict the source, terms, amount, form, and/or availability of additional capital to fund its operations to the end of the current year.

During 1996, the Company raised approximately \$5,300,000 cash through the sale of its Series C, Series D and Series E Preferred Stock and common stock, and convertible term notes. Substantial additional capital will be required during 1997 to continue operating in accordance with its current plans. The Company has engaged an agent to assist on a best-efforts basis to complete a private placement of its common stock. In addition, the Company has engaged a French investment banker to act as its underwriter for a planned public offering of its common stock on the newly opened French stock market, Le Nouveau Marche, subject to obtaining appropriate authorization from the French stock market regulatory authorities. However, no assurances can be given that the Company will successfully raise the needed capital. If the Company is unable to raise additional capital during the first half of 1997, it would endeavor to extend its ability to continue in business through the reduction of personnel and facility costs, by slowing its research and development efforts, and by reducing other operating costs, however, no assurances can be given that it will be able to do so.

RESULTS OF OPERATIONS

REVENUES

The Company's sales for the past three years consisted of the following:

<TABLE>

<CAPTION>

<S>	1996 <C>	1995 <C>	1994 <C>	
Diagnostic and research assays		\$2,364,000	\$2,240,000	\$ 645,000
Bovine superoxide dismutase (bSOD) for research and human use		1,935,000	1,817,000	2,130,000
Palosein/(R)/(bSOD for veterinary use)		480,000	555,000	346,000
Other		23,000	370,000	204,000
Total sales	\$4,802,000	\$4,982,000	\$3,325,000	

</TABLE>

Diagnostic and research assays are products acquired with the acquisitions of IBC and OXIS S.A. Sales of these products for 1994 represent sales from September 8 through the end of the year. The entire years' sales of diagnostic and research assays are included in the Company's sales for 1995 and 1996.

Bulk bSOD sales in 1994 and 1995 included sales to Sanofi Winthrop, Inc. Sales of bulk bSOD to Sanofi Winthrop ceased in 1995, when Sanofi Winthrop announced that the clinical trial in which it was using the Company's bSOD failed to show the desired results. The

decline in sales to Sanofi Winthrop has been offset to a large extent by increases in sales of bSOD to Tedec-Meiji Farma S.A., the Company's Spanish licensee.

Future sales of bulk bSOD are largely dependent on the needs of the Company's Spanish licensee. The Company expects its orders for 1997 from the Spanish licensee to be less than those for 1996. The Company's sales of bulk bSOD beyond 1997 are uncertain and difficult to predict and no assurances can be given with respect thereto.

Sales of Palosein/(R)/, which was reintroduced to the U.S. market in 1993 and is sold primarily to veterinary wholesalers in the United States, increased from \$346,000 in 1994 to \$555,000 in 1995 as a result of an active direct mail marketing campaign, but declined to \$480,000 in 1996 due in part to large stocking orders by distributors in late 1995. The decrease in other sales was principally the result of the completion of an assay development contract in early 1996. Royalties and license fees are not expected to be material in 1997.

COSTS AND EXPENSES

Cost of sales as a percent of product sales declined from 62% in 1994 to 59% in 1995. In 1995 the cost of the Company's diagnostic and research assays declined slightly as a result of increased volumes, and the cost of bulk bSOD sales also declined from the 1994 level. In 1996 cost of sales increased to 63% of product sales. The increase was primarily caused by a decline in the gross margin on bulk bSOD sales. The Company's cost of sales includes amortization of technology acquired in 1994 (\$239,000 in 1994, and \$737,000 in 1995 and 1996).

Research and development costs increased from \$1,670,000 in 1994 to \$4,299,000 in 1995, and \$4,908,000 in 1996. The increase in 1995 was primarily due to the cost of the research and development activities associated with pharmaceutical technologies acquired in the September 1994 and July 1995 business acquisitions. The increase of \$609,000 in 1996 is the result of increased expenditures relating to preclinical development work and the Phase I clinical trial on the Company's lead therapeutics program (glutathione peroxidase mimics) of approximately \$1,130,000, and a \$230,000 increase in expenses of the former Therox operations, offset by a cost reduction of approximately \$780,000 from the closure of the Company's Mountain View, California facility in the fourth quarter of 1995. The expenses of the Therox operations are included in the 1995 expenses starting in July 1995; the former Therox laboratory facility was closed in May 1996.

Sales, general and administrative expenses increased in 1995 to \$3,332,000 from \$1,652,000 in 1994. The increase in 1995 was due primarily to the inclusion for the entire year of general and administrative costs of the businesses acquired in 1994, further increases in sales and marketing costs relating to Palosein/(R)/ and the new products from the 1994 acquisitions, and increased legal fees and other expenses relating to the Company's ongoing need to raise capital and more complex corporate structure.

In 1996, sales, general and administrative expenses decreased by \$491,000, to \$2,841,000. Most of the decrease was a decrease in the selling, general and administrative expenses of the Company's French subsidiary. In the third quarter of 1996 all of the Company's manufacturing operations were consolidated in the United States and the French subsidiary became a research facility. In connection with this restructuring, two administrative positions have been eliminated and certain other costs which were previously charged to administrative expenses are now being classified as research and development costs. The administrative costs of the Company's French subsidiary decreased \$359,000 in 1996 as compared to 1995.

Expenses included charges of \$3,675,000 and \$3,329,000 to operations for 1994 and 1995, respectively, reflecting the write-off of purchased in-process technology, as described in Note 3 to the consolidated financial statements.

INTEREST INCOME AND EXPENSE

Interest income decreased and interest expense increased in 1995 as the Company liquidated certificates of deposit and borrowed funds pursuant to short-term and long-term interest bearing obligations to finance increased research and development efforts.

NET LOSS

The Company incurred net losses in 1994, 1995 and 1996. The 1994 loss includes a \$3,675,000 (\$.58 per share) charge to operations for the write-off of purchased in-process technology related to the acquisitions of OXIS S.A. and IBC. Similarly, the 1995 loss includes a \$3,329,000 (\$.31 per share) charge to operations for the write-off of purchased in-process technology related to the acquisition of Therox. Excluding these unusual charges, the Company would have incurred a net loss of \$1,892,000, or \$.30 per share for 1994; a net loss of \$5,563,000, or \$.51 per share for 1995, as compared to a net loss of \$5,992,000, or \$.47 per share for 1996.

Increased research and development expenditures and selling, general and administrative expenses from the businesses acquired late in the third quarter of 1994 and increased research and development expenditures relating to the acquisition of Therox early in the third quarter of 1995 contributed to the increased losses in 1995 as compared to 1994. The increased loss for 1996 as compared to 1995 (excluding the unusual charge) is attributable primarily to the increased research and development costs relating to the Company's glutathione peroxidase mimics program.

The Company expects to incur a substantial net loss for 1997. If substantial additional capital is raised through further sales of securities (See Financial Condition, Liquidity and Capital Resources), the Company plans to continue to invest in research and development activities and incur sales, general and administrative expenses in amounts greater than its anticipated near-term product margins. If the Company is unable to raise sufficient

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additional capital, it will have to cease, or severely curtail, its operations. In this event, while expenses will be reduced, expense levels, and the potential write down of various assets, would still be in amounts greater than anticipated revenues.

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ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

CONSOLIDATED BALANCE SHEETS DECEMBER 31, 1996 AND 1995

	1996	1995
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 422,000	\$ 727,000
Accounts receivable	861,000	823,000
Inventories	591,000	953,000
Prepaid and other	191,000	262,000
	-----	-----
Total current assets	2,065,000	2,765,000
Property and equipment, net	1,327,000	1,092,000
Assets under capital leases, net	309,000	1,198,000
Technology for developed products and custom assays, net	3,782,000	4,498,000
Other assets	514,000	317,000
	-----	-----

Total assets	\$7,997,000	\$9,870,000
--------------	-------------	-------------

See accompanying notes.

16

CONSOLIDATED BALANCE SHEETS
DECEMBER 31, 1996 AND 1995

<TABLE>

<CAPTION>

	1996	1995
LIABILITIES AND SHAREHOLDERS' EQUITY		
<S>	<C>	<C>
Current liabilities:		
Notes payable	\$ 1,221,000	\$ 1,616,000
Accounts payable	1,386,000	1,182,000
Customer deposits	132,000	250,000
Accrued liabilities	655,000	903,000
Current portion of capital lease obligations		76,000 283,000
	-----	-----
Total current liabilities	3,470,000	4,234,000
Capital lease obligations		-- 47,000
8% convertible subordinated debentures		-- 1,255,000
Other liabilities	2,000	30,000
Commitments and contingencies (Notes 1, 3 and 11)		
Shareholders' equity:		
Preferred stock - \$.01 par value; 15,000,000 shares authorized:		
Series B - 642,583 shares issued and outstanding at December 31, 1996 and 1995 (liquidation preference of \$1,500,000)	6,000	6,000
Series C - 1,647,157 shares issued and outstanding at December 31, 1996	17,000	--
Series D - 1,650 shares issued and outstanding at December 31, 1996	--	--
Series E - 2,200 shares issued and outstanding at December 31, 1996	--	--
Common stock - \$.50 par value; 40,000,000 shares authorized; 13,790,736 shares issued and outstanding		6,895,000 6,062,000
Additional paid in capital	30,706,000	25,210,000
Accumulated deficit	(33,023,000)	(27,031,000)
Accumulated translation adjustments		(76,000) 57,000
	-----	-----
Total shareholders' equity	4,525,000	4,304,000
	-----	-----
Total liabilities and shareholders' equity	\$ 7,997,000	\$ 9,870,000

</TABLE>

See accompanying notes.

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CONSOLIDATED STATEMENTS OF OPERATIONS
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

<TABLE>

<CAPTION>

	1996	1995	1994
<S>	<C>	<C>	<C>
Revenues:			
Sales	\$ 4,802,000	\$ 4,982,000	\$ 3,325,000
Royalties and license fees		65,000	145,000
	-----	-----	-----
Total revenues	4,867,000	5,136,000	3,470,000

Costs and expenses:			
Cost of sales	3,009,000	2,939,000	2,074,000
Research and development	4,908,000	4,299,000	1,670,000
Sales, general and administrative	2,841,000	3,332,000	1,652,000
Purchased in-process technology (Note 3)	--	3,329,000	3,675,000
	-----	-----	-----
Total costs and expenses	10,758,000	13,899,000	9,071,000
	-----	-----	-----
Operating loss	(5,891,000)	(8,763,000)	(5,601,000)
Interest income	37,000	42,000	82,000
Interest expense	(138,000)	(171,000)	(48,000)
	-----	-----	-----
Net loss	<u>\$ (5,992,000)</u>	<u>\$ (8,892,000)</u>	<u>\$ (5,567,000)</u>
	=====	=====	=====
Net loss per share	<u>\$ (.47)</u>	<u>\$ (0.82)</u>	<u>\$ (0.88)</u>
	=====	=====	=====
Weighted average number of shares used in computation	<u>12,821,544</u>	<u>10,854,149</u>	<u>6,350,097</u>
	=====	=====	=====

</TABLE>

See accompanying notes.

18

CONSOLIDATED STATEMENTS OF CASH FLOWS
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

<TABLE>

<CAPTION>

	1996	1995	1994
<S>	<C>	<C>	<C>
Cash flows from operating activities:			
Net loss	\$(5,992,000)	\$(8,892,000)	\$(5,567,000)
Adjustments to reconcile net loss to cash provided by (used for) operating activities:			
Depreciation and amortization	1,381,000	1,369,000	551,000
Purchased in-process technology	--	3,329,000	3,675,000
Changes in assets and liabilities:			
Accounts receivable	(50,000)	(70,000)	258,000
Inventories	355,000	(17,000)	(186,000)
Other current assets	(2,000)	209,000	(19,000)
Accounts payable	220,000	(565,000)	562,000
Customer deposits	(118,000)	(866,000)	1,116,000
Accrued liabilities	(69,000)	251,000	(8,000)
	-----	-----	-----
Net cash provided by (used for) operating activities	(4,275,000)	(5,252,000)	382,000
Cash flows from investing activities:			
Redemption of certificates of deposit	--	496,000	884,000
Purchase of equipment	(58,000)	(99,000)	(40,000)
Acquisition and stock issuance costs (Note 3)	--	--	(1,361,000)
Cash of businesses acquired (Note 3)	--	143,000	273,000
Additions to patent and deferred financing costs	--	(350,000)	--
Other	(1,000)	(136,000)	19,000
	-----	-----	-----
Net cash provided by (used for) investing activities	(409,000)	404,000	(225,000)
Cash flows from financing activities:			
Short-term borrowing	1,061,000	1,366,000	296,000
Proceeds from issuance of long-term debt	--	1,255,000	--
Costs in connection with issuance of long-term debt	--	(152,000)	--

Proceeds from issuance of stock, net of related cost	4,305,000	3,077,000	--
Repayment of short-term notes	(690,000)	(340,000)	--
Repayment of capital lease obligations and other liabilities	(294,000)	(573,000)	(275,000)
	-----	-----	-----
Net cash provided by financing activities	4,382,000	4,633,000	21,000
Effect of exchange rate changes on cash	(3,000)	6,000	--
	-----	-----	-----
Net increase (decrease) in cash and cash equivalents	(305,000)	(209,000)	178,000
Cash and cash equivalents - beginning of year	727,000	936,000	758,000
	-----	-----	-----
Cash and cash equivalents - end of year	\$ 422,000	\$ 727,000	\$ 936,000
	=====	=====	=====

</TABLE>

See accompanying notes.

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CONSOLIDATED STATEMENTS OF CASH FLOWS (CONTINUED)
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

<TABLE>

<CAPTION>

	1996	1995	1994
<S>	<C>	<C>	<C>

Supplemental schedule of noncash operating and financing activities:

Inventory purchase with deferred payment terms	--	\$250,000	--
Common stock issued as incentive to purchase notes	--	\$156,000	--
Issuance of Series C Preferred Stock in exchange for cancellation of notes	\$ 844,000	--	--
Conversion of 8% Convertible Subordinated Debentures into Common Stock	\$1,312,000	--	--
Conversion of Series C and D Preferred Stock into Common Stock	\$ 515,000	--	--

</TABLE>

See accompanying notes.

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CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

<TABLE>

<CAPTION>

	Preferred Stock		Common Stock		Additional
	Shares	Amount	Shares	Amount	paid-in capital
<S>	<C>	<C>	<C>	<C>	<C>
Balances, January 1, 1994			4,982,670	\$ 2,491,000	\$12,863,000
Series A preferred and common shares issued in connection with 1994 business combinations (Note 3)	40,000	\$ --	4,340,092	2,170,000	7,367,000
Accumulated translation adjustments					
Net loss					
	-----	-----	-----	-----	-----
Balances, December 31, 1994	40,000	--	9,322,762	4,661,000	20,230,000

Shares issued in connection with short-term notes		93,300	47,000	109,000	
Sale of common shares		1,227,625	614,000	1,089,000	
Conversion of Series A preferred shares to common	(40,000)	--	40,000	20,000	(20,000)
Shares issued in connection with 1995 business combination (Note 3)		1,440,736	720,000	2,633,000	
Series B preferred shares issued (Note 3)	642,583	6,000		1,169,000	
Accumulated translation adjustments					
Net loss					
	-----	-----	-----	-----	-----
Balances, December 31, 1995	642,583	6,000	12,124,423	6,062,000	25,210,000
Sale of Series C preferred shares for cash	1,125,590	11,000		1,225,000	
Series C preferred shares issued in exchange for cancellation of notes	648,490	7,000		837,000	
Sale of Series D preferred shares	2,000	--		1,939,000	

<CAPTION>

	Accumulated deficit	Accumulated translation adjustments	Total shareholders' equity
	-----	-----	-----
<S>	<C>	<C>	<C>
Balances, January 1, 1994	\$(12,572,000)		\$ 2,782,000
Series A preferred and common shares issued in connection with 1994 business combinations (Note 3)		9,537,000	
Accumulated translation adjustments		\$(53,000)	(53,000)
Net loss	(5,567,000)		(5,567,000)
	-----	-----	-----
Balances, December 31, 1994	(18,139,000)	(53,000)	6,699,000
Shares issued in connection with short-term notes			156,000
Sale of common shares			1,703,000
Conversion of Series A preferred shares to common			--
Shares issued in connection with 1995 business combination (Note 3)		3,353,000	
Series B preferred shares issued (Note 3)			1,175,000
Accumulated translation adjustments		110,000	110,000
Net loss	(8,892,000)		(8,892,000)
	-----	-----	-----
Balances, December 31, 1995	(27,031,000)	57,000	4,304,000
Sale of Series C preferred shares for cash			1,236,000
Series C preferred shares issued in exchange for cancellation of notes			844,000
Sale of Series D preferred shares			1,939,000

</TABLE>

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CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY (CONTINUED)
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

<TABLE>

<CAPTION>

	Preferred Stock		Common Stock		
	Shares	Amount	Shares	Amount	
<S>	<C>	<C>	<C>	<C>	
Common shares issued upon conversion of debentures			1,050,217	525,000	
Conversion of Series C preferred shares to common stock	(126,923)		(1,000)	136,924	69,000
Conversion of Series D preferred shares to common stock	(350)		--	360,839	180,000
Sale of Series E preferred and common shares for cash	2,200	--	55,000	27,000	
Other issuances of common shares			63,333	32,000	
Accumulated translation adjustments					
Net Loss					
	-----	-----	-----	-----	
Balances, December 31, 1996	2,293,590	\$23,000	13,790,736	\$6,895,000	

<CAPTION>

	Additional	Accumulated	Total	
	paid-in capital	Accumulated deficit	translation adjustments	shareholders' equity
<S>	<C>	<C>	<C>	<C>
Common shares issued upon conversion of debentures	787,000		1,312,000	
Conversion of Series C preferred shares to common stock	(68,000)		--	
Conversion of Series D preferred shares to common stock	(180,000)		--	
Sale of Series E preferred and common shares for cash	923,000		950,000	
Other issuances of common shares	33,000		65,000	
Accumulated translation adjustments		(133,000)	(133,000)	
Net Loss		(5,992,000)	(5,992,000)	
	-----	-----	-----	
Balances, December 31, 1996	\$30,706,000	\$(33,023,000)	\$ (76,000)	\$4,525,000

</TABLE>

See accompanying notes.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
YEARS ENDED DECEMBER 31, 1996, 1995 AND 1994

1. DESCRIPTION OF BUSINESS AND BASIS OF PRESENTATION

OXIS International, Inc. (the "Company") develops, manufactures and markets selected therapeutic and diagnostic products. The Company's research and development efforts are concentrated principally in the development of products to diagnose, treat and prevent diseases associated with free radicals and reactive oxygen species. The Company is headquartered in Portland, Oregon and operates a research and development facility near Paris, France.

The Company has historically licensed and sold pharmaceutical forms of superoxide dismutase (SOD) for human and veterinary use. In 1994, with the acquisitions of businesses as described in Note 3, the Company began selling therapeutic drug monitoring assays and research assays to measure markers of oxidative stress.

Therapeutic drug monitoring assays are manufactured by the Company in the United States and are sold to hospital clinical laboratories and reference laboratories by an in-house sales force and a network of distributors both within and outside the United States. Assays to measure markers of oxidative stress are manufactured by the Company in the United States (in France prior to July, 1996) and are sold directly to researchers and to distributors for resale to researchers, primarily in Europe, the United States and Japan.

These financial statements have been prepared on a going concern basis which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The Company has incurred losses in each of the last three years, and at December 31, 1996, the Company's current liabilities exceeded its current assets by \$1,405,000. These factors, among others, may indicate that the Company may be unable to continue as a going concern for a reasonable period of time. These financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that may be necessary should the Company be unable to continue as a going concern. The Company's continuation as a going concern is contingent upon its ability to obtain additional financing, and to generate revenue and cash flow to meet its obligations on a timely basis.

During 1996, the Company raised approximately \$5,300,000 cash through the sale of its Series C, Series D and Series E Preferred Stock and common stock, and convertible term notes. The Company expects that additional capital will be required during 1997 to continue operating in accordance with its current plans. The Company has engaged an agent to assist on a best-efforts basis to complete a private placement of its common stock. In addition, the Company has engaged a French investment banker to act as its underwriter for a planned public offering of its common stock on the newly opened French stock market, Le Nouveau

Marche, subject to obtaining appropriate authorization from the French stock market regulatory authorities. If the Company is unable to raise additional capital it intends to curtail its operations through the reduction of personnel and facility costs and by reducing its research and development efforts. If the Company were to be unable to sufficiently curtail its costs in such a situation, it might be forced to seek protection of the courts through reorganization, bankruptcy or insolvency proceedings.

2. SIGNIFICANT ACCOUNTING POLICIES

PRINCIPLES OF CONSOLIDATION - The accompanying balance sheets include the accounts of the Company as well as its subsidiaries. The results of operations of the Company's French subsidiary since its purchase by the Company on September 7, 1994, are included in the accompanying statements of operations and cash flows. The functional currency of the Company's French subsidiary is the French franc. The French subsidiary's assets and liabilities are translated at the exchange rate at the end of the year, and its statement of operations is translated at the average exchange rates during the period for which its revenues and expenses are included in the consolidated statement of operations. Gains or losses resulting from

foreign currency translation are accumulated as a separate component of shareholders' equity. All significant intercompany balances and transactions are eliminated in consolidation.

CASH EQUIVALENTS consist of money market accounts with commercial banks.

INVENTORIES are stated at the lower of cost or market. Cost has been determined by using the first-in, first-out and specific identification methods. Inventories at December 31, 1996 and 1995, consisted of the following:

	1996	1995
Raw materials	\$148,000	\$173,000
Work in process	200,000	354,000
Finished goods	243,000	426,000
	-----	-----
Total	<u>\$591,000</u>	<u>\$953,000</u>

PROPERTY AND EQUIPMENT is stated at cost, or, in the case of property and equipment acquired in transactions accounted for by the purchase method, at the estimated fair market value at the date of the acquisition (which is then considered to be the Company's cost). Depreciation of equipment is computed using the straight-line method over estimated useful lives of three to ten years. Leasehold improvements are amortized over the shorter of five years or the remaining lease term. Assets acquired under capital leases are being amortized over estimated useful lives of four to ten years.

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Property and equipment at December 31, 1996 and 1995, consisted of the following:

	1996	1995
Furniture and office equipment	\$ 369,000	\$ 346,000
Laboratory and manufacturing equipment	2,495,000	707,000
Automobile	15,000	15,000
Leasehold improvements	766,000	806,000
	-----	-----
Property and equipment, at cost	3,645,000	1,874,000
Accumulated depreciation and amortization	(2,318,000)	(782,000)
	-----	-----
Property and equipment, net	<u>\$ 1,327,000</u>	<u>\$1,092,000</u>

During 1996 certain equipment under capital lease was purchased, and the cost and accumulated amortization of that equipment was reclassified to property and equipment.

TECHNOLOGY - Technology for developed products and custom assays, which was acquired in the 1994 business combinations described in Note 3, is being amortized over estimated useful lives of seven to ten years. Accumulated amortization of technology for developed products and custom assays was \$1,682,000 as of December 31, 1996 and \$973,000 as of December 31, 1995. The Company periodically reviews net cash flows from sales of products and projections of net cash flows from sales of products on an undiscounted basis to assess recovery of intangible assets.

STOCK OPTIONS - The Company applies the intrinsic value based method described in Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees", in accounting for its stock incentive plan.

REVENUE RECOGNITION - The Company recognizes product sales upon shipment of

the product to the customer.

INCOME TAXES - Deferred income taxes, reflecting the net tax effects of temporary differences between the carrying amount of assets and liabilities recognized for financial reporting purposes and the amounts recognized for income tax purposes, are based on tax laws currently enacted. A valuation allowance is established when necessary to reduce deferred tax assets to the amount expected to be realized.

NET LOSS PER SHARE - Net loss per share is computed based upon the average number of common shares outstanding and, if dilutive, the incremental shares issuable upon the assumed exercise of stock options or warrants and the assumed conversion of convertible debentures and preferred stock.

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USE OF ESTIMATES - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of sales and expenses during the reporting period. Actual results could differ from those estimates.

FAIR VALUE OF FINANCIAL INSTRUMENTS - The carrying amount reported in the balance sheet for cash and cash equivalents, accounts receivable, notes payable, customer deposits and accrued liabilities approximates fair value due to the short-term nature of the accounts. The carrying amount reported in the balance sheet for secured convertible term notes and 8% convertible subordinated debentures approximates fair value because the terms of the notes and debentures were determined and the notes and debentures were sold shortly before the dates of the balance sheets in which they appear.

3. BUSINESS COMBINATIONS

On September 7, 1994, the Company acquired Bioxytech S.A., a French company, and International BioClinical, Inc. ("IBC"), an Oregon corporation. The name of Bioxytech S.A. was subsequently changed to OXIS International S.A. ("OXIS S.A."). OXIS S.A. was acquired through an exchange of shares that resulted in the Company owning in excess of 99% of the outstanding stock of OXIS S.A., which thus became a subsidiary of the Company. IBC was acquired through a merger with and into the Company, which (1) terminated the separate existence of IBC by merging it into the Company, and (2) resulted in the conversion of the outstanding stock of IBC into stock of the Company. Two of the Company's directors were also directors and major shareholders of IBC.

In exchange for the Bioxytech S.A. shares, the Company issued a total of 2,341,599 shares of the Company's common stock and 40,000 shares of the Company's non-voting preferred stock (which have subsequently been converted into 40,000 shares of common stock). In addition, the Bioxytech S.A. shareholders may receive up to 107,670 shares of the Company's capital stock if they meet certain participation levels in a contemplated private placement of equity securities of the Company.

The merger of IBC with and into the Company resulted in the conversion of IBC's common stock into 1,998,493 shares of the Company's common stock.

The acquisitions of OXIS S.A. and IBC have been accounted for as purchases and, accordingly, the acquired assets and liabilities were recorded at their estimated fair market values as of the date of acquisition. The aggregate purchase price of \$9,811,000 (4,380,092 shares issued times the average per share closing price of the Company's common stock for the five days ended September 8, 1994, discounted 30% for certain trading restrictions and less costs of \$274,000 directly attributable to issuance of stock in connection with the acquisitions) plus direct costs for the acquisitions of \$881,000 have been allocated to the

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assets and liabilities acquired. The Company also issued options to purchase 214,700 shares of the Company's common stock in connection with

the acquisitions. No value was assigned to these options because the exercise price of the options was in excess of the market value of the common stock.

The total cost of the acquisitions of Bioxytech and IBC has been allocated to the assets acquired and liabilities assumed as follows:

<TABLE>
<CAPTION>

	OXIS S.A.	IBC	Total	
	-----	---	-----	
<S>	<C>	<C>	<C>	
Cash	\$ 150,000	\$ 123,000	\$ 273,000	
Other assets	369,000	611,000	980,000	
Property, equipment and capitalized leases	2,434,000	294,000	2,728,000	
Technology for developed products and custom assay development capabilities		1,503,000	3,995,000	5,498,000
Technology for in-process products		3,368,000	307,000	3,675,000
Less liabilities assumed	(2,011,000)	(451,000)	(2,462,000)	
	-----	-----	-----	
Total acquisition cost	\$ 5,813,000	\$ 4,879,000	\$10,692,000	
	=====	=====	=====	

</TABLE>

The Company's consolidated results of operations include the operating results of the acquired companies since the acquisitions.

Approximately \$3,675,000 (\$.58 per share) of the total purchase price represented technology relating to research and development projects that were in process by the acquired companies that had no alternative future use other than the completion of these projects. In accordance with generally accepted accounting principles, these costs have been charged to operations immediately upon completion of the acquisitions.

The following table summarizes the unaudited pro forma combined results of operations for the year ended December 31, 1994 as if the acquisitions had occurred at the beginning of the year:

	1994
Total revenues	\$ 5,809,000
Net loss	\$(4,742,000)
Net loss per share (based on 9,322,762 shares outstanding)	\$ (.51)

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The above table includes, on an unaudited pro forma basis, the Company's financial information for the year ended December 31, 1994, combined with the financial information of OXIS S.A. and IBC for the same twelve-month period. The above table excludes the one-time \$3,675,000 charge for purchased in-process technology arising from the acquisitions.

The unaudited pro forma combined results of operations are presented for illustrative purposes only and are not necessarily indicative of the operating results that would have occurred had the acquisitions been consummated at the beginning of the period presented, nor are they necessarily indicative of future operating results.

On July 19, 1995, the Company consummated the acquisition of Therox Pharmaceuticals, Inc. ("Therox") pursuant to a transaction wherein Therox was merged with and into a wholly-owned subsidiary of the Company. Therox was a Philadelphia-based start-up company focused on the development of therapeutics to treat diseases associated with damage from free radicals. The Company issued 1,440,736 shares of its common stock to Therox stockholders in exchange for all of the Therox capital stock. In addition, the acquisition agreement provides for payment of up to \$2,000,000 by the Company to the Therox stockholders based on the successful

commercialization of the Therox technologies.

The acquisition of Therox has been recorded as a purchase and, accordingly, the acquired assets and liabilities were recorded at their estimated fair values as of the date of acquisition. The aggregate purchase price of \$3,353,000 (1,440,736 shares issued times the average per share closing price of the Company's common stock for the five days ended July 20, 1995, discounted 30% for certain trading restrictions) has been allocated to the assets and liabilities acquired.

The cost of the acquisition of Therox has been allocated to the assets acquired and liabilities assumed as follows:

Cash	\$ 143,000
Equipment	16,000
Technology for in-process products	3,329,000
Other assets	23,000
Less liabilities assumed	(158,000)

Acquisition cost	\$3,353,000
	=====

The Company's consolidated results of operations include the operating results of the acquired company since the acquisition.

Approximately \$3,329,000 of the purchase price represented technology related to research and development projects that are in process and that has no alternative future use other than the completion of these projects. Accordingly, these costs have been charged to operations immediately upon completion of the acquisition.

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The following table presents the unaudited pro forma combined results of operations for the years ended December 31, 1995 and 1994 as if the acquisition had occurred at the beginning of the periods presented:

	1995	1994
	----	----
Total revenues	\$ 5,136,000	\$ 3,470,000
Net loss	\$(5,990,000)	\$(6,088,000)
Net loss per share (based on 12,124,423 shares outstanding)	\$ (.49)	\$ (.50)

The above table includes, on an unaudited pro forma basis, the Company's financial information for the years ended December 31, 1995 and 1994, combined with the financial information of Therox for the same periods. The above table excludes the one-time \$3,329,000 charge for purchased in-process technology arising from the 1995 acquisition, but includes non-recurring costs of \$3,675,000 for purchased in-process technology from the Company's September 1994 business acquisitions.

The unaudited pro forma combined results of operations are presented for illustrative purposes only and are not necessarily indicative of the operating results that would have occurred had the acquisition been consummated at the beginning of the periods presented, nor are they necessarily indicative of future operating results.

Simultaneously with the Therox acquisition, a Series B Preferred Stock Purchase Agreement was entered into between the Company and two venture capital firms (S.R. One, Limited and Brantley Venture Partners II, L.P.) which were major stockholders of Therox. Pursuant to this agreement, the Company sold 642,583 shares of its Series B Preferred Stock for an aggregate price of \$1,500,000.

Costs of approximately \$325,000 directly attributable to the issuance of the Series B Preferred Stock and the common stock issued in the Therox acquisition have been recorded as a reduction in the proceeds from the issuance of the shares.

4. NOTES PAYABLE

Notes payable at December 31, 1996 and 1995 consisted of the following:

<TABLE>

<CAPTION>

<S>	1996 <C>	1995 <C>	
Secured convertible term notes	\$1,000,000		\$ --
8% notes payable to certain shareholders who are former Bioxytech S.A. shareholders, due February 5, 1996, secured by assets relating to certain of the Company's diagnostic products	--	766,000	
Note payable to Sanofi S.A., due May 4, 1996, interest at prime plus 2% (10-1/2% as of December 31, 1995), secured by all of the Company's assets	--		600,000
Liability, without interest, under inventory purchase agreement, due May 1997 or earlier if 75% of the related inventory is sold	200,000	250,000	
Other	21,000	--	
	<u>-----</u>	<u>-----</u>	
	<u>\$1,221,000</u>	<u>\$1,616,000</u>	

</TABLE>

In October 1996, the Company sold \$1,000,000 of secured convertible term notes with warrants to two of the Company's current shareholders. The notes bear interest at 10% per annum, are due in June 1997, and are initially convertible into common stock at a price of \$1.4125 per share. The warrants issued entitle the holders to purchase up to 300,000 shares of common stock, initially at an exercise price of \$1.58 per share. The conversion rate of the convertible term notes and the exercise price of the warrants are subject to change under certain circumstances. The due date of the notes can be extended at the option of the Company for 120 days upon issuance of additional warrants to the holders. The convertible term notes are secured by assets relating to the Company's clinical diagnostic products.

As described in Note 7, in May 1996, the 8% notes payable were canceled in exchange for issuance of Series C Preferred Stock.

5. CAPITALIZED LEASES

The Company's French subsidiary leases certain equipment, furniture and fixtures under capital leases. As of December 31, 1996, remaining minimum lease payments on these capital leases were approximately \$48,000, all due in 1997.

Leased assets, which consist principally of laboratory and office equipment, are reported in the December 31, 1996, balance sheet at \$622,000 less accumulated amortization of \$313,000.

6. 8% CONVERTIBLE SUBORDINATED DEBENTURES

In November and December 1995, the Company completed a private placement pursuant to which \$1,255,000 of its 8% Convertible Subordinated Debentures were issued. The debentures were unsecured and were subordinated to other obligations of the Company up to an aggregate of \$3,000,000.

The debentures were convertible into shares of the Company's common stock at the option of the holders. Any time after six months following closing of the private placement, the Company had the right to require conversion

of the debentures. In June 1996, \$1,255,000 principal plus accrued interest of \$57,000 on the Company's 8% Convertible Subordinated Debentures were converted into 1,050,217 shares of common stock.

7. SHAREHOLDERS' EQUITY

PREFERRED STOCK - Terms of the preferred stock are to be fixed by the Board of Directors at such time as the preferred stock is issued. The 40,000 shares of Series A Preferred Stock issued during 1994 were nonvoting and were converted to common stock on a one share for one share basis during 1995. The 642,583 shares of Series B Preferred Stock are convertible into common stock on a one-for-one basis and have the same voting rights as the common stock. The Series B Preferred Stock has certain preferential rights with respect to liquidation and dividends.

During the first six months of 1996, the Company issued 1,125,590 shares of its Series C Preferred Stock for net cash proceeds of \$1,236,000. In addition, in May 1996, the Company issued 648,490 shares of its Series C Preferred stock in exchange for the cancellation of \$766,000 principal plus accrued interest of \$78,000 on 8% notes payable to former shareholders of the Company's French subsidiary. The shares of Series C Preferred Stock are convertible into shares of the Company's common stock at the option of the holders at any time. The conversion ratio is based on the average closing bid price of the common stock for the fifteen consecutive trading days ending on the date immediately preceding the date notice of conversion is given, but cannot be less than one nor more than 1.4444 common shares for each Series C Preferred share. The conversion ratio may be adjusted under certain circumstances, and the Company has the right to automatically convert the Series C Preferred Stock into common stock under certain circumstances. Each share of Series C Preferred Stock is entitled to the number of votes equal to 1.30 divided by the average closing bid price of the Company's common stock during the fifteen consecutive trading days immediately prior to the date such shares of Series C Preferred Stock were purchased.

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In May 1996, the Company issued 2,000 shares of its Series D Preferred Stock and warrants to purchase 810,126 shares of common stock for net cash proceeds of \$1,939,000. The Series D Preferred Stock entitles the holder thereof to convert its shares into a number of shares of common stock determined by dividing the stated value of the Series D Preferred Stock (i.e., \$1,000 per share), plus a premium in the amount of 8% per annum of the stated value from the date of issuance, by a conversion price equal to the lesser of (i) \$2.30 and (ii) 75% of the average of the closing bid prices for shares of common stock for the five trading days immediately prior to conversion, but limited to a maximum of 2,424,884 shares of common stock. The holders of Series D Preferred Stock have no voting power, except as specifically provided by Delaware General Corporation Law.

In December 1996, the Company issued 2,200 shares of its Series E Preferred Stock and 55,000 shares of common stock for net cash proceeds of \$950,000.

The Series E Preferred Stock entitles the holder thereof, after the earlier of (i) April 9, 1997 or (ii) 30 days following the closing of a public offering by the Company, to receive in exchange for its shares of Series E Preferred Stock, a number of shares of common stock determined by dividing the stated value of the Series E Preferred Stock (i.e., \$500 per share) ("Series E Stated Value"), by a conversion price equal to the lesser of (i) \$2.00 and (ii) 75% of the average of the closing bid prices for shares of common stock for the five consecutive trading days ending one trading day prior to conversion, subject to adjustment upon the occurrence of certain dilutive events. However, the maximum number of shares of common stock issuable upon conversion of the Series E Preferred Stock plus the number of shares of common stock issued in connection with the sale of the Series E Preferred Stock is 2,733,799 shares (subject to adjustment upon the occurrence of certain dilutive events).

Pursuant to the terms of the Series E Preferred Stock, each holder thereof can only acquire shares of common stock upon conversion of the Series E Preferred Stock to the extent that the number of shares of common stock thereby issuable, together with a number of shares of common stock then

held by such holder and its affiliates (not including shares of common stock underlying converted shares of Series E Preferred Stock) would not exceed 4.9% of the then outstanding common stock.

The Series E Preferred Stock has no voting power except as provided under the Delaware General Corporation Law.

STOCK WARRANTS - In prior years, the Company issued warrants to purchase shares of common stock to certain officers and key employees (none of whom any longer hold a position with the Company) and to former directors. These warrants are exercisable at \$2.875 per share and expire through 1999. At December 31, 1996 and 1995, warrants to purchase 1,012,500 shares were outstanding and exercisable. No warrants were exercised during 1994, 1995 or 1996.

In connection with the issuance of common stock, 8% Convertible Subordinated Debentures, and Series B, C and E Preferred Stock, the Company has issued to its placement agents

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warrants to purchase 614,573 shares of common stock at prices ranging from \$1.375 to \$3.25 per share. The warrants all remained outstanding and were exercisable at December 31, 1996.

A warrant to purchase 810,126 common shares at \$3.09 per share was issued to the purchaser of the Company's Series D Preferred Stock. The warrant was immediately exercisable and remained outstanding as of December 31, 1996.

Warrants to purchase 300,000 common shares at \$1.58 per share were issued to the purchasers of the secured convertible term notes in October 1996. The warrants were immediately exercisable and remained outstanding as of December 31, 1996.

STOCK OPTIONS - The Company has a stock incentive plan under which 2,200,000 shares of the Company's common stock are reserved for issuance. The plan permits granting stock options to acquire shares of the Company's common stock, awarding stock bonuses of the Company's common stock, and granting stock appreciation rights. Options granted pursuant to the Plan have a maximum term of ten years; vesting is determined by the Company's Compensation Committee. Options granted through 1996 have had vesting requirements of up to three years. Options granted and outstanding under the plan are summarized as follows:

<TABLE>
<CAPTION>

	1996		1995		1994	
	Weighted average exercise price		Weighted average exercise price		Weighted average exercise price	
<S>	Shares <C>	price <C>	Shares <C>	price <C>	Shares <C>	price <C>
Outstanding at beginning of year	382,900	\$2.93	90,000	\$3.44	--	--
Granted	1,090,000	\$1.57	317,900	\$2.73	90,000	\$3.44
Exercised	(3,333)	\$1.69	--	--	--	--
Forfeitures	(49,067)	\$2.17	(25,000)	\$2.25	--	--
Outstanding at end of year	<u>1,420,500</u>	<u>\$1.92</u>	<u>382,900</u>	<u>\$2.93</u>	<u>90,000</u>	<u>\$3.44</u>
Exercisable at end of year	<u>619,331</u>	<u>\$2.29</u>	<u>219,294</u>	<u>\$3.18</u>	<u>75,000</u>	<u>\$3.50</u>

</TABLE>

The number of shares under option, weighted average exercise price and weighted average remaining contractual life of all options outstanding as

of December 31, 1996, by range of exercise price was as follows:

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Range of exercise price	Shares	Weighted average exercise price	Weighted average remaining life
\$1.31 - \$1.69	1,050,000	\$1.55	9.5 years
\$2.25 - \$2.28	125,500	\$2.26	7.7 years
\$3.00 - \$3.50	245,000	\$3.31	8.1 years

The number of shares under option and weighted average exercise price of options exercisable as of December 31, 1996, by range of exercise price was as follows:

Range of exercise price	Shares	Weighted average exercise price
\$1.31 - \$1.69	293,999	\$1.48
\$2.25 - \$2.28	93,666	\$2.26
\$3.00 - \$3.50	231,666	\$3.33

The Company applies Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees", in accounting for its stock incentive plan. Accordingly, since the exercise price of all options issued under the plan has been less than or equal to the fair market value of the stock at the date of issue of the options, no compensation cost has been recognized for options granted under the plan. Had compensation cost for options granted under the plan been determined based on the fair value at the grant dates in a manner consistent with the method determined under Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation", the net loss and net loss per share for 1996 and 1995 would have been increased to the pro forma amounts indicated below:

	1996	1995
Net loss:		
As reported	\$(5,992,000)	\$(8,892,000)
Pro forma	\$(6,389,000)	\$(9,210,000)
Net loss per share:		
As reported	\$ (.47)	\$ (.82)
Pro forma	\$ (.50)	\$ (.85)

For the purpose of computing the pro forma expense, the fair value of each option is estimated on the grant date using the Black-Scholes option pricing model with the following assumptions used for grants in both 1996 and 1995: a dividend yield of zero percent;

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expected volatility of 75%; risk-free interest rate of 6%; and expected lives of three years. The weighted average fair value as of the option date was computed to be \$.83 per share for options issued during 1996 and \$1.53 per share for options issued during 1995.

8. INCOME TAXES

INCOME TAX PROVISION - Income tax provisions were not necessary in 1996, 1995 and 1994 due to net losses.

DEFERRED TAXES - Deferred taxes reflect the net tax effects of (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and (b) operating losses and tax credit carryforwards.

The tax effects of significant items comprising the Company's deferred taxes as of December 31 were as follows:

<TABLE>
<CAPTION>

United States taxes:	1996	1995
<S>	<C>	<C>
Deferred tax assets:		
Federal net operating loss carryforward and capitalized research and development expenses	\$5,194,000	\$4,829,000
Federal R&D tax credit carryforward	522,000	495,000
State net operating loss carryforward and capitalized research and development expenses	211,000	125,000
Deferred tax liabilities - book basis in excess of noncurrent assets acquired in the acquisition of IBC	(1,102,000)	(1,338,000)
	-----	-----
Net deferred tax assets	4,825,000	4,111,000
Valuation allowance	(4,825,000)	(4,111,000)
	-----	-----
Net deferred taxes	\$ --	\$ --
	=====	=====
French taxes:	1996	1995
Deferred tax assets:		
Net operating loss carryforward	\$5,426,000	\$5,721,000
Impact of temporary differences	(211,000)	(225,000)
	-----	-----
Total	5,215,000	5,496,000
Valuation allowance	(5,215,000)	(5,496,000)
	-----	-----
Net deferred taxes	\$ --	\$ --
	=====	=====

</TABLE>

Temporary differences for French taxes result primarily from leases treated as operating leases for French tax reporting and as capital leases in the consolidated financial statements.

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The tax benefits (\$5,136,000) of the net operating losses of \$15,410,000 which existed at the date of acquisition (September 7, 1994) of the French subsidiary will be recorded as a reduction of the net unamortized balance of property, equipment, capitalized lease assets and intangible assets of \$2,421,000 when and if realized, and the remaining benefit will be recorded as a reduction of income tax expense.

Statement of Financial Accounting Standards No. 109 requires that the tax benefit of net operating losses, temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is "more likely than not." Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Because of the Company's recent history of operating losses, management has provided a valuation allowance for its net deferred tax assets.

TAX CARRYFORWARDS - At December 31, 1996, the Company had net operating loss carryforwards of approximately \$3,995,000 to reduce United States federal taxable income in future years, and research and development tax credit carryforwards of \$522,000 to reduce United States federal taxes in future years. In addition, the Company's French subsidiary had operating loss carryforwards of \$14,801,000 (76,812,000 French francs) to reduce French taxable income in future years. These carryforwards expire as follows:

Year of expiration	United States net operating loss carryforward	R&D tax credit carryforward	French operating loss carryforward
1997	\$2,670,000		\$ 1,200,000
1998	208,000		1,240,000
1999	111,000		220,000
2000	--		6,000
2001	23,000	\$123,000	--
2002-2011	983,000	399,000	--
No expiration	--	--	12,135,000
	-----	-----	-----
	<u>\$3,995,000</u>	<u>\$522,000</u>	<u>\$14,801,000</u>

Utilization of the United States tax carryforwards is subject to certain restrictions in the event of a significant change (as defined in Internal Revenue Service guidelines) in ownership of the Company.

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9. MAJOR CUSTOMERS AND CONCENTRATION OF CREDIT RISK

One domestic customer and one foreign licensee have each accounted for significant portions of the Company's revenues during the past three years. The percentages of total revenues derived from sales to, and royalties from, these major customers are as follows:

	1996	1995	1994
Domestic customer	--	18%	35%
Spanish licensee	39%	16%	18%

The Company's domestic customer to whom sales of bovine superoxide dismutase ("bSOD") accounted for 18% and 35% of the Company's revenues in 1995 and 1994, respectively, announced in the fourth quarter of 1995 that the clinical trial in which it was using bSOD purchased from the Company failed to show the desired results, and sales of bSOD to this customer have ceased.

The Company limits its foreign exchange risk by buying and selling bulk bSOD in a single currency, the Dutch guilder. The Company maintains a bank account in The Netherlands for receipt and disbursement of Dutch guilders and had the equivalent of \$1,000 and \$81,000 in that account at December 31, 1996 and 1995, respectively. Foreign currency transaction gains and losses were not material.

10. GEOGRAPHIC AREA INFORMATION

The Company operates in a single industry segment: the development, manufacture and marketing of therapeutic and diagnostic products. The Company's foreign operations consist of research and development and manufacturing facilities and certain marketing activities conducted by the Company's subsidiary in France. Sales and costs associated with bSOD manufactured in the Netherlands are considered to be United States operations, since the contract to manufacture bSOD and all related sales activities are administered in the United States. Similarly, royalties from foreign customers that relate to bSOD-based products are considered to be export sales from the United States, since the product was developed in the United States.

Sales, operating income and identifiable assets, classified by the major geographic areas in which the Company operates, are as follows:

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<TABLE>
<CAPTION>

	1996	1995	1994
<S>	<C>	<C>	<C>
Revenues from unaffiliated customers:			

United States	\$ 1,303,000	\$ 2,686,000	\$ 2,053,000
Export sales from the U.S.	3,185,000	1,878,000	1,257,000
France	379,000	572,000	160,000
	-----	-----	-----
Total	\$ 4,867,000	\$ 5,136,000	\$ 3,470,000
	=====	=====	=====
Operating loss:			
United States	\$(2,874,000)	\$(5,653,000)	\$(1,410,000)
France	(3,017,000)	(3,110,000)	(4,191,000)
	-----	-----	-----
Total	\$(5,891,000)	\$(8,763,000)	\$(5,601,000)
	=====	=====	=====
Identifiable assets:			
United States	\$ 5,110,000	\$ 7,824,000	\$ 9,587,000
France	2,942,000	3,866,000	2,570,000
Eliminations	(55,000)	(1,820,000)	(963,000)
	-----	-----	-----
Total	\$ 7,997,000	\$ 9,870,000	\$ 11,194,000
	=====	=====	=====

</TABLE>

11. LEASE COMMITMENTS

The Company leases its facilities in Oregon under an operating lease that expires in 1997, and leases its facilities in France under an operating lease that expires in 1998. Future lease payments are scheduled as follows:

1997	\$313,000
1998	217,000

Rental expense included in the accompanying statements of operations was \$519,000 in 1996, \$492,000 in 1995 and \$193,000 in 1994.

12. 401(K) SAVINGS PLAN

The Company has a 401(k) saving plan (the "Plan") which covers all United States employees who meet certain minimum age and service requirements. The Company's matching contribution to the Plan for each year is 100% of the first \$1,000 of each employee's salary deferral and 33-1/3% of the next \$3,000 of salary deferral. The Company's contributions have not been material.

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INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of
OXIS International, Inc.:

We have audited the accompanying consolidated balance sheets of OXIS International, Inc. and subsidiaries as of December 31, 1996 and 1995, and the related consolidated statements of operations, shareholders' equity and cash flows for each of the three years in the period ended December 31, 1996. These financial statements are the responsibility of the management of OXIS International, Inc. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated 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, such consolidated financial statements present fairly, in all material respects, the financial position of OXIS International, Inc.

and subsidiaries at December 31, 1996 and 1995, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1996, in conformity with generally accepted accounting principles.

The accompanying financial statements for the year ended December 31, 1996, have been prepared assuming that the Company will continue as a going concern. The Company is engaged in developing, manufacturing and marketing selected therapeutic and diagnostic products. As discussed in Note 1 to the financial statements, the Company has incurred losses in each of the last three years, and at December 31, 1996, the Company's current liabilities exceeded its current assets by \$1,405,000, raising substantial doubt about its ability to continue as a going concern. Management's plans concerning these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

DELOITTE & TOUCHE LLP

March 7, 1997
Portland, Oregon

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ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT.

The information required by this item is incorporated herein by reference from the material contained under the caption "Proposal No. 1-Election of Directors" in the Company's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A.

ITEM 11. EXECUTIVE COMPENSATION

The information required under this item is incorporated herein by reference from the material contained under the caption "Compensation of Executive Officers" in the Company's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT.

The information required under this item is incorporated herein by reference from the material contained under the caption "Proposal No. 1-Election of Directors" in the Company's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS.

The information required under this item is incorporated herein by reference from the material contained under the caption "Proposal No. 1-Election of Directors" in the Company's definitive proxy statement to be filed with the Commission pursuant to Regulation 14A.

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PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K.

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

1. FINANCIAL STATEMENTS

See pages 16 to 39.

2. FINANCIAL STATEMENT SCHEDULES

Schedules are omitted because they are not applicable or the required information is included in the financial statements and notes thereto.

3. EXHIBITS

See Exhibit Index - page 43.

(b) Reports on Form 8-K.

Two reports on Form 8-K were filed by the Company during the fourth quarter of 1996. The first, filed on November 4, 1996, reported the issuance of \$1,000,000 in secured convertible term notes and the engagement of an investment banker to act as underwriter for a public offering of common stock on a French stock market. The second, filed December 30, 1996, reported a private placement of Series E Preferred Stock and common stock for an aggregate of \$1,100,000.

(c) Exhibits specified by item 601 of Regulation S-K.

See Exhibit Index - page 43.

(d) Financial statement schedules required by Regulation S-K are omitted because they are not applicable or the required information is included in the financial statements and notes hereto.

SIGNATURES

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

Dated: March 25, 1997

OXIS INTERNATIONAL, INC.
Registrant

By: /s/ Anna D. Barker

Anna D. Barker
President and Chief Executive Officer
(Principal Executive Officer)

/s/ Jon S. Pitcher

Jon S. Pitcher
Chief Financial Officer
(Principal Financial and
Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following directors on behalf of the Registrant.

/s/ Anna D. Barker March 25, 1997 /s/ Timothy G. Biro March 25, 1997

Anna D. Barker Date Timothy G. Biro Date

/s/ Stuart S. Lang March 25, 1997 /s/ Gerald D. Mayer March 25, 1997

Stuart S. Lang. Date Gerald D. Mayer Date

/s/ James D. McCamant March 25, 1997 /s/ David Needham March 25, 1997

James D. McCamant Date David Needham Date

/s/ Ray R. Rogers March 25, 1997 /s/ A.R. Sitaraman March 25, 1997

Ray R. Rogers Date A.R. Sitaraman Date

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EXHIBIT INDEX

<TABLE>
<CAPTION>

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT	PAGE NUMBER
<S> <C> <C>		<C>
2 (a)	Agreement and Plan of Reorganization and Merger between OXIS International, Inc., OXIS Acquisition Corporation and Therox Pharmaceuticals, Inc. Dated July 18, 1995	(1)
2 (b)	Amendment No. 1 to Agreement and Plan for Reorganization and Merger between OXIS International, Inc., OXIS Acquisition Corporation and Therox Pharmaceuticals, Inc.	(2)
3 (a)	Second Restated Certificate of Incorporation as filed September 10, 1996	45
3 (b)	Certificate of Designations, Preferences, and Rights of Series E Preferred Stock of the Company	(3)
3 (c)	Bylaws of the Company as amended on June 15, 1994	(4)
4 (a)	Securities Purchase Agreement, Registration Rights Agreement and Security Agreement	(5)
10 (a)	1987 Stock Purchase Warrants	(6)
10 (b)	1988 Stock Purchase Warrants	(7)
10 (c)	Lease agreement between Bioxytech S.A. and Sofibus	(8)
10 (d)	OXIS International, Inc. Series B Preferred Stock Purchase Agreement dated July 18, 1995	(9)
10 (e)	Factoring (security) Agreement dated September 6, 1996 between Silicon Valley Financial Services and OXIS International, Inc.	77
21 (a)	Subsidiaries of OXIS International, Inc.	91
23 (a)	Independent Auditors' Consent	92
27 (a)	Financial data schedule	93

</TABLE>

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(1) Incorporated by reference to the Company's Current Report on Form 8-K dated July 19, 1995.

(2) Incorporated by reference to the Company's Annual Report on Form 10-K for 1995 - Exhibit 2 (b).

(3) Incorporated by reference to the Company's Form 8-K Current Report dated

December 30, 1996.

- (4) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1994.
- (5) Incorporated by reference to the Company's Form 8-K Current Report dated November 4, 1996.
- (6) Incorporated by reference to the Company's Annual Report on Form 10-K for 1992 - Exhibit 10(b).
- (7) Incorporated by reference to the Company's Annual Report on Form 10-K for 1992 - Exhibit 10(c).
- (8) Incorporated by reference to the Company's Annual Report on Form 10-K for 1994.
- (9) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1995.

EXHIBIT 3 (A)

SECOND RESTATED CERTIFICATE OF INCORPORATION OF
OXIS INTERNATIONAL, INC.
UNDER SECTION 242 AND SECTION 245 OF THE GENERAL CORPORATION LAW
OF THE STATE OF DELAWARE

We, RAY R. ROGERS, Chairman of the Board, and JON S. PITCHER, Secretary, of OXIS INTERNATIONAL, INC., a Delaware corporation organized and existing under the General Corporation Law of the State of Delaware, HEREBY CERTIFY that:

1. The name of the corporation is OXIS INTERNATIONAL, INC.
2. The original Certificate of Incorporation was filed under the name of Diagnostic Data, Inc. on October 15, 1973.
3. On March 11, 1985, the corporation changed the name of the corporation to DDI Pharmaceuticals, Inc., and another name change to OXIS INTERNATIONAL, INC. was effected on September 7, 1994.
4. This Second Restated Certificate of Incorporation restates and integrates and further amends the provisions of the corporation's original Certificate of Incorporation.
5. This Second Restated Certificate of Incorporation has been duly adopted in accordance with Section 242 and Section 245 of the General Corporation Law of the State of Delaware and the text of such Second Restated Certificate of Incorporation is as follows:

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SECOND RESTATED CERTIFICATE OF INCORPORATION
OF
OXIS INTERNATIONAL, INC.

FIRST: The name of the corporation (hereinafter called "Company" or "Corporation") is OXIS INTERNATIONAL, INC.

SECOND: The registered office of the Company in the State of Delaware is located at Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, in the County of New Castle. The name of its registered agent at that address is The Corporation Trust Company.

THIRD: The purpose of the Company is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

FOURTH:

I. COMMON STOCK

The Company is authorized to issue a total of Forty Million (40,000,000) shares of Common Stock, each of which shares of Common Stock has a par value of Fifty Cents (\$0.50). Dividends may be paid on the Common Stock as and when declared by the Board of Directors, out of any funds of the Company legally available for the payment of such dividends, and each share of Common Stock will be entitled to one vote on all matters on which such stock is entitled to vote. All duly authorized One Dollar (\$1.00) par value shares outstanding shall be deemed shares having a par value of Fifty Cents (\$0.50).

II. PREFERRED STOCK

The Company is authorized to issue a total of Fifteen Million (15,000,000) shares of Preferred Stock (\$0.01 par value), each of which shares of Preferred Stock may be issued in one or more series of stock within the class of Preferred Stock. Each series may have such voting powers, full or limited, or

no voting powers, and such designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions thereof, as shall be stated and expressed in the resolution or resolutions providing for the issue of such stock adopted by the Board of Directors pursuant to authority hereby expressly vested in it by the provisions of this Second Restated Certificate of Incorporation.

A. SERIES A PREFERRED STOCK. A series of the class of Preferred

Stock of the Company shall be hereby created, and the shares of such series shall be designated as "Series A Preferred Stock." The number of shares of the class of Preferred Stock shall be 100,000, and the preferences and rights of the shares of such series shall be the same as the rights of the shares of Common Stock of the Company except that the shares of such series shall have no voting power and that in the event of any liquidation, dissolution, or winding up of the Company, the holders of the Series A Preferred Stock shall be entitled to receive prior to and in preference to any

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distribution of any assets or surplus funds of the Company to the holders of Common Stock by reason of their ownership thereof, the amount of \$.01 per share. If at any time and from time to time any holder of shares of Series A Preferred Stock owns less than 4.99% of the then outstanding shares of the Common Stock of the Company, a portion of such holder's shares of Series A Preferred Stock shall automatically convert into shares of the Company's Common Stock (on the basis of one share of Series A Preferred Stock converting into one fully paid and nonassessable share of Common Stock of the Company) until such holder owns 4.99% of the then outstanding shares of the Company's Common Stock.

B. SERIES B PREFERRED STOCK. A series of the class of Preferred

Stock of the Company shall be hereby created, and the shares of such series shall be designated as "Series B Preferred Stock", par value \$0.01 per share. The number of shares constituting such series shall be 642,583 and the rights, preferences, privileges and restrictions granted to or imposed upon the Series B Preferred Stock are as follows:

1. Series B Dividends.

(a) The holders of outstanding Series B Preferred Stock shall be entitled to receive in any fiscal year, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, dividends at the rate of \$0.115 per share of Series B Preferred Stock per annum before any dividend or distribution (other than pursuant to Section B.4) is paid on Common Stock. Such dividend or distribution may be payable annually or otherwise as the Board of Directors may from time to time determine. Dividends or distributions (other than dividends payable solely in shares of Common Stock or distributions pursuant to Section B.4) of up to \$0.115 per share may be declared and paid upon shares of Common Stock in any fiscal year of the Corporation only if dividends shall have been paid on and declared and set apart upon all shares of Series B Preferred Stock at such annual rate in such year. After dividends or distributions of \$0.115 per share have been declared and paid on the Common Stock in any fiscal year, all further dividends and distributions during such fiscal year shall be distributed among the holders of the Common Stock and the Series B Preferred Stock in proportion to the shares of Common Stock then held by them and the shares of Common Stock which they then have the right to acquire upon conversion of the shares of Series B Preferred Stock then held by them. The right to such dividends on shares of Series B Preferred Stock shall not be cumulative and no right shall accrue to holders of shares of Series B Preferred Stock by reason of the fact that dividends on said shares are not declared in any prior year, nor shall any undeclared or unpaid dividend bear or accrue interest.

2. Series B Voting Rights.

(a) Each holder of shares of Series B Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such holder's shares of Series B Preferred Stock could be converted on the record date for the vote or consent of stockholders and, except as otherwise provided herein, shall have voting rights and powers equal to the voting rights and powers of the Common Stock. The holder of each share of Series B Preferred Stock shall be entitled to notice of any stockholders' meeting in

Bylaws of the Corporation and shall vote with holders of the Common Stock upon the election of directors and upon any other matter submitted to a vote of stockholders, except those matters required by law to be submitted to a class or series vote and except as otherwise provided in Section B.2(b) hereof. Fractional votes by the holders of Series B Preferred Stock shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Series B Preferred Stock held by each holder could be converted) shall be rounded to the nearest whole number.

(b) The number of directors shall be set as provided in the Bylaws of the Corporation. So long as any shares of Series B Preferred Stock remain outstanding, the holders of the Series B Preferred Stock outstanding shall vote together with the Common Stock as a single class with respect to the election of directors.

3. Series B Conversion. The holders of Series B Preferred Stock

shall have conversion rights as follows (the "Conversion Rights");

(a) Right to Convert. Each share of Series B Preferred Stock

shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for such stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$2.33433 by the Series B Conversion Price, determined as hereinafter provided, in effect on the date the certificate is surrendered for conversion. The price at which shares of Common Stock shall be deliverable upon conversion of shares of the Series B Preferred Stock (the "Series B Conversion Price") shall initially be \$2.33433 per share of Common Stock. Such initial Series B Conversion Price shall be adjusted as hereinafter provided.

(b) Automatic Conversion. Each share of Series B Preferred

Stock shall automatically be converted into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$2.33433 by the Series B Conversion Price, in effect on the date of the receipt by the Corporation of the written consent to, or request for, such conversion from holders of at least three-fourths (3/4) of the Series B Preferred Stock then outstanding.

(c) Mechanics of Conversion.

(i) Before any holder of Series B Preferred Stock shall be entitled to convert the same into shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for such stock, and shall give written notice to the Corporation at such office that he elects to convert the same and shall state therein the name or names in which he wishes the certificate or certificates for shares of Common Stock to be issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series B Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Series B Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable

upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

(ii) If a voluntary conversion is made in connection with an underwritten offering of securities pursuant to a registration statement filed pursuant to the Securities Act of 1933, as amended (the "Securities Act"), the conversion may, at the option of any holder tendering shares of Series B Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock upon conversion of the Series

B Preferred Stock shall not be deemed to have converted such Series B Preferred Stock until immediately prior to the closing of such sale of securities.

(d) Adjustments for Stock Dividends, Subdivisions, or Split-

ups of Common Stock. If the number of shares of Common Stock outstanding at any

time after the filing of the original Certificate of Designation with respect to the Series B Preferred Stock (July 19, 1995) is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split-up of shares of Common Stock, then, effective at the close of business upon the record date fixed for the determination of holders of Common Stock entitled to receive such stock dividend, subdivision or split-up, the Conversion Price for the Series B Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of Series B Preferred Stock shall be increased in proportion to such increase of outstanding shares of Common Stock.

(e) Adjustments for Combinations of Common Stock. If the

number of shares of Common Stock outstanding at any time after the filing of the original Certificate of Designation with respect to the Series B Preferred Stock (July 19, 1995) is decreased by a combination of the outstanding shares of Common Stock, then, effective at the close of business upon the record date of such combination, the Conversion Price for the Series B Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of Series B Preferred Stock shall be decreased in proportion to such decrease in outstanding shares of Common Stock.

(f) Adjustments for Other Distributions. In the event the

Corporation at any time or from time to time makes, or fixes a record date for the determination of holders of Common Stock entitled to receive any distribution payable in securities of the Corporation other than shares of Common Stock, then and in each such event provision shall be made so that the holders of Series B Preferred Stock shall receive upon conversion thereof, in addition to the number of shares of Common Stock receivable thereupon, the amount of securities of the Corporation which they would have received had their Series B Preferred Stock been converted into Common Stock on the date of such event and had they thereafter, during the period from the date of such event to and including the date of conversion, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section B.3(f) with respect to the rights of the holders of the Series B Preferred Stock.

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(g) Adjustments for Reorganizations, Reclassifications, etc.

If the Common Stock issuable upon conversion of the Series B Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock or other securities or property, whether by reclassification, a merger or consolidation of this Corporation with or into any other corporation or corporations, or a sale of all or substantially all of the assets of this Corporation, or otherwise, the Conversion Price then in effect shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series B Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock or securities or other property equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series B Preferred Stock immediately before such event; and, in any such case, appropriate adjustment (as determined by the Board) shall be made in the application of the provisions herein set forth with respect to the rights and interests thereafter of the holders of the Series B Preferred Stock, to the end that the provisions set forth herein (including provisions with respect to changes in and other adjustments of the Conversion Price) shall thereafter be applicable, as nearly as may be reasonable, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Series B Preferred Stock.

(h) Certificates as to Adjustments. Upon the occurrence of

each adjustment or readjustment of the Series B Conversion Price pursuant to this Section B.3, the Corporation at its expense shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of Series B Preferred Stock a certificate executed by the Corporation's President or Chief Financial Officer setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Series B Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (A) such adjustments and readjustments, (B) the Conversion Price for such Series B Preferred Stock at the time in effect, and (C) the number of shares of Common Stock and the amount, if any, of other property which at the time would be received upon the conversion of the Series B Preferred Stock.

(i) Notices of Record Date. In the event that the Corporation

shall propose at any time: (a) to declare any special dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not out of earnings or earned surplus; (b) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or (d) to merge or consolidate with or into any other corporation (other than a mere reincorporation transaction), or sell, lease or convey all or substantially all of its assets, or to liquidate, dissolve or wind up; then, in connection with each such event, the Corporation shall send to the holders of Series B Preferred Stock:

(i) at least twenty (20) days' prior written notice of the date on which a record shall be taken for such dividend, distribution or subscription rights (and

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specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (c) and (d) above; and

(ii) In the case of the matters referred to in (c) and (d) above, at least twenty (20) days' prior written notice of the date when the same shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon the occurrence of such event).

(j) Reservation of Stock Issuable Upon Conversion. The

Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series B Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series B Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series B Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, engaging in its best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation.

(k) Fractional Shares. No fractional share shall be issued

upon the conversion of any share or shares of Series B Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of more than one share of Series B Preferred Stock by a holder thereof shall be aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned aggregation, the conversion would result in the issuance of a fraction of a share of Common Stock, the Corporation shall, in lieu of issuing any fractional share, pay the holder otherwise entitled to such fraction a sum in cash equal to the fair market value of such fraction on the date of conversion (as determined in good faith by the board of directors of the Corporation).

(l) Notices. Any notice required by the provisions of this

Section B.3 to be given to the holders of shares of Series B Preferred Stock shall be deemed given on the date of delivery if delivered by hand delivery or by facsimile, or, if deposited in the United States mail (registered or certified), postage prepaid, and addressed to each holder of record at his or its address appearing on the books of the Corporation.

4. Series B Liquidation Preferences.

(a) In the event of any liquidation, dissolution or winding up of the Corporation whether voluntary or involuntary, the holders of the Series B Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of Common Stock or any other shares of this corporation other than Series B Preferred Stock by reason of their ownership thereof, the amount of \$2.33433 per share (as adjusted for any stock dividends, combinations or splits with respect to such shares), plus all declared or accrued but unpaid, dividends on such share, for each share of Series B Preferred Stock then held by them. If upon the occurrence of such event, the assets and funds

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thus distributed among the holders of the Series B Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then the entire assets and funds of the Corporation legally available for distribution shall be distributed ratably among the holders of the Series B Preferred Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(b) After the payment to the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) above, the holders of the Common Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets or surplus funds of the Corporation to the holders of the other capital stock of the Company by reason of their ownership thereof, an aggregate distribution equal to the total consideration received by the Corporation for the sale and issuance of all issued and outstanding Series B Preferred Stock, with each holder of Common Stock participating on a pro rata basis based on the number of shares of Common Stock they own. If upon the occurrence of such event, the assets and funds thus distributed among the holders of the Common Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amount, then all assets and funds of the Corporation legally available for distribution after the payment to the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) shall be distributed ratably among the holders of the Common Stock in proportion to the preferential amount each such holder is otherwise entitled to receive.

(c) After payments to (i) the holders of the Series B Preferred Stock of the amounts set forth in Section B.4(a) above, and (ii) the holders of the Common Stock of the amounts set forth in Section B.4(b) above, the entire remaining assets and funds of the Corporation legally available for distribution, if any, shall be distributed among the holders of the Common Stock and the Series B Preferred Stock in proportion to the shares of Common Stock then held by them and the shares of Common Stock which they then have the right to acquire upon conversion of the shares of Series B Preferred Stock then held by them.

5. Series B Protective Provisions. In addition to any other

rights provided by law, so long as any share of Series B Preferred Stock shall be outstanding, the Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of the majority of the outstanding shares of Series B Preferred Stock voting separately as a separate class, take any action which alters or changes any of the rights, privileges or preferences of the Series B Preferred Stock, including without limitation increasing or decreasing the aggregate number of authorized shares of such series other than an increase incident to a stock split.

C. SERIES C PREFERRED STOCK. A series of the class of Preferred

Stock of the Company shall be hereby created, and the shares of such series

shall be designated as "Series C Preferred Stock", par value \$0.01 per share. The number of shares constituting such series shall be 3,076,923 and the rights, preferences, privileges and restrictions granted to or imposed upon the Series C Preferred Stock are as follows:

1. Series C Dividends.

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(a) The holders of outstanding Series C Preferred Stock shall be entitled to receive in any fiscal year, when, as and if declared by the Board of Directors, after the payment of dividends on Series B Preferred Stock, out of any assets at the time legally available therefor, dividends in amounts determined by the Corporation's Board of Directors before any other dividend or distribution (other than pursuant to Section C.4, or distributions with respect to the Series B Preferred Stock) is paid on Common Stock. Such dividend or distribution may be payable annually or otherwise as the Board of Directors may from time to time determine. The right to such dividends on shares of Series C Preferred Stock shall not be cumulative and no right shall accrue to holders of shares of Series C Preferred Stock by reason of the fact that dividends on said shares are not declared in any prior year, nor shall any undeclared or unpaid dividend bear or accrue interest.

2. Series C Voting Rights. Each holder of shares of Series C

Preferred Stock shall be entitled to the number of votes equal to the number of shares of Common Stock into which such holder's shares of Series C Preferred Stock could be converted on the record date for the vote or consent of stockholders multiplied by the Voting Power Fraction and, except as otherwise provided herein, shall have voting rights and powers equal to the voting rights and powers of the Common Stock. The Voting Power Fraction shall equal \$1.30 divided by the average closing bid price of the Company's Common Stock during the 15 consecutive trading days immediately prior to the date the Series C Preferred was purchased (the "Average Closing Price"); but in no event shall be greater than one (1). The holder of each share of Series C Preferred Stock shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of the Corporation and shall vote with holders of the Common Stock upon the election of directors and upon any other matter submitted to a vote of stockholders, except those matters required by law to be submitted to a class or series vote. Fractional votes by the holders of Series C Preferred Stock shall not, however, be permitted and any fractional voting rights resulting from the above formula (after aggregating all shares into which shares of Series C Preferred Stock held by each holder could be converted) shall be rounded to the nearest whole number.

3. Series C Conversion. The holders of Series C Preferred Stock

shall have conversion rights as follows (the "Conversion Rights"):

(a) Right to Convert. Each share of Series C Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share at the office of the Corporation or any transfer agent for such stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing \$1.30 by the Series C Conversion Price, determined as hereinafter provided, in effect on the date the certificate is surrendered for conversion. The Series C Conversion Price shall initially be \$1.30. Such initial Series C Conversion Price shall be adjusted as hereinafter provided.

(b) Mechanics of Conversion.

(i) Before any holder of Series C Preferred Stock shall be entitled to convert the same into shares of Common Stock, he shall surrender the certificate or certificates therefor, duly endorsed, at the office of the Corporation or of any transfer agent for

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such stock, and shall give written notice to the Corporation at such office that he elects to convert the same and shall state therein the name or names in which he wishes the certificate or certificates for shares of Common Stock to be

issued. The Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Series C Preferred Stock, a certificate or certificates for the number of shares of Common Stock to which he shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of surrender of the shares of Series C Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock on such date.

(ii) If a voluntary conversion is made in connection with an underwritten offering of securities pursuant to a registration statement filed pursuant to the Securities Act of 1933, as amended (the "Securities Act"), the conversion may, at the option of any holder tendering shares of Series C Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event the person(s) entitled to receive the Common Stock upon conversion of the Series C Preferred Stock shall not be deemed to have converted such Series C Preferred Stock until immediately prior to the closing of such sale of securities.

(c) Adjustments for Stock Dividends, Subdivisions, or Split-

ups of Common Stock. If the number of shares of Common Stock outstanding at any

time after the filing of the original Certificate of Designation with respect to the Series C Preferred Stock (February 8, 1996) is increased by a stock dividend payable in shares of Common Stock or by a subdivision or split-up of shares of Common Stock, then, effective at the close of business upon the record date fixed for the determination of holders of Common Stock entitled to receive such stock dividend, subdivision or split-up, the Series C Conversion Price shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of Series C Preferred Stock shall be increased in proportion to such increase of outstanding shares of Common Stock.

(d) Adjustments for Combinations of Common Stock. If the

number of shares of Common Stock outstanding at any time after the filing of the original Certificate of Designation with respect to the Series C Preferred Stock (February 8, 1996) is decreased by a combination of the outstanding shares of Common Stock, then, effective at the close of business upon the record date of such combination, the Series C Conversion Price shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of Series C Preferred Stock shall be decreased in proportion to such decrease in outstanding shares of Common Stock.

(e) Adjustments for Other Distributions. In the event the

Corporation at any time or from time to time makes, or fixes a record date for the determination of holders of Common Stock entitled to receive any distribution payable in securities of the Corporation other than shares of Common Stock, then and in each such event provision shall be made so that the holders of Series C Preferred Stock shall receive upon conversion thereof, in addition to the

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number of shares of Common Stock receivable thereupon, the amount of securities of the Corporation which they would have received had their Series C Preferred Stock been converted into Common Stock on the date of such event and had they thereafter, during the period from the date of such event to and including the date of conversion, retained such securities receivable by them as aforesaid during such period, subject to all other adjustments called for during such period under this Section C.3(e) with respect to the rights of the holders of the Series C Preferred Stock.

(f) Adjustments for Reorganizations, Reclassifications, etc.

If the Common Stock issuable upon conversion of the Series C Preferred Stock shall be changed into the same or a different number of shares of any other class or classes of stock or other securities or property, whether by reclassification, a merger or consolidation of this Corporation with or into any other corporation or corporations, or a sale of all or substantially all of the assets of this Corporation, or otherwise, the Series C Conversion Price then in

effect shall, concurrently with the effectiveness of such reorganization or reclassification, be proportionately adjusted such that the Series C Preferred Stock shall be convertible into, in lieu of the number of shares of Common Stock which the holders would otherwise have been entitled to receive, a number of shares of such other class or classes of stock or securities or other property equivalent to the number of shares of Common Stock that would have been subject to receipt by the holders upon conversion of the Series C Preferred Stock immediately before such event; and, in any such case, appropriate adjustment (as determined by the Board) shall be made in the application of the provisions herein set forth with respect to the rights and interests thereafter of the holders of the Series C Preferred Stock, to the end that the provisions set forth herein (including provisions with respect to changes in and other adjustments of the Series C Conversion Price) shall thereafter be applicable, as nearly as may be reasonable, in relation to any shares of stock or other property thereafter deliverable upon the conversion of the Series C Preferred Stock.

(g) Certain Other Adjustment. If at any time after six (6)

months following the consummation ("Closing") of the sale of Series C Preferred Stock purchased pursuant to those certain Subscription and Purchase Agreements between the Corporation and each holder of such Series C Preferred Stock (such Closing having occurred on May 9, 1996), any such holder converts the Series C Preferred Stock, then the Series C Conversion Price applicable to such holder's shares shall be the lesser of (i) \$1.30, or (ii) the greater of (x) .90 or (y) 80% of the average closing bid price of the Common Stock for the fifteen (15) consecutive trading days ending on the date immediately preceding the date notice of conversion is given. The Series C Conversion Price may only adjust once for each holder.

(h) Company's Right to Automatically Convert. If at any time

after eight (8) months following the Closing the average closing bid price of the Corporation's Common Stock for 15 consecutive trading days as quoted on the Nasdaq National Market is equal to or greater than \$2.60, the Corporation shall thereafter have the right to automatically convert the Series C Preferred Stock into such number of shares of Common Stock as is determined by dividing \$1.30 by the then applicable Series C Conversion Price by notice given to such holders of Series C Preferred Stock.

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(i) Certificates as to Adjustments. Upon the occurrence of

each adjustment of the Series C Conversion Price pursuant to this Section C.3, the Corporation at its expense shall promptly compute such adjustment in accordance with the terms hereof and prepare and furnish to each applicable holder of Series C Preferred Stock a certificate executed by the Corporation's President or Chief Financial Officer setting forth such computation of adjustment.

(j) Notices of Record Date. In the event that the Corporation

shall propose at any time: (a) to declare any special dividend or distribution upon its Common Stock, whether in cash, property, stock or other securities, whether or not out of earnings or earned surplus; (b) to offer for subscription pro rata to the holders of any class or series of its stock any additional shares of stock of any class or series or other rights; (c) to effect any reclassification or recapitalization of its Common Stock outstanding involving a change in the Common Stock; or (d) to merge or consolidate with or into any other corporation (other than a mere reincorporation transaction), or sell, lease or convey all or substantially all of its assets, or to liquidate, dissolve or wind up; then, in connection with each such event, the Corporation shall send to the holders of Series C Preferred Stock:

(i) at least twenty (20) days' prior written notice of the date on which a record shall be taken for such dividend, distribution or subscription rights (and specifying the date on which the holders of Common Stock shall be entitled thereto) or for determining rights to vote, if any, in respect of the matters referred to in (c) and (d) above; and

(ii) in the case of the matters referred to in (c) and (d) above, at least twenty (20) days' prior written notice of the date when the same

shall take place (and specifying the date on which the holders of Common Stock shall be entitled to exchange their Common Stock for securities or other property deliverable upon the occurrence of such event).

(k) Reservation of Stock Issuable Upon Conversion. The

Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series C Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series C Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series C Preferred Stock, the Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose, including, without limitation, engaging in its best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation.

(l) Fractional Shares. No fractional share shall be issued

upon the conversion of any share or shares of Series C Preferred Stock. All shares of Common Stock (including fractions thereof) issuable upon conversion of more than one share of Series C Preferred Stock by a holder thereof shall be aggregated for purposes of determining whether the conversion would result in the issuance of any fractional share. If, after the aforementioned

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aggregation, the conversion would result in the issuance of a fraction of a share of Common Stock, the Corporation shall, in lieu of issuing any fractional share, pay the holder otherwise entitled to such fraction a sum in cash equal to the fair market value of such fraction on the date of conversion (as determined in good faith by the board of directors of the Corporation).

(m) Notices. Any notice required by the provisions of this

Section C.3 to be given to the holders of shares of Series C Preferred Stock shall be deemed given on the date of delivery if delivered by hand delivery or by facsimile, or, if deposited in the United States mail (registered or certified), postage prepaid, and addressed to each holder of record at his or its address appearing on the books of the Corporation.

4. Series C Liquidation Preferences. In the event of any

liquidation, dissolution or winding up of the Corporation whether voluntary or involuntary, the holders of the Series C Preferred Stock shall participate on an equal basis with the holders of the Common Stock (as if the Series C Preferred Stock had converted into Common Stock) in any distribution of any of the assets or surplus funds of the Corporation.

5. Series C Protective Provisions. In addition to any other

rights provided by law, so long as any share of Series C Preferred Stock shall be outstanding, the Corporation shall not, without first obtaining the affirmative vote or written consent of the holders of the majority of the outstanding shares of Series C Preferred Stock voting separately as a separate class, take any action which alters or changes any of the rights, privileges or preferences of the Series C Preferred Stock, including without limitation increasing or decreasing the aggregate number of authorized shares of such series other than an increase incident to a stock split.

D. SERIES D PREFERRED STOCK. A series of the class of Preferred Stock

of the Company shall be hereby created, and the shares of such series shall be designated as "Series D Preferred Stock", par value \$0.01 per shares. The number of shares constituting such series shall be 2,000 and the stated value shall be One Thousand Dollars (\$1,000) per share (the "Stated Value").

1. Rank With Respect to Liquidation Event. In the event of any

distribution of assets upon liquidation, dissolution or winding up of the

Corporation, whether voluntary or involuntary, the holders of Series D Preferred Stock shall participate on an equal basis with (i) the holders of the Corporation's Common Stock, par value \$.50 per share (the "Common Stock"), as if the Series D Preferred Stock had converted into Common Stock; (ii) the holders of the Corporation's Series C Preferred Stock, par value \$.01 per share (the "Series C Preferred Stock"); and (iii) the holders of any class or series of capital stock of the Corporation hereafter created (with the consent of the holders of Series D Preferred Stock obtained in accordance with Section 7 hereof) which specifically, by its terms, ranks pari passu with the Series D Preferred Stock (collectively, with the Common Stock and the Series C Preferred Stock, "Pari Passu Securities").

2. No Dividends,

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The Series D Preferred Stock will bear no dividends, and the holders of the Series D Preferred Stock shall not be entitled to receive dividends on the Series D Preferred Stock.

3. Cash Redemption of Premium by Corporation; Redemption of

Series D Preferred Stock.

(a) The Corporation shall have the right, in its sole discretion, upon receipt of a Notice of Conversion pursuant to Section 4(d) or in the event of a Mandatory Conversion effected in accordance with Section 5 hereof, to redeem all or any portion of the Premium (as defined in Section 4(a) below) subject to such conversion for a sum of cash equal to the amount of the Premium being so redeemed. All cash redemption payments hereunder shall be paid in lawful money of the United States of America at such address for the holder as appears on the record books of the Corporation (or at such other address as such holder shall hereafter give to the Corporation by written notice). In the event the Corporation elects, pursuant to this Section 3(a), to redeem all or any portion of the Premium in cash and fails to pay such holder the applicable redemption amount to which such holder is entitled by depositing a check in the U.S. Mail to such holder within seven (7) business days of receipt by the Corporation of a Conversion Notice (in the case of a redemption in connection with an Optional Conversion) or May 15, 2001 (in the case of a redemption in connection with a Mandatory Conversion), the Corporation shall thereafter forfeit its right to redeem such Premium in cash and such Premium shall thereafter be converted into shares of Common Stock in accordance with Section 4 hereof.

(b) Each holder of Series D Preferred Stock shall have the right to require the Corporation to provide advance notice to such holder stating whether the Corporation will elect to redeem all or any portion of the Premium in cash pursuant to the Corporation's redemption rights discussed in Section D.3(a) as set forth herein. A holder may exercise such right from time to time by sending notice (an "Election Notice") to the Corporation, by facsimile, requesting that the Corporation disclose to such holder whether the Corporation would elect to redeem any portion of the Premium for cash in lieu of issuing Common Stock in accordance with Section 4 hereof if such holder were to exercise his, her or its right of conversion pursuant to Section 4. The Corporation shall, no later than the fifth (5th) business day following receipt of an Election Notice, disclose to such holder, whether the Corporation would elect to redeem any portion of a Premium in connection with a conversion pursuant to a Conversion Notice delivered over the subsequent ten (10) business day period. If the Corporation does not respond to such holder within such five (5) business day period via facsimile, the Corporation shall, with respect to any conversion pursuant to a Conversion Notice delivered within the subsequent ten (10) business day period, forfeit its right to redeem such Premium in accordance with Section D.3(a) and shall be required to convert such Premium into shares of Common Stock in accordance with Section 4 hereof.

(c) Except as provided in Section D.3 and Section D.4 hereof, the Series D Preferred Stock is not subject to redemption.

(d) Commencing May 15, 1998, at any time that the average of the closing bid prices for the Common Stock on NASDAQ, or on the principal securities exchange

or other securities market on which the Common Stock is being traded, for the twenty (20) consecutive Trading Days ending one Trading Day prior to the date the Corporation provides the holders a Redemption Notice (as defined herein) under this Section D.3 is equal to or greater than 200% of the closing bid price for the Common Stock on NASDAQ (or on the principal securities exchange or other securities market on which the Common Stock is being traded) on the Closing Date (as defined herein) (the "Optional Redemption Threshold Price"), the Corporation shall have the right, in its sole discretion, to redeem ("Redemption at Corporation's Election") any or all of the Series D Preferred Stock at the Redemption Price (as defined herein), in accordance with the redemption procedures set forth below; provided, however, that if the average closing bid price of the Common Stock for any ten (10) consecutive Trading Days after a Redemption Notice is less than 75% of the Optional Redemption Threshold Price, the Corporation's Redemption Notice shall thereafter be rendered null and void and the Corporation shall not have the right to redeem the Series D Preferred Stock pursuant to the terms of this Section D.3 unless and until it delivers another Redemption Notice to the holders of the Series D Preferred Stock in accordance with the provisions of this Section D.3. "Trading Day" shall mean any day on which the Common Stock is traded for any period on NASDAQ, or on the principal securities exchange or other securities market on which the Common Stock is then being traded. If the Corporation elects to redeem some, but not all, of the Series D Preferred Stock, the Corporation shall redeem a pro-rata amount from each holder of Series D Preferred Stock. Holders of Series D Preferred Stock may convert all or any part of their shares of Series D Preferred Stock into Common Stock by delivering a Notice of Conversion (as defined herein) to the Corporation at any time prior to the Effective Date of Redemption (as defined herein).

(e) The "Redemption Price" with respect to each share of Series D Preferred Stock shall mean the amount equal to the sum of (i) the Stated Value thereof plus (ii) the amount equal to eight (8%) percent per annum of such Stated Value for the period beginning on the issuance of such share and ending on the Effective Date of Redemption hereunder.

(f) The Corporation shall effect each redemption under this Section D.3 by giving at least ninety (90) days (subject to extension as set forth below) prior written notice (the "Redemption Notice") to (i) the holders of Series D Preferred Stock selected for redemption at the address and facsimile number of such holder appearing in the Corporation's register for the Series D Preferred Stock and (ii) the Transfer Agent, which Redemption Notice shall be deemed to have been delivered three (3) business days after the Corporation's mailing (by overnight courier, with a copy by facsimile) of such notice. Such Redemption Notice shall indicate the number of shares of the holder's Series D Preferred Stock that have been selected for redemption, the date which such redemption is to become effective (the "Effective Date of Redemption") and the Redemption Price. The Corporation shall not be entitled to send any Redemption Notice and begin the redemption procedure unless it has (i) the full amount of the Redemption Price, in cash, available in a demand or other immediately available account in a bank or similar financial institution or (ii) immediately available credit facilities, in the full amount of the Redemption Price, with a bank or similar financial institution on the date the Redemption Notice is delivered to the applicable holder. Notwithstanding the foregoing, the ninety (90) day notice period referred to herein shall be extended with respect to any holder of Series D Preferred Stock by such number of days after the date of the Redemption Notice as such

holder is not permitted to sell all of its Series D Preferred Stock pursuant to an effective registration statement filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (or a successor statute) (the "1933 Act") or pursuant to Rule 144(k) under the 1933 Act.

The Redemption Price shall be paid to the holder of the Series D Preferred Stock being redeemed within 10 business days of the Effective Date of Redemption; provided, however, that the Corporation shall not be obligated to deliver any portion of the Redemption Price until either the certificates evidencing the Series D Preferred Stock being redeemed are delivered to the office of the Corporation or the Transfer Agent, or the holder notifies the Corporation or the Transfer Agent that such certificates have been lost, stolen

or destroyed and delivers the documentation in accordance with Section D.4(d) hereof. Notwithstanding anything herein to the contrary, in the event that the certificates evidencing the Series D Preferred Stock redeemed are not delivered to the Corporation or the Transfer Agent prior to the 10th business day following the Effective Date of Redemption, the redemption of the Series D Preferred Stock pursuant to this Section D.3 shall still be deemed effective as of the Effective Date of Redemption and the Redemption Price shall be paid to the holder of Series D Preferred Stock redeemed within 5 business days of the date the certificates evidencing the Series D Preferred Stock redeemed are actually delivered to the Corporation or the Transfer Agent.

(g) If of any of the following events (each, a "Mandatory Redemption Event") shall occur:

(i) Conversion and the Shares. The Corporation fails to

issue shares of Common Stock (subject to the limitations set forth in Section D.4(g)) to the holders of Series D Preferred Stock upon exercise by the holders of their conversion rights in accordance with the terms of this Certificate of Designation (for a period of at least sixty (60) days if such failure is solely as a result of the circumstances governed by Section D.4(e) below and the Corporation is using all commercially reasonable efforts to authorize a sufficient number of shares of Common Stock as soon as practicable), fails to transfer any certificate for shares of Common Stock issued to the holders upon conversion of the Series D Preferred Stock and when required by Section D of the Second Restated Certificate of Incorporation or the Registration Rights Agreement, dated as of May 15, 1996, by and among the Corporation and the other signatories thereto (the "Registration Rights Agreement") (or shares of Common Stock issuable upon exercise of the warrants (the "Warrants") issued pursuant to the Securities Purchase Agreement, dated as of May 15, 1996, by and between the Corporation and the other signatory thereto (the "Purchase Agreement") in accordance with the Warrants), or fails to remove any restrictive legend on any certificate or any shares of Common Stock issued to the holders of Series D Preferred Stock upon conversion of the Series D Preferred Stock as and when required by this Second Restated Certificate of Incorporation, the Purchase Agreement or the Registration Rights Agreement (or shares of Common Stock issuable upon exercise of the Warrants in accordance with the Warrants) and any such failure shall continue uncured for twenty (20) business days after the Corporation shall have been notified thereof in writing by the holder;

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(ii) Failure to Register. The Corporation fails to obtain

effectiveness with the Securities and Exchange Commission (the "SEC") of the Registration Statement (as defined in the Registration Rights Agreement) prior to November 15, 1996 (other than because of issues raised by the SEC arising from the transactions contemplated by the Purchase Agreement or because of a change in the policy, procedures, interpretations, positions, practice or rules of the SEC made public after the date hereof so long as, in either case, the Corporation is using all commercially reasonable efforts to achieve the effectiveness of such Registration Statement) or lapses in effect (or sales otherwise cannot be made thereunder) for more than thirty (30) consecutive days or sixty (60) days in any twelve (12) month period after such Registration Statement becomes effective;

(iii) Receiver or Trustee. The Corporation or any

subsidiary of the Corporation shall make an assignment for the benefit of creditors, or apply for or consent to the appointment of a receiver or trustee for it or for all or substantially all of its property or business; or such a receiver or trustee shall otherwise be appointed;

(iv) Bankruptcy. Bankruptcy, insolvency, reorganization

or liquidation proceedings or other proceedings for relief under any bankruptcy law or any law for the relief of debtors shall be instituted by or against the Corporation or any subsidiary of the Corporation.

Then, upon the occurrence and during the continuation of any Mandatory Redemption Event specified in subparagraphs (i) or (ii), at the option of the holders of at least 50% of the then outstanding shares of Series D Preferred Stock by written notice (the "Mandatory Redemption Notice") to the Corporation

of such Mandatory Redemption Event, the Corporation shall, and upon the occurrence of any Mandatory Redemption Event specified in subparagraphs (iii) or (iv), purchase the holder's shares of Series D Preferred Stock for an amount per share equal to 125% multiplied by the Redemption Price in effect at the time of the redemption hereunder.

Subject to the limitations contained in Section D.4(g), if the Corporation fails to pay the Mandatory Redemption Amount for each share within five (5) business days of written notice that such amount is due and payable, then each holder of Series D Preferred Stock shall have the right at any time, so long as the Mandatory Redemption Event continues to require the Corporation, upon written notice, to immediately issue (in accordance with the terms of Section D.4 below), in lieu of the Mandatory Redemption Amount, with respect to each outstanding share of Series D Preferred Stock held by such holder, the number of shares of Common Stock of the Corporation equal to the Mandatory Redemption Amount divided by the Conversion Price then in effect.

4. Conversion at the Option of the Holder.

(a) Each holder of shares of Series D Preferred Stock may, at its option at any time and from time to time (whether or not the Corporation has sent an Optional Conversion Notice to the holders of Series D Preferred Stock pursuant to Section D.3), upon surrender of the certificates therefor, convert any or all of its shares of Series D Preferred Stock into Common Stock as follows (an "Optional Conversion"). Each share of Series D Preferred

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Stock shall be convertible into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing (x) the sum of (I) the Stated Value thereof, plus (II) unless the Corporation has timely redeemed such Premium in cash in accordance with Section D.3, an amount equal to eight percent (8%) per annum of such Stated Value for the period beginning on the date of issuance of such share and ending on the Conversion Date (the "Premium"), by (y) the then effective Conversion Price (as defined below); provided, however, that in no event shall holders of shares of Series D Preferred Stock be entitled to convert any such shares in excess of that number of shares upon conversion of which the sum of (x) the number of shares of Common Stock beneficially owned by the holder and its affiliates (other than shares of Common Stock which may be deemed beneficially owned through the ownership of the unconverted portion of the shares of Series D Preferred Stock and the unexercised portion of the Warrants) and (y) the number of shares of Common Stock issuable upon the conversion of the shares of Series D Preferred Stock with respect to which the determination of this proviso is being made would result in beneficial ownership by the holder and its affiliates of more than 4.9% of the outstanding shares of Common Stock. For purposes of the second proviso to the immediately preceding sentence, beneficial ownership shall be determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended, and Regulation 13 D-G thereunder, except as otherwise provided in clause (x) of such proviso.

(b) The "Conversion Price" shall be the lesser of (i) the Applicable Percentage (as hereinafter defined) of the average of the closing bid prices for the Common Stock on the NASDAQ National Market ("NASDAQ"), or on the principal securities exchange or other securities market on which the Common Stock is then being traded, for the five (5) consecutive Trading Days (as defined below) ending one Trading Day prior to the date (the "Conversion Date") the Conversion Notice is sent by a holder to the Corporation via facsimile (the "Variable Conversion Price"), and (ii) the average of the closing bid prices for the Common Stock on NASDAQ for the five (5) consecutive Trading Days ending on the Closing Date under the Purchase Agreement (the "Closing Date") (the "Fixed Conversion Price") (subject to equitable adjustments from time to time pursuant to the antidilution provisions of Section D.4(c) below). Applicable Percentage means (i) 100%, if the Conversion Date is within forty (40) days after the Closing Date, and (ii) 90%, if the Conversion Date is within eighty (80) days, but more than forty (40) days, after the Closing Date, and (iii) 75%, if the Conversion Date is more than eighty (80) days after the Closing Date.

(c) The Conversion Price shall be subject to adjustment from time to time as follows:

(i) Adjustment to Fixed Conversion Price Due to Stock

Split, Stock Dividend, Etc. If at any time when the Series D Preferred Stock is

issued and outstanding, the number of outstanding shares of Common Stock is increased by a stock split, stock dividend, or other similar event, the Fixed Conversion Price shall be proportionately reduced, or if the number of outstanding shares of Common Stock is decreased by a reverse stock split, combination or reclassification of shares, or other similar event, the Fixed Conversion Price shall be proportionately increased. In such event the Corporation shall notify the Transfer Agent of such change on or before the effective date thereof.

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(ii) Adjustment to Variable Conversion Price. If at any

time when Series D Preferred Stock is issued and outstanding, the number of outstanding shares of Common Stock is increased or decreased by a stock split, stock dividend, combination, reclassification or other similar event, which event shall have taken place during the reference period for determination of the Conversion Price for any Optional Conversion or Mandatory Conversion of the Series D Preferred Stock, then the Variable Conversion Price shall be calculated giving appropriate effect to the stock split, stock dividend, combination, reclassification or other similar event for all five (5) Trading Days immediately preceding the Conversion Date.

(iii) Adjustment Due to Merger, Consolidation, Etc. If,

at any time when Series D Preferred Stock is issued and outstanding and prior to the conversion of all Series D Preferred Stock, there shall be (i) any reclassification or change of the outstanding shares of Common Stock (other than a change in par value, or from par value to no par value, or from no par value to par value, or as a result of a subdivision or combination), (ii) any consolidation or merger of the Corporation with any other corporation (other than a merger in which the Corporation is the surviving or continuing corporation and its capital stock is unchanged), (iii) any sale or transfer of all or substantially all of the assets of the Corporation or (iv) any share exchange pursuant to which all of the outstanding shares of Common Stock are converted into other securities or property, then the holders of Series D Preferred Stock shall, upon being given at least thirty (30) days prior written notice of such transaction, thereafter have the right to purchase and receive upon conversion of Series D Preferred Stock, upon the basis and upon the terms and conditions specified herein and in lieu of the shares of Common Stock immediately theretofore issuable upon conversion, such shares of stock and/or securities or other property as may be issued or payable with respect to or in exchange for the number of shares of Common Stock immediately theretofore purchasable and receivable upon the conversion of Series D Preferred Stock held by such holders had such merger, consolidation, exchange of shares, recapitalization, reorganization or other similar event not taken place and in any such case appropriate provisions shall be made with respect to the rights and interests of the holders of the Series D Preferred Stock to the end that the provisions hereof (including, without limitation, provisions for adjustment of the Conversion Price and of the number of shares issuable upon conversion of the Series D Preferred Stock) shall thereafter be applicable, as nearly as may be practicable in relation to any shares of stock or securities thereafter deliverable upon the conversion thereof. The Corporation shall not effect any transaction described in this subsection (c) unless (i) each holder of Series D Preferred Stock has received written notice of such transaction at least thirty (30) days prior thereto and in no event later than ten (10) days prior to the record date for the determination of shareholders entitled to vote with respect thereto, and (ii) the provisions of this paragraph have been complied with. The above provisions shall similarly apply to successive reclassifications, consolidations, mergers, sales, transfers or share exchanges.

(iv) No Fractional Shares. If any adjustment under this

Section D.4(c) would create a fractional share of Common Stock or a right to acquire a fractional share of Common Stock, such fractional share shall be disregarded and the number of shares of Common Stock issuable upon conversion shall be the next higher number of shares.

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(d) In order to convert Series D Preferred Stock into full

shares of Common Stock, a holder shall: (i) fax a copy of the fully executed notice of conversion in the form attached hereto as Exhibit A ("Notice of

Conversion") to the Corporation at the office of the Corporation for the Series D Preferred Stock that the holder elects to convert the same, which notice shall specify the number of shares of Series D Preferred Stock to be converted, the applicable Conversion Price and a calculation of the number of shares of Common Stock issuable upon such conversion (together with a copy of the first page of each certificate to be converted) prior to Midnight, New York City time (the "Conversion Notice Deadline") on the date of conversion specified on the Notice of Conversion; and (ii) surrender the original certificates representing the Series D Preferred Stock being converted (the "Preferred Stock Certificates"), duly endorsed, along with a copy of the Notice of Conversion as soon as practicable thereafter to the office of the Corporation for the Series D Preferred Stock; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless either the Preferred Stock Certificates are delivered to the Corporation as provided above, or the holder notifies the Corporation that such certificates have been lost, stolen or destroyed (subject to the requirements of subparagraph (i) below). In the case of a dispute as to the calculation of the Conversion Price, the Corporation shall promptly issue such number of shares of Common Stock that are not disputed in accordance with subparagraph (ii) below. The Corporation shall submit the disputed calculations to its outside accountant via facsimile within three (3) business days of receipt of the Notice of Conversion. The accountant shall audit the calculations and notify the Corporation and the holder of the results no later than 48 hours from the time it receives the disputed calculations. The accountant's calculation shall be deemed conclusive absent manifest error.

(i) Lost or Stolen Certificates. Upon receipt by the

Corporation of evidence of the loss, theft, destruction or mutilation of any Preferred Stock Certificates representing shares of Series D Preferred Stock, and (in the case of loss, theft or destruction) of indemnity or security reasonably satisfactory to the Corporation, and upon surrender and cancellation of the Preferred Stock Certificate(s), if mutilated, the Corporation shall execute and deliver new Preferred Stock Certificate(s) of like tenor and date. However, the Corporation shall not be obligated to reissue such lost or stolen Preferred Stock Certificate(s) if the holder contemporaneously requests the Corporation to convert such Series D Preferred Stock.

(ii) Delivery of Common Stock Upon Conversion. Upon the

surrender of certificates as described above from a holder of Series D Preferred Stock accompanied by a Notice of Conversion, the Corporation shall issue and, within two (2) business days (the "Delivery Period") after such surrender (or, in the case of lost, stolen or destroyed certificates, after provision of agreement and indemnification pursuant to subparagraph (i) above), deliver to or upon the order of the holder (i) that number of shares of Common Stock for the portion of the shares of Series D Preferred Stock converted as shall be determined in accordance herewith and (ii) a certificate representing the balance of the shares of Series D Preferred Stock not converted, if any. In addition to any other remedies available to the holder, including actual damages and/or equitable relief, the Corporation shall pay to a holder \$250 in cash for the first day beyond such Delivery Period that the Corporation fails to deliver Common Stock issuable upon surrender of shares of Series D Preferred Stock with a Notice of Conversion

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and \$500 per day in cash for each day thereafter until such time as the earlier of the date that the Corporation has delivered all such Common Stock and the tenth day beyond such Delivery Period. Such cash amount shall be paid to such holder by the fifth day of the month following the month in which it has accrued. In the event the Corporation fails to deliver such Common Stock prior to the expiration of the ten (10) business day period after the Delivery Period for any reason (whether due to a requirement of law or a stock exchange or otherwise), such holder shall be entitled to (in addition to any other remedies available to the holder) Conversion Default Payments in accordance with Section D.4(e) hereof beginning on the expiration of such ten (10) business day period.

(iii) No Fractional Shares. If any conversion of Series D

Preferred Stock would result in a fractional share of Common Stock or the right

to acquire a fractional share of Common Stock, such fractional share shall be disregarded and the number of shares of Common Stock issuable upon conversion of the Series D Preferred Stock shall be the next higher number of shares.

(iv) Conversion Date. The "Conversion Date" shall be the

date specified in the Notice of Conversion, provided (i) that the advance copy of the Notice of Conversion is faxed to the Corporation before Midnight, New York City time, on the Conversion Date, and (ii) that the original Preferred Stock Certificate(s), duly endorsed, are surrendered along with a copy of the Notice of Conversion as soon as practicable thereafter to the office of the Corporation or the Transfer Agent for the Series D Preferred Stock. The person or persons entitled to receive the shares of Common Stock issuable upon conversion shall be treated for all purposes as the record holder or holders of such securities as of the Conversion Date and all rights with respect to the shares of Series D Preferred Stock surrendered shall forthwith terminate except the right to receive the shares of Common Stock or other securities or property issuable on such conversion.

(e) A number of shares of the authorized but unissued Common Stock sufficient to provide for the conversion of the Series D Preferred Stock outstanding at the then current Conversion Price shall at all times be reserved by the Corporation, free from preemptive rights, for such conversion or exercise. If the Corporation shall issue any securities or make any change in its capital structure which would change the number of shares of Common Stock into which each share of the Series D Preferred Stock shall be convertible at the then current Conversion Price, the Corporation shall at the same time also make proper provision so that thereafter there shall be a sufficient number of shares of Common Stock authorized and reserved, free from preemptive rights, for conversion of the outstanding Series D Preferred Stock on the new basis. If, at any time a holder of shares of Series D Preferred Stock submits a Conversion Notice, the Corporation does not have sufficient authorized but unissued shares of Common Stock available to effect such conversion in accordance with the provisions of this Section 4 (a "Conversion Default"), the Corporation shall issue to the holder all of the shares of Common Stock which are available to effect such conversion (including, with the Holder's written consent, any shares underlying outstanding Warrants ("Borrowed Shares")). The number of shares of Series D Preferred Stock included in the Notice of Conversion which exceeds the amount which is then convertible into available shares of Common Stock (including Borrowed

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Shares, if any) (the "Excess Amount") shall, notwithstanding anything to the contrary contained herein, not be convertible into Common Stock in accordance with the terms hereof until (and at the holder's option at any time after) the date additional shares of Common Stock are authorized by the Corporation to permit such conversion, at which time the Conversion Price in respect thereof shall be the lesser of (i) the Conversion Price on the Conversion Date Default (as defined below) and (ii) the Conversion Price on the Conversion Date elected by the holder in respect thereof. The Corporation shall pay to the holder payments ("Conversion Default Payments") for a Conversion Default in the amount of $(N/365)$, multiplied by the sum of the Stated Value with respect to each share of Series D Preferred Stock, multiplied by the Default Amount (as defined below) on the first day of the Conversion Default (the "Conversion Default Date"), multiplied by .25, where (i) N = the number of days from the Conversion Default Date to the earlier of (A) the date (the "Authorization Date") that the Corporation authorizes a sufficient number of shares of Common Stock to effect conversion of the full number of shares of Series D Preferred Stock and (B) the date such share of Series D Preferred Stock is redeemed in accordance with Section D.4(d) and (ii) "Default Amount" means the Excess Amount plus the number of shares of Series D Preferred Stock that would not be convertible as a result of this Section D.4(e) but for the Borrowed Shares. The Corporation shall send notice to the holder of the authorization of additional shares of Common Stock, the Authorization Date and the amount of holder's accrued Conversion Default Payments. The accrued Conversion Default Payments for each calendar month shall be paid in cash or, subject to the limitations contained in Section D.4(g), shall be convertible into Common Stock at the Conversion Price, at the holder's option, as follows:

(i) In the event holder elects to take such payment in cash, cash payment shall be made to holder by the fifth day of the month following the month in which it has accrued; and

(ii) In the event holder elects to take such payment in Common Stock, the holder may convert such payment amount into Common Stock at the Conversion Price (as in effect at the time of Conversion) at any time after the fifth day of the month following the month in which it has accrued in accordance with the terms of this Section 4.

1. Nothing herein shall limit the holder's right to pursue actual damages for the Corporation's failure to maintain a sufficient number of authorized shares of Common Stock, and each holder shall have the right to pursue all remedies available at law or in equity (including a decree of specific performance and/or injunctive relief).

(f) Upon the occurrence of each adjustment or readjustment of the Conversion Price pursuant to this Section 4, the Corporation, at its expense, shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of Series D Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, upon the written request at any time of any holder of Series D Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (i) such adjustment or readjustment, (ii) the Conversion Price at the time in effect and (iii) the

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number of shares of Common Stock and the amount, if any, of other securities or property which at the time would be received upon conversion of a share of Series D Preferred Stock.

(g) Notwithstanding anything contained herein to the contrary, in no event shall the aggregate number of shares of Common Stock issuable upon conversion or redemption of, or otherwise issuable with respect to, all of the Series D Preferred Stock issued by the Corporation pursuant to the Purchase Agreement (including, without limitation, all shares of Common Stock issued with respect to such Series D Preferred Stock pursuant to Section D.3 and Section D.4(e) hereof, but without taking into account any shares of Common Stock issuable upon exercise of Warrants) plus all shares of Common Stock issuable pursuant to Section 2(c) of the Registration Rights Agreement exceed 2,424,884 (subject to equitable adjustments from time to time pursuant to the antidilution provisions of Section D.4(c) above). In the event the Corporation is prohibited from issuing shares of Common Stock as a result of the operation of this Section D.4(g), the provisions of Section 3, subparagraph (ii) of Section D.4(d) and Section D.4(e) shall apply to the extent applicable.

5. Mandatory Conversion.

Each share of Series D Preferred Stock issued and outstanding on May 15, 2001, automatically shall be converted into shares of Common Stock on such date at the then effective Conversion Price in accordance with the provisions of Section D.4 hereof (the "Mandatory Conversion").

6. Voting Rights.

The holders of the Series D Preferred Stock have no voting power whatsoever, except as otherwise provided by the Delaware General Corporation Law ("DGCL"), and in this Section D.6, and in Section D.7 below.

Notwithstanding the above, the Corporation shall provide each holder of Series D Preferred Stock with prior notification of any meeting of the shareholders (and copies of proxy materials and other information sent to shareholders). In the event of any taking by the Corporation of a record of its shareholders for the purpose of determining shareholders who are entitled to receive payment of any dividend or other distribution, any right to subscribe for, purchase or otherwise acquire (including by way of merger, consolidation or recapitalization) any share of any class or any other securities or property, or to receive any other right, or for the purpose of determining shareholders who are entitled to vote in connection with any proposed sale, lease or conveyance of all or substantially all of the assets of the Corporation, or any proposed liquidation, dissolution or winding up of the Corporation, the Corporation shall mail a notice to each holder, at least ten (10) days prior to the record date

specified therein (or 30 days prior to the consummation of the transaction or event, whichever is earlier), of the date on which any such record is to be taken for the purpose of such dividend, distribution, right or other event, and a brief statement regarding the amount and character of such dividend, distribution, right or other event to the extent known at such time.

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To the extent that under the DGCL the vote of the holders of the Series D Preferred Stock, voting separately as a class or series as applicable, is required to authorize a given action of the Corporation, the affirmative vote or consent of the holders of at least a majority of the shares of the Series D Preferred Stock represented at a duly held meeting at which a quorum is present or by written consent of a majority of the shares of Series D Preferred Stock (except as otherwise may be required under the DGCL) shall constitute the approval of such action by the class. To the extent that under the DGCL holders of the Series D Preferred Stock are entitled to vote on a matter with holders of Common Stock, voting together as one class, each share of Series D Preferred Stock shall be entitled to a number of votes equal to the number of shares of Common Stock into which it is then convertible using the record date for the taking of such vote of shareholders as the date as of which the Conversion Price is calculated. Holders of the Series D Preferred Stock shall be entitled to notice of (and copies of proxy materials and other information sent to shareholders) all shareholder meetings or written consents with respect to which they would be entitled to vote, which notice would be provided pursuant to the Corporation's by-laws and the DGCL.

7. Protection Provision.

So long as shares of Series D Preferred Stock are outstanding, the Corporation shall not, without first obtaining the approval (by vote or written consent, as provided by the DGCL) of the holders of at least a majority of the then outstanding shares of Series D Preferred Stock:

(a) alter or change the rights, preferences or privileges of the Series D Preferred Stock or any other class or series of capital stock of the Corporation so as to affect adversely the Series D Preferred Stock;

(b) create any new class or series of capital stock having a preference over the Series D Preferred Stock as to distribution of assets upon liquidation, dissolution or winding up of the Corporation ("Senior Securities");

(c) create any new class or series of capital stock ranking pari passu with the Series D Preferred Stock as to distribution of assets upon liquidation, dissolution or winding up of the Corporation (as previously defined in Section D.1 hereof, "Pari Passu Securities");

(d) increase the authorized number of shares of Series D Preferred Stock.

(e) do any act or thing not authorized or contemplated by this Certificate of Designation which would result in taxation of the holders of shares of the Series D Preferred Stock under Section 305 of the Internal Revenue Code of 1986, as amended (or any comparable provision of the Internal Revenue Code as hereafter from time to time amended); or

(f) issue after the Closing Date any Senior Securities or Pari Passu Securities (other than Common Stock).

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In the event holders of at least a majority of the then outstanding shares of Series D Preferred Stock agree to allow the Corporation to alter or change the rights, preferences or privileges of the shares of Series D Preferred Stock, pursuant to subsection (a) above, so as to affect the Series D Preferred Stock, then the Corporation will deliver notice of such approved change to the holders of the Series D Preferred Stock that did not agree to such alteration or change (the "Dissenting Holders") and Dissenting Holders shall have the right for a period of twenty (20) days to convert pursuant to the terms of this Section D of the Second Restated Certificate of Incorporation of the Corporation as they exist prior to such alteration or change or continue to hold their shares of Series D Preferred Stock.

8. Notices.

Each holders of Series D Preferred Stock shall send a copy of all notices to be given to the Corporation under this Section D of the Second Restated Certificate of Incorporation to such one (1) counsel as the Corporation may designate in writing at least five (5) business days prior to such holder sending such notice. For purposes of this Section D.8, the initial counsel designated by the Corporation for receiving copies of notices under this Section D of the Second Restated Certificate of Incorporation shall be Jackson Tufts Cole & Black, LLP, 60 South Market Street, San Jose, California 95113, Attention: Richard Scudellari, Telecopier (408) 998-4889.

FIFTH: In furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to adopt, alter or repeal the by-laws of the Company, subject always to the right of the stockholders entitled to vote with respect thereto to adopt additional by-laws and to alter or repeal by-laws adopted by the Board of Directors, and to provide in connection therewith that any by-law adopted or altered by the stockholders may be altered or repealed only by a vote of a designated proportion of the stockholders.

SIXTH:

(A) If with respect to any of the following transactions, a stockholder vote is required by law or by any other rules or policies to which the Company may then be subject, the affirmative vote of two-thirds of the outstanding stock entitled to vote thereon, given in person or by proxy, at a meeting called for the purpose shall be necessary.

(a) To approve (i) the lease, sale, exchange, transfer or other disposition by the Company of all or substantially all, of its assets or business to a related company, or an affiliate of a related company, or (ii) the consolidation of the Company with or its merger into a related company or an affiliate of a related company, or (iii) the merger into the Company or a subsidiary of the Company of a related company or an affiliate of a related company, or (iv) an acquisition of substantially all of the assets of a corporation or of the securities representing such assets, in which the Company, or any subsidiary of the Company, is the acquiring corporation and voting shares of the Company are issued or transferred to a related company or an affiliate of a related company, or to stockholders of a related company, or an affiliate of a related company, or an associated person.

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(b) To approve any agreement, contract, or other arrangement with a related company or an affiliate of a related company, or an associated person providing for any of the transactions described in subparagraph (a) above; or

(c) To effect any amendment of the Certificate of Incorporation which changes the provisions of this Article Sixth:

1. For the purpose of this Article Sixth, (i) a "related company" in respect of a given transaction, shall be any person, partnership, corporation, or firm (except a subsidiary of the Company at least a majority of whose stock is owned by the Company) which, together with its affiliates and associated persons owns of record or beneficially, directly or indirectly, in excess of 10% of the outstanding shares of the Company, entitled to vote upon such transaction, as of the record date used to determine the stockholders of the Company entitled to vote upon such transaction; (ii) an "affiliate" of a related company shall be any individual, joint venture, trust, partnership, or corporation which, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, the related company; and (iii) an "associated person" of a related company shall be any officer or director or any beneficial owner, directly or indirectly, of 10% or more of any class of equity security of such related company or any of its affiliates.

The determination of the Board of Directors of the Company, based on information known to the Board of Directors and made in good faith, shall be conclusive as to whether any person, partnership, corporation or firm is a related company or affiliate or associated person as defined in this Article Sixth.

(B) If the provisions of this Article Sixth are applicable to a transaction and if the provisions of Section 262 of the Delaware General Corporation Law, or any similar provision hereinafter enacted, would be applicable thereto but for the provisions of subparagraph (k) thereof, then the stockholders of the Company shall be entitled to the rights granted by Section 262 of the Delaware General Corporation Law or any similar provision hereafter enacted notwithstanding the exemptions contained in subparagraph (k) of such section.

(C) If the provisions of this Article Sixth are applicable to a transaction, but the provisions of Section 262 of the Delaware General Corporation Law are not applicable thereto, notwithstanding the elimination of the exemptions contained in subparagraph (k) of such Section, then a holder of dissenting shares with respect to such transaction shall be entitled to receive from the Company, payment for the value of his stock on the effective date of the transaction, excluding any appreciation or depreciation in value from the expectation or accomplishment of the transaction.

(a) To qualify as a holder of dissenting shares, a stockholder shall, before the taking of the vote on the transaction, file with the Company a written objection to such proposed transaction. Following the effective date of such transaction, the Company shall notify each stockholder who has filed such written objection and whose shares were not voted in favor of the transaction, that the transaction has become

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effective. The notice shall be sent by registered or certified mail, return receipt requested, addressed to the stockholder at his address as it appears on the records of the Company. Such stockholder shall, within 20 days after the mailing of the notice, demand, in writing, from the Company, payment of the value of his stock. The demand shall state the number and class of shares held of record by the stockholder which he demands that the Company purchase and shall contain a request that the Company state what it claims to be the fair market value of these shares. In addition, within 20 days after the date of mailing of such notice, such stockholder shall submit to the Company at its principal office or at the office of any transfer agent thereof, his certificate representing the shares which he demands that the Company purchase to be stamped or endorsed with a statement that the shares are dissenting shares or to be exchanged for a certificate of appropriate denomination to be so stamped or endorsed. Upon subsequent transfers of such dissenting shares on the books of the Company, the new certificates issued therefor shall bear a like statement, together with the name of the original dissenting holder of the shares.

(b) As used in this paragraph (C) "dissenting shares" means shares which come within all the following descriptions:

1. Which were held of record on the date for the determination of stockholders entitled to vote at the meeting at which the transaction was approved and the holder thereof filed written objection thereto with the Company before the taking of the vote thereon and did not vote in favor thereof.

2. Which the holder has demanded that the Company purchase at their fair market value in accordance with subparagraph (a) above.

3. Which the holder has submitted for endorsement in accordance with subparagraph (a) above.

(c) Within five days after receipt of a copy of a demand for purchase of shares as dissenting shares, the Company shall, by registered or certified mail, return receipt requested, addressed to the stockholder at his address as it appears on the records of the Company, mail a written offer to purchase the shares if they are determined to be dissenting shares, at a price deemed by the Company to

represent their fair market value.

(d) Payment of the fair market value of the dissenting shares shall be made within 30 days after the amount thereof has been agreed upon, upon surrender of the certificates therefor unless provided otherwise by agreement.

(e) If the Company shall deny that the shares are dissenting shares, or the Company shall fail to make an offer for the shares, or the Company and the stockholder fail to agree upon the fair market value of the shares, the Company or any stockholder demanding purchase of his shares as dissenting shares, within four months after the date upon which the Company mailed notice that the transaction was effective, but not thereafter, may make written demand to the American Arbitration Association,

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Los Angeles, California, for a determination of the value of the dissenting shares or of whether the shares are dissenting shares, or both, in accordance with the Commercial Arbitration Rules of such Association, which arbitration shall be conducted in Los Angeles, California. If such arbitration is commenced by the Company, there shall be named therein all stockholders who have theretofore qualified as dissenting stockholders. If such arbitration is commenced by any one or more of such stockholders, the Company shall be permitted to join therein all stockholders who have theretofore qualified as dissenting stockholders. The arbitration shall be conducted before a panel of three arbitrators selected in accordance with the Commercial Arbitration Rules of the American Arbitration Association, and such panel of arbitrators shall determine those stockholders who have complied with the provisions of this Paragraph (C), and who have become entitled to the valuation of any payment for their shares and the value of such dissenting shares. Each stockholder who is a party to such arbitration, and the Company, shall be afforded reasonable opportunity to submit pertinent evidence on the value of the shares. Upon the determination of the value of the stock and of the stockholders entitled to payment therefor by the panel of arbitrators, such panel of arbitrators shall direct the payment of such value to the stockholders entitled thereto by the Company upon transfer to it of the certificates representing such stock, which determination may be enforced by a court of competent jurisdiction in the State of New York.

(f) The costs of the arbitration shall be assessed or apportioned as the panel of arbitrators considers equitable.

(g) All action required or permitted to be taken by the panel of arbitrators shall be taken by the majority decision of the members of the panel of arbitrators.

(h) Except as expressly limited in this Paragraph (C), holders of dissenting shares continue to have all the rights and privileges incident to those shares until the fair market value of their shares is agreed upon or determined. A holder of dissenting shares may not withdraw his dissent or demand for payment unless the Company, by its Board of Directors, consents thereto.

(i) Dissenting shares lose their status as dissenting shares, and the holders thereof cease to be entitled to require the Company to purchase their shares upon the happening of any of the following

1. The Company abandons the transaction which the dissenting stockholder did not approve.

2. The shares are surrendered for conversion into shares of another class in accordance with the Certificate of Incorporation, or transferred prior to their submission for endorsement in accordance with subparagraph (a) above.

3. The holder of the dissenting shares and the Company do not agree upon the status of the shares as dissenting shares and upon the purchase price of the

shares, and the holder of the dissenting shares does not file a written demand for arbitration or intervene in an arbitration or is not made a party to an arbitration in respect to dissenting shares within four months after the date on which the notice of the effective date of the transaction is mailed to the stockholders.

(j) If litigation is instituted to test the sufficiency or regularity of the votes of the stockholders in authorizing a transaction, the proceeding for compensation of any holder of dissenting shares shall be suspended until final determination of such litigation.

SEVENTH: The Company shall indemnify any and all persons whom it has the power to indemnify pursuant to the General Corporation Law of Delaware against any and all expenses, judgments, fines, amounts paid in settlement, and any other liabilities to the fullest extent permitted by such law and may at the discretion of the Board of Directors, purchase and maintain insurance, at its expense, to protect itself and such persons against any expense, judgment, fine, amount paid in settlement or other liability, whether or not the Company would have the power to so indemnify such person under the General Corporation Law of Delaware.

EIGHTH: A director of the Company shall not be personally liable to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law or (iv) for any transaction from which the director derived an improper personal benefit. If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Company shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended. Any repeal or modification of this Article by the stockholders of the Company shall not adversely affect any right or protection of a director of the Company existing at the time of such repeal or modification.

IN WITNESS WHEREOF, OXIS INTERNATIONAL, INC., a Delaware corporation has caused this Second Restated Certificate of Incorporation to be signed by its Chairman of the Board and attested by its Secretary, this ____ day of August, 1996.

OXIS INTERNATIONAL, INC., a
Delaware corporation

Ray R. Rogers,
Chairman of the Board

ATTEST:

By: _____
Jon S. Pitcher,
Secretary

NOTICE OF CONVERSION

(To be executed by the Registered Holder
in order to Convert the Series D Preferred Stock)

The undersigned hereby irrevocably elects to convert shares of Series D Preferred Stock, represented by stock certificate No.(s). (the "Preferred Stock Certificates") into shares of common stock ("Common Stock") of OXIS International, Inc. (the "Corporation") according to the conditions of the Corporation's Certificate of Incorporation with respect to Series D Preferred Stock, as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto and is delivering herewith such certificates. No fee will be charged to the Holder for any conversion, except for transfer taxes, if any. A copy of each Preferred Stock Certificate is attached hereto (or evidence of loss, theft or destruction thereof).

The undersigned represents and warrants that all offers and sales by the undersigned of the securities issuable to the undersigned upon conversion of Series D Preferred Stock shall be made pursuant to registration of the securities under the Securities Act of 1933, as amended (the "Act"), or pursuant to an exemption from registration under the Act.

Date of Conversion: _____

Applicable Conversion Price: _____

Number of Shares of
Common Stock to be Issued: _____

Signature: _____

Name: _____

Address: _____

* The Corporation is not required to issue shares of Common Stock until the original Series D Preferred Stock Certificate(s) (or evidence of loss, theft or destruction thereof) to be converted are received by the Corporation or its Transfer Agent. the Corporation shall issue and deliver

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shares of Common Stock to an overnight courier not later than two (2) business days following receipt of the original Preferred Stock Certificate(s) to be converted, and shall make payments pursuant to the Certificate of Incorporation for the number of business days such issuance and delivery is late.

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EXHIBIT 10 (E)

SILICON VALLEY FINANCIAL SERVICES
A Division of Silicon Valley Bank
3003 Tasman Drive
Santa Clara, Ca. 95054
(408)654-1000 - Fax (408)980-6410

FACTORING AGREEMENT

This Factoring Agreement (the "Agreement") is made on the SIXTH day of SEPTEMBER, 1996, by and between Silicon Valley Financial Services (a division of Silicon Valley Bank) ("Buyer") having a place of business at the address specified above and OXIS INTERNATIONAL, INC., A DELAWARE corporation, (the "Parent"), and its wholly owned subsidiary, OXIS ACQUISITION CORPORATION (the "Subsidiary"). The Parent and the Subsidiary are jointly referred to herein as the "Seller" having its principal place of business and chief executive office at

Street Address: 6040 N. Cutter Circle, Suite 317
City: Portland
County: Multnomah
State: Oregon
Zip code: 97271
Fax: 94-1620407

1. DEFINITIONS. When used herein, the following terms shall have the following meanings.
 - 1.1. "Account Balance" shall mean, on any given day, the gross amount of all Purchased Receivables unpaid on that day.
 - 1.2. "Account Debtor" shall have the meaning set forth in the California Uniform Commercial Code and shall include any person liable on any Purchased Receivable, including without limitation, any guarantor of the Purchased Receivable and any issuer of a letter of credit or banker's acceptance.
 - 1.3. "Adjustments" shall mean all discounts, allowances, returns, disputes, counterclaims, offsets, defense, rights of recoupment, rights of return, warranty claims, or short payments, asserted by or on behalf of any Account Debtor with respect to any Purchased Receivable.
 - 1.4. "Administrative Fee" shall have the meaning as set forth in Section 3.3 hereof.
 - 1.5. "Advance" shall have the meaning set forth in Section 2.2 hereof.
 - 1.6. "Collateral" shall have the meaning set forth in Section 8 hereof.
 - 1.7. "Collections" shall mean all good funds received by Buyer from or on the behalf of an Account Debtor with respect to Purchased Receivables.
 - 1.8. "Compliance Certificate" shall mean a certificate, in a form provided by Buyer to Seller, which contains the certification of the chief financial officer of Seller that, among other things, the representations and warranties set forth in this Agreement are true and correct as of the date such certificate is delivered.
- 1.9. "Event of Default" shall have the meaning set forth in Section 9 hereof.
- 1.10. "Finance Charges" shall have the meaning set forth in Section 3.2 hereof.
- 1.11. "Invoice Transmittal" shall mean a writing signed by an authorized representative of Seller which accurately identifies the receivables which Buyer, at its election, may purchase, and includes for each such receivable the correct amount owed by the Account Debtor, the name and address of the Account Debtor, the invoice number, the invoice date and the account code.
- 1.12. "Obligations" shall mean all advances, financial accommodations, liabilities, obligations, covenants and duties owing, arising, due or payable by Seller to Buyer of any kind or nature, present or future, arising under or in connection with this Agreement or under any other document, instrument or agreement, whether or not evidenced by any note, guarantee or other instrument, whether arising on account or by overdraft, whether direct or indirect (including those acquired by assignment) absolute or contingent,

primary or secondary, due or to become due, now owing or hereafter arising, and however acquired; including, without limitation, all Advances, Finance Charges, Administrative Fees, interest, Repurchase Amounts, fees, expenses, professional fees and attorneys' fees and other sums chargeable to Seller hereunder or otherwise.

- 1.13. "Purchased Receivable" shall mean all those accounts, receivables, chattel paper, instruments, contract rights, documents, general intangibles, letters of credit, drafts, bankers acceptances, and rights to payment, and all proceeds thereof (all of the foregoing being referred to as "receivables") arising out of the invoices and other agreements identified on or delivered with any Invoice Transmittal delivered by Seller to Buyer which Buyer elects to purchase and for which Buyer makes an Advance.
- 1.14. "Refund" shall have the meaning set forth in Section 3.5 hereof.
- 1.15. "Reserve" shall have the meaning set forth in Sections 2.4 hereof.
- 1.16. "Repurchase Amount" shall have the meaning set forth in Section 4.2 hereof.
- 1.17. "Reconciliation Date" shall mean the last calendar day of each Reconciliation Period.
- 1.18. "Reconciliation Period" shall mean each calendar month of the year.

2. PURCHASE AND SALE OF RECEIVABLE.

- 2.1. OFFER TO SELL RECEIVABLES. During the term hereof, and provided that there does not then exist any Event of Default or any event that with notice, lapse of time or otherwise would constitute an Event of Default, Seller may request that Buyer purchase receivables and Buyer may, in its sole discretion, elect to purchase receivables. Seller shall deliver to Buyer an Invoice Transmittal with respect to any receivable for which a request for purchase is made. An authorized representative of Seller shall sign each Invoice Transmittal delivered to Buyer. Buyer shall be entitled to rely on all the information provided by Seller to Buyer on or with the Invoice Transmittal and to rely on the signature on any Invoice Transmittal as an authorized signature of Seller.

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- 2.2. ACCEPTANCE OF RECEIVABLES. Buyer shall have no obligation to purchase any receivable listed on an Invoice Transmittal. Buyer may exercise its sole discretion in approving the credit of each Account Debtor before buying any receivable. Upon acceptance by Buyer of all or any of the receivables described on any Invoice Transmittal, Buyer shall pay to Seller 80 (%) percent of the face amount of each receivable Buyer desires-----to purchase. Such payment shall be the "Advance" with respect to such receivable. Buyer may, from time to time, in its sole discretion, change the percentage of the Advance. Upon Buyer's acceptance of the receivable and payment to Seller of the Advance, the receivable shall become a "Purchased Receivable." It shall be a condition to each advance that (i) all of the representations and warranties set forth in Section 6 of this Agreement be true and correct on and as of the date of the related Invoice Transmittal and on and as of the date of such Advance as though made at and as of each such date, and (ii) no Event of Default or any event or condition that with notice, lapse of time or otherwise would constitute an Event of Default shall have occurred and be continuing, or would result from such Advance. Notwithstanding the foregoing, in no event shall the aggregate amount of all Purchased Receivables outstanding at any time exceed FIVE HUNDRED THOUSAND AND NO/100**** Dollars (\$500,000.00).
- 2.3. EFFECTIVENESS OF SALE TO BUYER. Effective upon Buyer's payment of an Advance, and for and in consideration thereof and in consideration of the covenants of this Agreement, Seller hereby absolutely sells, transfers and assigns to Buyer, all of Seller's right, title and interest in and to each Purchased Receivable and all monies due or which may become due on or with respect to such Purchased Receivable. Buyer shall be the absolute owner of each Purchased Receivable. Buyer shall have, with respect to any goods related to the Purchased Receivable, all the rights and remedies of an unpaid seller under the California Uniform Commercial Code

and other applicable law, including the rights of replevin, claim and delivery, reclamation and stoppage in transit.

- 2.4. ESTABLISHMENT OF A RESERVE. Upon the purchase by Buyer of each Purchased Receivable, Buyer shall establish a reserve. The reserve shall be the amount by which the face amount of the Purchased Receivable exceeds the advance on that Purchased Receivable (the "Reserve"); provided, the Reserve with respect to all Purchased Receivables outstanding at any one time shall be an amount not less than 20(%) percent of the Account Balance at that time and may be set at a higher percentage at Buyer's sole discretion. The reserve shall be a book balance maintained on the records of Buyer and shall not be a segregated fund.

3. COLLECTIONS, CHARGES AND REMITTANCES.

- 3.1. COLLECTIONS. Upon receipt by Buyer of Collections, Buyer shall promptly credit such Collections to Seller's Account Balance on a daily basis; provided, that if Seller is in default under this Agreement, Buyer shall apply all Collections to Seller's Obligations hereunder in such order and manner as Buyer may determine. If an item

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of collection is not honored or Buyer does not receive good funds for any reason, the amount shall be included in the Account Balance as if the Collections had not been received and Finance Charges under Section 3.2 shall accrue thereon.

- 3.2. FINANCE CHARGES. On each Reconciliation Date Seller shall pay to Buyer a finance charge in an amount equal to 2.0(%) percent per month of the average daily Account Balance outstanding during the applicable Reconciliation Period (the "Finance Charges"). Buyer shall deduct the accrued Finance Charges from the Reserve as set forth in Section 3.5 below.
- 3.3. ADMINISTRATIVE FEE. On each Reconciliation Date Seller shall pay to Buyer an Administrative Fee equal to 1.0 (%) percent of the face amount of each Purchased Receivable first purchased during that Reconciliation Period (the "Administrative Fee"). Buyer shall deduct the Administrative Fee from the Reserve as set forth in Section 3.5 below.
- 3.4. ACCOUNTING. Buyer shall prepare and send to Seller after the close of business for each Reconciliation Period, an accounting of the transactions for that Reconciliation Period, including the amount of all Purchased Receivables, all Collections, and Adjustments, Finance Charges, and the Administrative Fee. The accounting shall be deemed correct and conclusive unless Seller makes written objection to Buyer within thirty (30) days after the Buyer mails the accounting to Seller.
- 3.5. REFUND TO SELLER. Provided that there does not exist an Event of Default or any condition that with notice, lapse of time or otherwise would constitute an Event of Default, Buyer shall refund to Seller by check after the Reconciliation Date, the amount, if any, which Buyer owes to Seller at the end of the Reconciliation Period according to the accounting prepared by Buyer for the Reconciliation Period (the "Refund"). The Refund shall be an amount equal to:
- (A) (1) The Reserve as of the beginning of that Reconciliation Period, PLUS
 - (2) the Reserve created for each Purchased Receivable purchased during that Reconciliation Period, MINUS
 - (B) The total for that Reconciliation Period of:
 - (1) the Administrative Fee;
 - (2) Finance Charges;
 - (3) Adjustments;
 - (4) Repurchase Amounts, to the extent Buyer has agreed to accept payment thereof by deduction from the Refund;
 - (5) the Reserve for the Account Balance as of the first day of the following Reconciliation Period in the minimum percentage set forth in Section 2.4 hereof; and
 - (6) all amounts due, including professional fees and expenses, as set forth Section 12 for which oral or written demand has been made by Buyer to Seller during that Reconciliation Period to the extent Buyer has agreed to accept payment thereof by deduction from the Refund.

In the event the formula set forth in this Section 3.5 results in an amount due to Buyer from Seller, Seller shall make such payment in the same manner as set forth in Section 4.3 hereof for repurchases. If the formula set forth in this Section 3.5 results in an amount due to Seller from Buyer, Buyer shall make such payment by check, subject to Buyer's rights under Section 4.3 and Buyer's rights of offset and recoupment.

4. RECOURSE AND REPURCHASE OBLIGATIONS.

- 4.1 RECOURSE. Buyer's acquisition of Purchased Receivables from Seller shall be with full recourse against Seller. In the event the Obligations exceed the amount of Purchased Receivables and collateral, Seller shall be liable for any deficiency.
- 4.2 SELLER'S AGREEMENT TO REPURCHASE. Seller agrees to pay to Buyer on demand, the full face amount, or any unpaid portion, of any Purchased Receivable:
- (A) which remains unpaid ninety (90) calendar days after the invoice date; or
 - (B) which is owed by any Account Debtor who has filed, or has had filed against it, any bankruptcy case, assignment for the benefit of creditors, receivership, or insolvency proceeding or who is generally not paying its debts as such debts become due; or
 - (C) with respect to which there has been any breach of warranty of representation set forth in Section 6 hereof or any breach of any covenant contained in this Agreement; or
 - (D) with respect to which the Account Debtor asserts any discount, allowance, return, dispute, counterclaim, offset, defense, right of recoupment, right of return, warranty claim, or short payment;
- together with all reasonable attorneys' and professional fees and expenses and all court costs incurred by Buyer in collecting such Purchased Receivable and/or enforcing its rights under, or collecting amounts owned by Seller in connection with, this Agreement (collectively, the "Repurchase Amount").
- 4.3. SELLER'S PAYMENT OF THE REPURCHASE AMOUNT OR OTHER AMOUNTS DUE BUYER. When any Repurchase Amount or other amount owing to Buyer becomes due, Buyer shall inform Seller of the manner of payment which may be any one or more of the following in Buyer's sole discretion: (a) in cash immediately upon demand therefor; (b) by delivery of substitute invoices and an Invoice Transmittal acceptable to Buyer which shall thereupon become Purchased Receivables; (c) by adjustment to the Reserve pursuant to Section 3.5 hereof; (d) by deduction from or offset against the amount that otherwise would be forwarded to Seller in respect of any further Advances that may be made by Buyer; or (f) by any combination of the foregoing as Buyer may from time to time choose.
- 4.4. SELLER'S AGREEMENT TO REPURCHASE RECEIVABLES. Upon and after the occurrence of an Event of Default, Seller shall, upon Buyer's demand (or, in the case of an Event of Default under Section 9(B), immediately without notice or demand from Buyer) repurchase all the Purchased Receivables then outstanding, or such portion thereof as Buyer may demand. Such demand may, at Buyer's option, include and Seller shall

pay to Buyer Immediately upon demand, cash in an amount equal to the Advance with respect to each Purchased Receivable then outstanding together with all accrued Finance Charges, Adjustments, Administrative Fees, attorney's and professional fees, court costs and expenses as provided for herein, and any other Obligations. Upon receipt of payment in full of the Obligations, Buyers shall immediately instruct Account Debtors to pay Seller directly, and return to Seller any Refund due to Seller. For the purpose of calculating any Refund due under this Section only, the Reconciliation Date shall be deemed to be the date Buyer receives payment in good funds of all the Obligations as provided in this Section 4.4.

5. POWER OF ATTORNEY. Seller does hereby irrevocably appoint Buyer and its successors and assigns as Seller's true and lawful attorney in fact, and hereby authorizes Buyer, regardless of whether there has been as Event of Default, (a) to sell, assign, transfer, pledge, compromise, or discharge the whole or any part of the Purchased Receivables; (b) to demand, collect, receive, sue, and give releases to any Account Debtor for the monies due or which may become due upon or with respect to the Purchased Receivables and to compromise, prosecute, or defend any action, claim, case or proceeding relating to the Purchased Receivables, including the filing of a claim or the voting of such claims in any bankruptcy case, all in Buyer's name or Seller's name, as Buyer may choose (c) to prepare, file and sign Seller's name in any notice, claim, assignment, demand, draft, or notice of or satisfaction of lien or mechanics' lien or similar document with respect to Purchased Receivables;(d) to notify all Account Debtors with respect to the Purchased Receivables to pay directly;(e) to receive, open and dispose of all mail addressed to Seller for the purpose of collecting the Purchased Receivables;(f) to endorse Seller's name on any check or other forms of payment on the Purchased Receivables; (g) to execute on behalf of Seller any and all instruments, documents, financing statements and the like to perfect Buyer's interest in the Purchased Receivables and Collateral; and (h) to do all acts and things necessary or expedient, in furtherance of any such purposes. If Buyer receives a check or item which is payment for both a Purchased Receivable and another receivable, the funds shall first be applied to the Purchased Receivable and, so long as there does not exist an Event of Default or an event that with notice, lapse of time or otherwise would constitute an Event of Default, the excess shall be remitted to Seller. Upon the occurrence and continuation of an event of Default, all of power of attorney rights granted by Seller to Buyer hereunder shall be applicable with respect to all Purchased Receivables and all Collateral.

6. REPRESENTATIONS, WARRANTIES AND COVENANTS

6.1 RECEIVABLES' WARRANTIES, REPRESENTATIONS AND COVENANTS. To induce

Buyer to buy receivables and to render its services to Seller, and with full knowledge that the truth and accuracy of the following are being relied upon by the Buyer in determining whether to accept receivables as Purchased Receivables, Seller represents, warrants, covenants and agrees, with respect to each Invoice Transmittal delivered to Buyer and each receivable described therein, that:

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- (A) Seller is the absolute owner of each receivable set forth in the Invoice Transmittal and legal rights to sell, transfer and assign such receivables;
- (B) The correct amount of each receivables is as set forth in the Invoice Transmittal and is not in dispute;
- (C) The payment of each receivable is not contingent upon the fulfillment of any obligation or contract, past or future and any and all obligations required of the Seller have been fulfilled as of the date of the Invoice Transmittal;
- (D) Each receivable set forth on the Invoice Transmittal is based on an actual sale and delivery of goods and/or services actually rendered, is presently due and owing to Seller, is not past due or in default, has not been previously sold, assigned, transferred, or pledged, and is free of any and all liens, security interests and encumbrances other than liens, security interests or encumbrances in favor of Buyer or any other division or affiliate of Silicon Valley Bank;
- (E) There are no defenses, offsets, or counterclaims against any of the receivables, and no agreement has been made under which the Account Debtor may claim any deduction or discount, except as otherwise stated in the Invoice Transmittal;
- (F) Each Purchased Receivable shall be the property of the Buyer and shall be collected by Buyer, but if for any reason it should be paid to the Seller, Seller shall promptly notify Buyer of such payment, shall hold checks, drafts, or monies so received in trust for the benefit of Buyer, and shall promptly transfer and deliver the same to the Buyer;
- (G) Buyer shall have the right of endorsement, and also the right to require endorsement by Seller, on all payments received in

connection with each Purchased Receivable and any proceeds of Collateral;

- (H) Seller, and to Seller's best knowledge, each Account Debtor set forth in the Invoice Transmittal, are and shall remain solvent as that term is defined in the United States bankruptcy Code and the California Uniform Commercial Code, and no such Account Debtor has filed or had filed against it a voluntary petition for relief under the United States Bankruptcy Code;
- (I) Each Account Debtor named on the Invoice Transmittal will not object to the payment for, or the quality or the quantity of the subject matter of, the receivable and is liable for the amount set forth on the Invoice Transmittal;
- (J) Each Account Debtor shall promptly be notified, after acceptance by Buyer, that the Purchased Receivable has been transferred to and is payable to Buyer, and Seller shall not take or permit any action to countermand such notification; and
- (K) All receivables forwarded to and accepted by Buyer after the date hereof, and thereby becoming Purchased Receivables, shall comply with each and every one of the foregoing representations, warranties, covenants and agreements referred to above in this Section 6.1

6.2 ADDITIONAL WARRANTIES, REPRESENTATIONS AND COVENANTS. In addition to the foregoing warranties, representation and covenants, to induce Buyer to buy

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receivables and to render its services to Seller, hereby Seller represents, warrants, covenants and agrees that:

- (A) Seller will not assign, transfer, sell, or grant, or permit any lien or security interest any Purchased Receivables or Collateral to or favor of any other party, without Buyer's prior written consent;
- (B) The Seller's name, form of organization, chief executive office, and the place where records concerning all Purchased Receivables and Collateral are kept is set forth at the beginning of this Agreement, Collateral is located only at the location set forth in the beginning of this Agreement, or, if located at any additional location, as set forth on a schedule attached to this Agreement, and Seller will give Buyer at least thirty (30) days prior written notice if such name, organization, chief executive office or other locations of Collateral or records concerning Purchased Receivables or Collateral is changed or added and shall execute any documents necessary to perfect Buyer's interest in the Purchased Receivables and the Collateral;
- (C) Seller shall (i) pay all of its normal gross payroll for employees, and all federal and state taxes, as and when due, including without limitation all payroll and withholding taxes and state sales taxes; (ii) deliver at any time and from time to time at Buyer's request, evidence satisfactory to Buyer that all such amounts have been paid to the proper taxing authorities; and; (iii) if requested by Buyer, pay its payroll and related taxes through the bank or any independent payroll service acceptable Buyer.
- (D) Seller has not, as of the time Seller delivers to Buyer an Invoice Transmittal or as of the time Seller accepts any Advance from Buyer, filed a voluntary petition for relief under the United States Bankruptcy Code or had filed against it an involuntary petition for relief;
- (E) If Seller owns, holds or has any interest in, any copyrights (whether registered, or unregistered), and licenses of any of the foregoing, such interest has been disclosed to Buyer and specifically listed and identified on a schedule to this Agreement, and Seller shall immediately notify Buyer if Seller hereafter obtains any interest in any additional copyrights, or licenses that are significant in value or are material to the conduct of its business; and
- (F) Seller shall provide Buyer with a Compliance Certificate (i) on a quarterly basis to be received by Buyer no later than the fifth calendar day following each calendar quarter, and; (ii)

on a more frequent or other basis if and as requested by Buyer.

7. ADJUSTMENTS. In the event of a breach of any of the representations warranties or covenants set forth in Section 6.1, or in the event any Adjustment or dispute is asserted by any Account Debtor, Seller shall promptly advise Buyer and shall, subject to the Buyer's approval, resolve such disputes and advise Buyer of any adjustments. Unless the disputed Purchased Receivable is repurchased by Seller and the full Repurchase Amount is paid, Buyer shall remain the absolute owner of any Purchased Receivable which is subject to Adjustment or

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repurchased under Section 4.2 hereof, and any rejected, returned, or recovered personal property, with the right to take possession thereof at any time. If such possession is not taken by Buyer, Seller is to resell it for the Buyer's account at Seller's expense with the proceeds made payable to Buyer. While Seller retains possession of said returned goods, Seller shall segregate said goods and mark them "property of Silicon Valley Financial Services."

8. SECURITY INTEREST. To secure the prompt payment and performance to Buyer of all Obligations, Seller hereby grants to Buyer a continuing lien upon and security interest in all of Seller's now existing or hereafter arising rights and interest in the following, whether now owned or existing or hereafter created, acquired, or arising and wherever located (collectively, the "Collateral"):

- (A) All accounts, receivables, contract rights, chattel paper, instruments, documents, letters of credit, bankers acceptances, drafts, checks, cash, securities, and general intangibles (including, without limitation, all claims, causes of action, deposit accounts, guaranties, rights in and claims under insurance policies (including rights to premium refunds), rights to tax refunds, copyrights, rights in and under license agreements and all other intellectual property excluding patents and trademarks);
- (B) All Inventory, including Seller's rights to any returned or rejected goods, with respect to which Buyer shall have all the rights of any unpaid seller, including the rights of repelvin, claim and delivery, reclamation, and stoppage in transit;
- (C) All monies, refunds and other amounts due Seller, including, without limitation, amounts due Seller under this Agreement (including Seller's right of offset and recoupment);
- (D) All equipment, machinery, furniture, furnishing, fixtures, tools, supplies and motor vehicles;
- (E) All farm products, crops, timber, minerals and the like (including oil and gas);
- (F) All accessions to, substitutions for, and replacements of all of the foregoing;
- (G) All books and records pertaining to all of the foregoing; and
- (H) All proceeds of the foregoing, whether due to voluntary or involuntary disposition, including insurance proceeds.

Seller is not authorized to sell, assign, transfer or otherwise convey any Collateral without Buyer's prior written consent, except for the sale of finished inventory in the Seller's usual course of business. Seller agrees to sign UCC financing statements, in a form acceptable to Buyer, and any other instruments and documents requested by Buyer to evidence, perfect, or protect the interests of Buyer in the Collateral. Seller agrees to deliver to Buyer the originals of all instruments, chattel paper and documents evidencing or related to Purchased Receivables and Collateral.

9. DEFAULT. The occurrence of any one or more of the following shall constitute an Event of Default here under.
- (A) Seller fails to pay any amount owed to Buyer as and when due;

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- (B) There shall be commenced by or against Seller any voluntary or involuntary case under the United States Bankruptcy Code, or any assignment for the benefit of creditors, or appointment of a receiver or custodian for any of its assets;
- (C) Seller shall become insolvent in that its debts are greater

than the fair value of its assets, or Seller is generally not paying its debts as they become due or is left with unreasonably small capital;

- (D) Any involuntary lien, garnishment, attachment or the like is issued against or attaches to the Purchased Receivables or any Collateral;
- (E) Seller shall breach any covenant, agreement, warranty, or representation set forth herein, and the same is not cured to Buyer's satisfaction within ten (10) days after Buyer has given Seller oral or written notice thereof; provided, that if such breach is incapable of being cured it shall constitute an immediate default hereunder;
- (F) Seller is not in compliance with, or otherwise is in default under, any term of any document, instrument or agreement evidencing a debt, obligation or liability of any kind or character of Seller, now or hereafter existing, in favor of Buyer or any division or affiliate of Silicon Valley Bank, regardless of whether such debt, obligation or liability is direct or indirect, primary or secondary, joint, several or joint and several, or fixed or contingent, together with any and all renewals and extensions of such debts, obligations and liabilities, or any part thereof;
- (G) An event of default shall occur under any guaranty executed by any guarantor of the Obligations of Seller to Buyer under this Agreement, or any material provision of any such guaranty shall for any reason cease to be valid or enforceable or any such guaranty shall be repudiated or terminated, including by operation of law;
- (H) A default or event of default shall occur under any agreement between Seller and any creditor of Seller that has entered into a subordination agreement with Buyer; or
- (I) Any creditor that has entered into a subordination agreement with Buyer shall breach any of the terms or not comply with such subordination agreement.

10. REMEDIES UPON DEFAULT. Upon the occurrence of an Event of Default, (1) without implying any obligation to buy receivables, Buyer may cease buying receivables or extending any financial accommodations to Seller; (2) all or a portion of the Obligations shall be, at the option and upon demand by Buyer, or with respect to an Event of Default described in Section 9(B), automatically and without notice or demand, due and payable in full; and (3) Buyer shall have and may exercise all the rights and remedies under this Agreement and under applicable law, including the rights and remedies of a secured party under the California Uniform Commercial Code all the power of attorney rights described in Section 5 with respect to all Collateral, and the right to collect, dispose of, sell, lease, use, and realize upon all Purchased Receivables and all Collateral in any commercial reasonable manner. Seller and Buyer agree that any notice of sale required to be given to Seller shall be deemed to be reasonable if given five (5) days prior to the date on or after which the sale may be held.

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In the event that the Obligations are accelerated hereunder, Seller shall repurchase all of the Purchased Receivables as set forth in Section 4.4.

11. ACCRUAL OF INTEREST. If any amount owed by Seller hereunder is not paid when due, including, without limitation, amounts due under Section 3.5, Repurchase Amounts, amounts due under Section 12, and any other Obligations, such amounts shall bear interest at a per annum rate equal to the per annum rate of the Finance Charges until the earlier of (i) payment in good funds or (ii) entry of a final judgment thereof, at which time the principal amount of any money judgment remaining unsatisfied shall accrue interest at the highest rate allowed by applicable law.

12. FEES, COSTS AND EXPENSES; INDEMNIFICATION. The Seller will pay to Buyer immediately upon demand all fees, costs and expenses (including fees of attorneys and professionals and their costs and expenses) that Buyer incurs or may from time to time impose in connection with any of the following: (a) preparing, negotiating, administering, and enforcing this Agreement or any other agreement executed in connection herewith, including any amendments, waivers or consents in connection with any of the foregoing, (b) any litigation or dispute (whether instituted by Buyer, Seller or any

other person) in any way relating to the Purchased Receivables, the Collateral, this agreement or any other agreement executed in connection herewith or therewith, (d) enforcing any rights against Seller or any guarantor, or any Account Debtor, (e) protecting or enforcing its interest in the Purchased Receivables or the Collateral, (f) collecting the Purchased Receivables and the Obligations, and (g) the representation of Buyer in connection with any bankruptcy case or insolvency proceedings involving Seller, any Purchased Receivable, the Collateral, any Account Debtor, or any guarantor. Seller shall indemnify and hold Buyer harmless from and against any and all claims, actions, damages, costs, expenses, and liabilities of any nature whatsoever arising in connection with any of the foregoing.

13. SEVERABILITY, WAIVER, AND CHOICE OF LAW. In the event that any provision of this Agreement is deemed invalid by reason of law, this Agreement will be construed as not containing such provision and the remainder of the Agreement shall remain in full force and effect. Buyer retains all of its rights, even if it makes an Advance after default. If Buyer waives a default, it may enforce a later default. Any consent or waiver under, or amendment of, this Agreement must be in writing. Nothing contained herein, or any action taken or not taken by Buyer at any time, shall be construed at any time to be indicative of any obligation or willingness on the part of Buyer to amend this Agreement or to grant to Seller any waivers or consents. This Agreement has been transmitted by Seller to Buyer at Buyer's office in the State of California and has been executed and accepted by Buyer in the State of California. This Agreement shall be governed by and interpreted in accordance with the internal laws of the State of California.

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14. ACCOUNT COLLECTION SERVICES. Certain Account Debtors may require or prefer that all of Seller's receivables be paid to the same address and/or party, or Seller and Buyer may agree that all receivables with respect to certain Account Debtors be paid to one party. In such event Buyer and Seller may agree that Buyer shall collect all receivables whether owned by Seller or Buyer and (provided that there does not then exist an Event of Default or event that with notice, lapse or time or otherwise would constitute an Event of Default, and subject to Buyer's rights in the Collateral) Buyer agrees to remit to Seller the amount of the receivables collections it receives with respect to receivables other than Purchased Receivables. It is understood and agreed by Seller that this Section does not impose any affirmative duty on Buyer to do any act other than to turn over such amounts. All such receivables and collections are Collateral and in the event of Seller's default hereunder, Buyer shall have no duty to remit collections of Collateral and may apply such collections to the obligations hereunder and Buyer shall have the rights of a secured party under the California Uniform Commercial Code.

15. NOTICES. All notices shall be given to Buyer and Seller at the addresses or faxes set forth on the first page of this Agreement and shall be deemed to have been delivered and received: (a) if mailed, three(3) calendar days after deposited in the United States mail, first class, postage pre-paid, (b) one (1) calendar day after deposit with an overnight mail or messenger service; or (c) on the same date of confirmed transmission if sent by hand delivery, telex, telefax or telex.

16. JURY TRIAL. SELLER AND BUYER EACH HEREBY (a) WAIVE THEIR RESPECTIVE RIGHTS TO A JURY TRIAL ON ANY CLAIM OR ACTION ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT, ANY RELATED AGREEMENTS, OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY; (b) RECOGNIZE AND AGREE THAT THE FOREGOING WAIVER CONSTITUTES A MATERIAL INDUCEMENT FOR IT TO ENTER INTO THIS AGREEMENT; AND (c) REPRESENT AND WARRANT THAT IT HAS REVIEWED THIS WAIVER, HAS DETERMINED FOR ITSELF THE NECESSITY TO REVIEW THE SAME WITH ITS LEGAL COUNSEL, AND KNOWINGLY AND VOLUNTARILY WAIVES ALL RIGHTS TO A JURY TRIAL.

17. TERM AND TERMINATION. The term of this Agreement shall be for one (1) year from the date hereof, and from year to year thereafter unless terminated in writing by Buyer or Seller. Seller and Buyer shall each have the right to terminate this Agreement at any time. Notwithstanding the foregoing, any termination of this Agreement shall not affect Buyer's security interest in the Collateral and Buyer's ownership of the Purchased Receivables and this Agreement shall continue to be effective and Buyer's rights and remedies

hereunder shall survive such termination, until all transactions entered into and Obligations incurred hereunder or in connection herewith have been completed and satisfied in full.

18. TITLES AND SECTION HEADINGS. The titles and section headings used herein are for convenience only and shall not be used in interpreting this Agreement.

19. OTHER AGREEMENTS. The terms and provision of this Agreement shall not adversely affect the rights of Buyer or any other division or affiliate of Silicon Valley Bank under any other document, instrument or agreement. The terms of such other documents, instruments and agreements shall remain in full force and effect notwithstanding the execution of this Agreement. In the event of a conflict between any provision of this Agreement and any provision of any other document, instrument or agreement between Seller on the one hand, and Buyer or any other division or affiliate of Silicon Valey Bank on the other hand, Buyer shall determine in its sole discretion which provision shall apply. Seller acknowledges specifically that any security agreements, liens and/or security interests currently securing payment of any obligations of Seller owing to Buyer or any other division or affiliate of Silicon Valley Bank also secure Seller's obligations under Agreement, and are valid and subsisting and are not adversely affected by execution of this Agreement. Seller further acknowledges that (a) any collateral under other outstanding security agreements or other documents between Seller and Buyer or any other division or affiliate of Silicon Valley Bank secures the obligations of Seller under this Agreement and (b) a default by Seller under this Agreement constitutes a default under other outstanding agreements between Seller and Buyer or any other division or affiliate of Silicon Valley Bank.

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement on the day and year above written.

SELLER: OXIS INTERNATIONAL, INC. SELLER: OXIS ACQUISITION CORPORATION

By s/Jon S. Pitcher By s/Jon S. Pitcher

Title C.F.O. and Secretary Title C.F.O.

BUYER: SILICON VALLEY FINANCIAL SERVICES
A division of Silicon Valley Bank

By

Title

EXHIBIT 21 (A)

SUBSIDIARIES OF OXIS INTERNATIONAL, INC.

As of December 31, 1996, the Company's subsidiaries were as follows:

Name ----	Jurisdiction of incorporation -----
OXIS International S.A.	France
OXIS Acquisition Corporation	Delaware
OXIS Isle of Man Limited	Isle of Man

EXHIBIT 23

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in Registration Statement No. 33-64451 on Form S-8 and in Registration Statements Nos. 33-61087, 333-5921, and 333-18041 on Form S-3 of our report dated March 7, 1997 (which expresses an unqualified opinion and includes an explanatory paragraph relating to the Company's ability to continue as a going concern) appearing in this Annual Report on Form 10-K of OXIS International, Inc. for the year ended December 31, 1996.

DELOITTE & TOUCHE LLP
Portland, Oregon

March 25, 1997

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