

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-KSB

Annual report Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

For the fiscal year ended March 31, 1997

Transition Report Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

For the transition period from
to

Commission File Number:
0-16106

APA Optics, Inc.
(exact name of registrant as
specified in its charter)

Minnesota 41-1347235
(State of Incorporation)
(I.R.S. Employer ID No.)

2950 N.E. 84th Lane, Blaine, MN
55449
(Address of principal executive offices)
(zip code)

Issuer's telephone number, including area code: (612) 784-4995

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

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

Common Stock, par value \$.01 per share
(Title of class)

Check whether the issuer (1) filed all reports required to be
filed by Section 13 or 15(d) of the Exchange Act during the
past 12 months and (2) has been subject to the filing
requirements for the past 90 days. Yes No

Check if there is no disclosure of delinquent filers in
response to item 405 of Regulation S-B in this form, and no
disclosure will be contained to the best of issuer's
knowledge, in definitive proxy or information statements
incorporated by reference in Part III of this Form 10-KSB. [
]

The issuer's revenues for its most recent fiscal year were
\$2,769,270.

The aggregate market value of the voting stock held by non-
affiliates of the registrant as of May 30, 1997, was
approximately \$30,637,667.

The shares of Common Stock outstanding as of May 30, 1997 were
8,307,124.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the annual report to shareholders for the fiscal
year ended March 31, 1997 (the "1997 Annual Report") , are
incorporated by reference into Part II. The Annual Report is
filed with this report as Exhibit 13.

Portions of the proxy statement for the annual shareholders
meeting to be held on August 20, 1997 ("Proxy Statement") are
incorporated by reference into Part III.

Part I

Item 1. Description of Business.

(a) General Development of Business.

APA Optics, Inc. (the "Company"), a Minnesota corporation
organized in 1979, is engaged in the business of developing,
designing, and fabricating optical components and optical
systems for laser and other industrial application; Developing

and fabrication optical coatings and thin film optical devices; Research and development of optoelectronic technology and related devices.

(b) Description of Business.

Products and Services

(i) Optical Lens Systems. The Company designs and builds multi-element lens systems and components, including mounting structures, for precision quality optical needs. Many applications such as laser industrial imaging systems and display systems require precision quality optics.

A lens is a transparent optical component, the surface of which converges or diverges the light transmitted through it to form a real or virtual image of an object. A lens system consists of two or more lenses and is generally required for photographic and laser devices, microscopes, and telescopes. The design of a lens system involves selection of suitable optical glass and a delicate balance of various radii of lenses, lens thickness, and separation between various lenses. To accomplish these tasks, the Company uses sophisticated computer design programs, some of which it has purchased and some of which have been internally developed.

The Company has designed and built lens systems for various applications. These applications include laser-based systems, imaging systems, inspection systems, display systems, display optics, focusing optics for ultraviolet fire alarms, alignment verification optics for dual magnetic recording heads, and multi-magnification optics systems for optical comparators.

(iii) Optical Thin Film Coatings. The Company custom designs, develops, and fabricates optical thin film coatings for optical components of lasers, laser systems, optical instruments, and optical devices.

The Company uses its optical thin film coating services in two major ways. Antireflective coatings are deposited onto fabricated lens components. The Company also uses its thin film coating facility to design, develop and fabricate coating for lens components supplied by customers.

Applications for thin film coatings services are concentrated primarily in optical components used in lasers and laser systems. The Company provides high quality coatings to meet the delicate demands required in these systems.

(iii) Binary Optic Laser Scanner (BOLS): The BOLS provides two-dimensional scanning of laser Beams without and motors or rotating platforms. BOLS will find many applications due to its many unique features including compactness and ruggedness. BOLS can create multiple beams from a single input laser beam, and scan all of these in two-dimensions and receive the returns from the scanned beams. Some of the potential applications include: laser radar; 3-dimensional surface profiling; on-site, non-contact inspection during manufacturing, etc.

(iv) Optoelectronics Devices. The Company is focusing its research and development effort on several optoelectronic devices. Optoelectronic devices will be vital components of future communication systems and optical instruments. To foster development of fiber-optic high data rate communication systems, certain miniature lightweight modules, including amplifiers, switches, couplers, filters, and isolators, need to be created. These modules must then be integrated into microcircuit chips. Solving the problems of this technology is the current focus of the Company's development effort.

The Company is developing the following major optoelectronic devices:

Wavelength Divisional Multiplexed (WDM) Modulator. Recently, the Company demonstrated the feasibility of a WDM optical modulator capable of transmitting several channels through a single optical fiber for communication applications. APA Optics developed the optical modulator (single channel) technology during the early 90's for fiber optic communication. These modulators have the capability of direct high speed (several billion bits per second) data loading and

unloading on laser beams going through optical fibers, either for short distance or long distance. The WDM consists of a Gallium Arsenide material chip (fabricated using conventional semiconductor processing techniques) on which both laser beams and electrical beams can travel independently or interact with each other. This device, therefore, provides an easy way of mixing computer data, video or cable information (which are electrical in nature) with the laser beam going through the optical fiber. As a result, the modulator will be very valuable for fiber optic communication systems including Local Area Networks (LANs). The WDM optical modulator, developed recently, provides a major break-through in that information can travel on several different channels within a single fiber (A simple analogy is the expansion of a single lane highway to multi-lane throughway). As a result, the WDM due to its multiple channels provides: higher speed, increased and regulated data handling capabilities as compared to a single channel modulator.

The Company filed a patent for WDM optical modulator in June 1994, which was allowed on May 8, 1995. The Company is building three sets of WDM optical modulators for internal testing and characterization. The Company plans to build several prototype and pre-production sets prior to manufacturing of the WDM modulators.

UV Detector. The UV Detector is a high response solid state detector based on single-crystal gallium nitride. The GaN detector is expected to have applications in spectrometry, solar radiation measurement, excimer-laser measurement and calibration, biomedical instrumentation, and flame detection and monitoring. The detector is visible blind, which allows detection of UV radiation in the presence of room lights without a filter. The Company believes the GaN detector has advantages over photomultiplier tubes because of its ruggedness and chemical inertness, which suit it for application in high-vibration and harsh environments as well as high-temperature operation.

Other Products

The Company is performing contract research on at least two additional AlGaIn based devices, namely: a UV/blue laser and a transistor, which may form the basis for future products.

Major Customers

Revenues from sales and contract fees to the following unrelated customers constituted more than ten percent of the Company's total operating revenues in the last two fiscal years:

Year Ended March 31,

Name	1997	1996
Government Agencies *	93%	89%

*Represents services to several operating agencies of the U.S. Government, as follows:

1997	1996
Air Force	
42%	38%
Army	
22	4
Navy	
36	58
Total	
100%	100%

Backlog

The Company's backlog of uncompleted contracts at March 31, 1997, was approximately \$3,200,000, as compared to \$4,000,000 at March 31, 1996. Of the current year's backlog, all contracts will be completed within the next year except for several multi-year contracts, of which approximately \$1,000,000 will be completed in the following year.

Competition

Competition in the optics fabrication business is significant. Many of the companies engaged in the business are well-financed and have significantly greater research, development, production, and marketing resources than those of the Company. The Company believes that it has a competitive advantage in the important factors of quality and performance since it has a complete facility for the development, design, and fabrication of optical systems. Also, the geographical location of the Company gives it a competitive advantage in marketing its products to companies located in the Midwest, since most of the Company's competitors are located on the East and West Coasts.

There is also significant competition for research and development contracts for the development of optics technologies. Many potential competitors have significantly greater resources for product research and development than the Company. However, the Company believes that an early start in relatively new technologies will provide an edge in procuring various development contracts.

Research and Development

During the fiscal years ended March 31, 1997, and 1996 the Company spent approximately \$375,000 and \$30,000, respectively, on research and development sponsored by the Company. In addition, in each of those years, the Company spent approximately \$1,610,000, and \$1,559,000, respectively, on research activities sponsored by customers.

Employees

As of March 31, 1997, the Company employed 22 full-time employees and 2 part-time employees (including its executive officers).

Item 2. Description of Property.

The Company's offices, manufacturing facilities, and laboratories are located in an industrial building at 2950 N.E. 84th Lane, Blaine, Minnesota. The Company currently leases 23,500 square feet of space in the building under sublease from Jain-Olsen Properties, a partnership consisting of Anil K. Jain and Kenneth A. Olsen, officers and directors of the Company. See Note 10 of Notes to Financial Statements in the 1997 Annual Report included as Exhibit 13 to this Report.

The Company also owns land directly west of the Blaine facility and may use it for future expansion. The Company is in the final stages of completing construction of a 24,000 square foot production facility in Aberdeen, South Dakota, which will be used for manufacturing the Company's new products. The land upon which this facility is located was granted to the Company as part of a financing package from the city of Aberdeen. See Note 6 of Notes to Financial Statements in the 1997 Annual Report included as Exhibit 13 to this Report for further information on the financing of this facility.

Item 3. Legal Proceedings.

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

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

No matter was submitted to a vote of security holders during the fourth quarter of the fiscal year covered by this report.

PART II

Item 5. Market for Common Equity and Related Stockholder Matters.

"Common Stock Information" on page 8 of the 1997 Annual Report is incorporated herein by reference.

During the fiscal year ended March 31, 1997, the Company issued the following unregistered securities:

1. In June 1996, the Company sold a total of 148,148 shares of its Common Stock to NE Venture, Inc. for cash consideration of \$500,000 and in September 1996 sold an additional 148,844 shares to NE Venture, Inc. for cash consideration of \$700,000. These sales were in connection with the financing of the Company's Aberdeen production facility.
2. During fiscal 1997 the Company sold 24,625 shares of its Common Stock to 5 individuals upon exercise of warrants issued to the agent of a private placement conducted in 1991. The Company received total cash consideration from such exercises of \$81,263.
3. On February 10, 1997, a director of the Company exercised options to purchase 4,000 shares of the Company's Common Stock. The total purchase price for such exercise was \$14,000, which was paid in part by delivery to the Company of 2,000 shares of Common Stock valued at \$5.1875 per share. The balance of \$3,625 was paid in cash.
4. In March 1996, the Company issued warrants to purchase 31,875 shares of the Company's Common Stock at \$4.00 per share to a consultant in lieu of payment of \$31,875 in fees for services rendered by the consultant in connection with the Aberdeen financing.

In connection with the foregoing transactions, except for the transaction described in paragraph 1 above, the Company relied on the exemption provided under Section 4(2) of the Securities Act of 1933 for sales not involving a public offering. The Company relied on the exemption provided by Regulation D for the sales to NE Venture, Inc., filing Form Ds following each transaction. No commissions or other underwriting compensation was paid in connection with the sales described above.

Item 6. Management's Discussion and Analysis or Plan of Operations.

"Management's Discussion and Analysis of Financial Condition and Results of Operations" on page 8 of the 1997 Annual Report is incorporated herein by reference.

Item 7. Financial Statements.

The financial statements included on pages 9-17 of the 1997 Annual Report are incorporated herein by reference.

Item 8. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

PART III

Item 9. Directors, Executive Officers, Promoters, and Control Persons; Compliance with Section 16(a) of the Exchange Act.

EXECUTIVE OFFICERS OF THE REGISTRANT

The following is a list of APA Optics, Inc. executive officers, their ages, positions and offices as of March 31, 1997.

Name	Age	
Position		
Dr. Anil K. Jain	51	
President & Treasurer		
Kenneth A. Olsen	53	
Vice President and Secretary		
Randal J. Becker	44	
Principal Accounting Officer		
Dr. Jamshid Pooladdej	46	Vice
President, Aberdeen Products Division		

BUSINESS EXPERIENCE

Dr. Anil K. Jain has been a Director and President and Treasurer since March 1979. From 1973 until October 15, 1983, when Dr. Jain commenced full time employment with the Company, he was employed at the Systems and Research Center at Honeywell Inc. as a Senior Research Fellow, coordinating optics-related development.

Kenneth A. Olsen has been a Director since 1980, Secretary since 1983, and Vice President since 1992. Prior to joining the Company, he had been with 3M Corp., St. Paul, Minnesota.

Randal Becker has been Principal Accounting Officer since joining the Company in 1987. Prior to joining the Company he was with Apache Corporation, Minneapolis, Minnesota.

Dr. Jamshid Pooladdej was hired March 17, 1997 as V.P. Aberdeen Products Division. Prior to joining the Company, he had been director of manufacturing engineering at Ciena Corporation, Columbia, MD, since 1994. Before his service at Ciena Corp., he was engineering manager for Laser Diode Inc., New Brunswick, N.J., from 1991 to 1994.

Information regarding Directors is incorporated herein by reference from the Proxy Statement.

Item 10. Executive Compensation.

Item 11. Security Ownership of Certain Beneficial Owners and Management.

Item 12. Certain Relationships and Related Transactions.

The information requested by the above items 10, 11, and 12 is included in the Proxy Statement, which is incorporated herein by reference.

Item 13. Exhibits and Reports on Form 8-K.

(a) Exhibits: See Exhibit Index on Page 9

(b) Reports filed on Form 8-K:

No reports on Form 8-K were filed during the fourth quarter of the fiscal year ended March 31, 1997.

SIGNATURES

In accordance with Section 13 or 15(d) of the Exchange Act, the Registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APA Optics, Inc.

Date: 6/27/97
Anil K. Jain

By /s/

Anil K. Jain, President

In accordance with the Exchange Act, this report has been signed below by the following persons on behalf of the

Registrant and in the capacities and on the dates indicated.

/s/ Anil K. Jain
President, Chief
Anil K. Jain
Executive Officer,
treasurer, chief
financial officer,
and director

6/27/97

/s/ Kenneth A. Olsen
Secretary, Vice
Kenneth A. Olsen
President, and
director

6/27/97

/s/ Randal J. Becker
Principal
Randal J. Becker
accounting officer

6/27/97

/s/ Lincoln Hudson
Director
Lincoln Hudson

6/27/97

/s/ Gregory Von Wald
6/27/97
Gregory Von Wald

Director

EXHIBIT INDEX

Exhibit Page Number or Incorporated Number	Description by Reference to
3.1	Restated Articles
Exhibit 3.1 to Registrant's	of Incorporation, as amended
Report on Form 10-KSB for	to date, and Statement
the fiscal year ended March	regarding establishment of
31, 1995 (the "1995 10-KSB")	class of shares
3.2	Bylaws
Exhibit 3.2 to the	
Registration statement on	
Form S-18 filed with the	
Chicago Regional Office of	
the Securities and Exchange	
Commission on June 26, 1986	
(the "Registration	
Statement")	
4.1a	First Restated and Amended
Exhibit 4.1a to	Loan Agreement by and between
Report on Form 10-K for the	the Minnesota Agricultural and
fiscal year ended March 31,	Economic Development Board
1991 ("1991 10-K")	(the "Board") and the
	Registrant dated July 1, 1990

4.1b Security Agreement from the
Exhibit 4.1b to the 1991
Registrant to the Board dated
10-K
as of July 1, 1990

4.1c Registrant's Restated and
Exhibit 4.1c to the 1991
Amended Promissory Note in the
10-K
amount of \$1.5 million payable
to the Board

4.1d Intercreditor Agreement and
Exhibit 4.1d to the 1991
Consent by and among the
10-K
Board, the Registrant, and
other parties dated July 1,
1990

4.2(a) State of South Dakota Board of
Exhibit 4.1(a) to the
Economic Development \$300,000
Report on 10-QSB for
Promissory Note, REDI Loan: 95-13-A
the quarter ended June 30,
1996 (the "June 1996 10-QSB")

4.2(b) State of South Dakota Board of
Exhibit 4.1(b) to the June
Economic Development Security
1996 10-QSB
Agreement, REDI Loan No: 95-13-A
dated May 28, 1996

4.3(a) \$700,000 Loan Agreement dated June 24,
Exhibit 4.2(a) to the June
1996 by and between Aberdeen Development
1996 10-QSB
Corporation and APA Optics, Inc.

4.3(b) \$300,000 Loan Agreement dated June 24,
Exhibit 4.2(b) to the June
1996 between Aberdeen Development
1996 10-QSB
Corporation and APA Optics, Inc.

4.3(c) \$250,000 Loan Agreement dated June 24,
Exhibit 4.2 (c) to the June
1996 by and between Aberdeen Development
1996 10-QSB
Corporation and APA Optics, Inc.

4.3(d) \$300,000 Loan Agreement dated June 24
Exhibit 4.2(d) to the June
1996 by and between Aberdeen Development
1996 10-QSB
Corporation and APA Optics, Inc.

4.4(a) Loan Agreement between South Dakota
Exhibit 4.3(a) to the June
Economic Development Finance and
1996 10-QSB
APA Optics, Inc.

4.5(b) Mortgage and Security Agreement - One
Exhibit 4.3(b) to the June
Hundred Day Redemption from APA Optics,
1996 10-QSB
Inc. to South Dakota Economic Development
Finance Authority dated as of June 24, 1996

4.6(a) Subscription and Investment Representation
Exhibit 4.4(a) to the June
Agreement of NE Venture, Inc.
1996 10-QSB

4.6(b) Form of Common Stock Purchase Warrant
Exhibit 4.4(b) to the June
for NE Venture, Inc.

1996 10-QSB

10.1 Sublease Agreement between the
Exhibit 10.1 to the
Registrant and Jain-Olsen Properties and
Registration Statement
Sublease Amendment and Option Agreement
between the Registrant and
Jain-Olsen Properties

*10.2a Stock Option Plan for Nonemployee
Exhibit 10.3a to
Directors
Registrant's Report on Form

10-KSB for the fiscal year
ended March 31, 1994 (the
"1994 10-KSB")

*10.2b Form of option agreement issued
Exhibit 10.3b to 1994 10-KSB
under the plan

*10.3 1997 Stock Compensation Plan
Page 12

*10.4 Insurance agreement by and
Exhibit 10.5 to Registrant's
between the Registrant and
Report on Form 10-K for
Anil K. Jain
the fiscal year ended March
31, 1990

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Indicates management contract or compensation plan or
arrangements required to be filed as an exhibit to this form.