SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-QSB

X Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended December 31, 1997 or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act 1934

For the transition period from to .

Commission File Number 0-16106

APA Optics, Inc.
(exact name of small business issuer as specified in its charter)

Minnesota
41-1347235
(State or other jurisdiction of
(I.R.S. Employer Identification No.)
incorporation or organization)

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

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

Indicate whether the issuer (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the issuer was required to file such reports), and (2) has been subject to the filing requirement for the past 90 days.

Yes X No

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Class:
Outstanding at December 31, 1997
Common stock, par value $.01
8,512,274

PART 1, FINANCIAL INFORMATION

ITEM 1, FINANCIAL STATEMENTS

APA OPTICS, INC.
CONDENSED BALANCE SHEETS

ASSETS	December 31 1997	March 31 1997
CURRENT ASSETS:	(Unaudited)	(Audited)
Cash and short-term investments	$5,571,250	$3,875,205

Accounts receivable	318,312	355,981
Inventories:		
Raw materials	18,111	15,666
Work-in-process & finished goods	112,208	132,697
Prepaid expenses	32,051	27,408
Bond reserve funds	85,417	70,000
TOTAL CURRENT ASSETS	6,137,349	4,476,957
PROPERTY AND EQUIPMENT, NET	2,720,937	2,107,755
OTHER ASSETS	1,152,320	2,834,686
	$10,010,606	$ 9,419,398

LIABILITIES AND SHAREHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Current portion of long-term debt	$ 223,021	$ 158,021
Accounts payable	22,970	59,210
Accrued expenses	108,759	118,216
TOTAL CURRENT LIABILITIES	354,750	335,447
LONG-TERM DEBT	3,460,419	3,670,983
SHAREHOLDERS' EQUITY		
Undesignated shares; 5,000,000 shares authorized; none issued	---	---
Common stock, $.01 par value; 15,000,000 shares authorized; 8,512,274 & 8,306,624 issued	85,123	83,066
Paid-in-capital	9,564,280	8,244,423
Retained earnings (deficit)	(3,453,966)	(2,914,521)
	6,195,437	5,412,968
	$10,010,606	$ 9,419,398

* Derived from audited financial statements

APA OPTICS, INC.
CONDENSED STATEMENTS OF OPERATIONS
(UNAUDITED)

Three months ended		Nine months ended	
December 31		December 31	
1997	1996	1997	1996

REVENUES	$ 457,274	$ 666,014	$ 1,772,299	$1,877,068
COSTS AND EXPENSES:				
Cost of sales and services	555,047	522,583	1,764,757	1,321,651
Selling, general & administrative	127,760	135,582	368,158	442,071
Research & development	128,553	86,115	263,607	312,121
	811,360	744,280	2,396,522	2,075,843
Gain/loss from operations:	(354,086)	(78,266)	(624,223)	(198,775)
INTEREST INCOME & EXPENSE:				
Interest income	67,052	84,927	223,200	200,470
Interest expense	(44,410)	(45,753)	(137,572)	(110,567)
	22,642	39,174	85,628	89,903
INCOME (LOSS) BEFORE INCOME TAXES	(331,444)	(39,092)	(538,595)	(108,872)
INCOME TAX EXPENSE (BENEFIT)	250	930	850	1,430
NET INCOME (LOSS)	$ (331,694)	$ (40,022)	$(539,445)	$ (110,302)
EARNINGS (LOSS) PER COMMON & COMMON EQUIVALENT SHARE	$ (.04)	$ (.00)	$ (.06)	$ (.01)
WEIGHTED AVERAGE SHARES OUTSTANDING	8,424,765	8,304,624	8,346,653	8,155,944

APA OPTICS, INC.
CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

Nine Months Ended

December 31

1997 1996

OPERATING ACTIVITIES

Net income (loss)	$ (539,445)	$ (110,302)
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	314,127	333,863
Changes in operating assets and liabilities:		
(Increase) decrease in accounts receivable	37,669	(372,713)
Decrease in inventories and prepaid expenses	(2,016)	(10,811)
Costs in excess of billings on research contracts	---	210,658
Increase in accounts payable and accrued expenses	19,303	30,836
Other	(15,346)	(20,429)
Net cash provided by (used in) operating activities	(185,708)	61,102
INVESTING ACTIVITIES		
Purchases of property and equipment	(855,310)	(284,388)
Net cash (used in) investing activities	(855,310)	(284,388)
FINANCING ACTIVITIES		
Proceeds from the sale of common stock	1,353,789	1,281,263
Long-term debt proceeds	---	3,472,483
Earnest money deposit on bond financing	315,000	(315,000)
Debt placement costs	---	(253,721)
Bond reserve funds	1,278,837	(1,776,327)
Repayment of long-term debt	(210,563)	(128,908)
Net cash provided by financing activities	2,737,063	2,279,790
Increase in cash	1,696,045	2,056,504
Cash at Beginning of Period	3,875,205	2,256,309
Cash at end of Period	$ 5,571,250	$4,312,813
Supplemental schedule of non-cash transactions:		
Land and corresponding deferred revenue	$ 250,000	$ 250,000

NOTE TO CONDENSED FINANCIAL STATEMENTS

1. In the opinion of management, the information furnished reflects all adjustments which are necessary to a fair statement of the results of the interim periods presented. All adjustments were of a normal recurring nature. The results of any interim period are not necessarily indicative of results for the full year.

ITEM 2. MANAGEMENT'S DISCUSSION

AND ANALYSIS OF FINANCIAL CONDITION
AND RESULTS OF OPERATIONS

Results of Operations:

Revenues for the third quarter of fiscal 1998 ended December 31,1997 were $457,274, a decrease of thirty-one percent from the third quarter of fiscal 1997 ended December 31, 1996. The third quarter revenues of fiscal 1998 are also down thirty percent as compared to the second quarter of fiscal 1998. Revenues for the first three quarters of fiscal 1998 are down six percent as compared to the first three quarters of fiscal 1997. The decrease in revenues can be attributed to work shifted from government contracts to internal research and development. The Company continues to devote personnel toward product development associated with the Aberdeen facility.

For the third quarter of fiscal 1998, the Company is reporting a loss of $331,694 as compared to a loss of $40,022 in the third quarter of fiscal 1997. For the first nine months of fiscal 1998, the Company is reporting a loss of $539,445 as compared to a loss of $110,302 for the first nine months of fiscal 1997.The Company's increased loss for the first nine months of fiscal 1998, as compared to the first nine months of fiscal 1997 is mainly due to costs incurred at the Aberdeen facility which amount to approximately $422,000. The decrease in revenues of 31% from third quarter 1998 as compared to the fiscal third quarter 1997 is mainly due to decreased revenues from government contracts. Contract revenues are down for two reasons. First, the Company's backlog of uncompleted contracts is down to $1.6 million at December 31, 1997 ($3.2 million at March 31, 1997). Second, about half the contract personnel have left the Company, due to the Company's shift from a service oriented Company to production. The Company anticipates a further decline in revenues for the fourth quarter of fiscal 1998, and losses will accelerate with the decrease in revenues. The Company currently has eight full-time employees working at the Aberdeen facility. As yet there has been no production and no sales generated from Aberdeen.

Liquidity and Capital Resources:

The Company's cash balance at December 31, 1997 is $5,571,250 compared to $3,875,205 at March 31, 1997. The increase in cash during the first nine months ended December 31, 1997 is attributable primarily to a draw on the South Dakota Bond agreement. The Company used working capital to build the Aberdeen facility and was subsequently reimbursed from the South Dakota bond funds for the cost of the facility. Also, warrants outstanding from the Company's 1995 private placement were exercised, netting the Company in excess of $1.3 million. In spite of the Company's losses, the Company believes it has sufficient cash for operations beyond fiscal 1998.

Forward-looking statements contained herein are made pursuant to the safe harbor provisions of the Private Litigation Reform Act of 1995. These statements are based upon the Company's current expectations and judgments about future developments in the Company's business. Certain important factors could have a material impact on the Company's performance, including, without limitation, delays in or increased costs of production, delays in or lower than anticipated sales of the Company's new products, and other factors discussed from time to time in the Company's filings with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on forward-looking statements. The Company undertakes no obligation to update such statements to reflect actual events.

PART II. OTHER INFORMATION

ITEM 1. Legal Proceedings.

On or about November 22, 1997, the Company commenced litigation in the Anoka County District Court (Minnesota) seeking injunctive relief as well as damages against two of its former employees, Asif Khan and Jinwei Yang. A temporary restraining order has been issued by the Court and a decision on APA's Motion For a Temporary Injunction is currently pending. Both of the defendants were employed by the Company in the area of research and development. APA contends that the defendants are in breach of their respective confidentiality agreements and that it is entitled to relief under the Uniform Trade Secrets Act.

ITEM 2. Changes in Securities and Use of Proceeds.

(c) On November 30, 1997, the Company issued 196,750 shares of its Common Stock to 21 investors upon exercise by the investors of warrants issued in a private placement in 1995. The exercise price of the warrants was $6.75 per share, and the Company realized $1,328,062.50 as a result of the warrant exercises. No underwriter or selling agent was used, and no discounts or commissions were paid. The Company claims exemption for this transaction under Rule 506 of the Securities Act of 1933. A Notice of Sales on Form D was filed on December 15, 1997.

ITEMS 3-5. Not Applicable.

ITEM 6. Exhibits and Reports on Form 8-K.

(a) Exhibit 27: Financial Data Schedules

There were no reports on Form 8-K filed during the three months ended December 31, 1997.

Signatures

In accordance with the requirements of the Securities Exchange Act of 1934, the issuer has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APA OPTICS, INC.

February 12, 1998
/s/ Anil K. Jain

Date
Anil K. Jain

President

Principal Executive Officer

Treasurer & Principal Financial

Officer

February 12, 1998
/s/ Randal J. Becker

Date
Randal J. Becker

Principal Accounting Officer

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