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CVD EQUIPMENT CORP
Form 10KSB
March 26, 2007

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-KSB

(Mark One)

- ☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934.
For the fiscal year ended December 31, 2006
- ☐ 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: 1-16525

CVD EQUIPMENT CORPORATION
(Name of Small Business Issuer in Its Charter)

New York 11-2621692
(State or Other Jurisdiction of Incorporation or Organization) (I.R.S. Employer Identification No.)

1860 Smithtown Avenue
Ronkonkoma, New York 11779
(Address including zip code of registrant's Principal Executive Offices)

(631) 981-7081
(Issuer's Telephone Number, Including Area Code)

Securities registered under Section 12(b) of the Act:
Title of each class Name of each exchange on which registered
Common Stock, Par value \$0.01 American Stock Exchange

Securities registered under Section 12(g) of the Act:
None

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 (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Check if there is no disclosure of delinquent filers in response to Item 405 of Regulation S-B is not contained in this form, and no disclosure will be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-KSB or any amendment to this Form 10-KSB. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

State issuer's revenues for its most recent fiscal year. \$13,355,778.

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was sold, or the average bid and asked price of such common equity, as of a specified date within the past 60 days. Shares of common stock held by each officer and director and by each person who owns 5% or more of the outstanding common stock have been excluded, in that such persons may be deemed to be affiliates. This determination of affiliate status is not

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necessarily conclusive determination for other purposes: \$ 7,227,981 at March 20, 2007.

State the number of shares outstanding of each of the issuer's classes of common equity, as of the latest practicable date: 3,298,500 shares of Common Stock, \$0.01 par value at March 20, 2007.

DOCUMENTS INCORPORATED BY REFERENCE None.

Transitional Small Business Disclosure Format (Check one): Yes ☐ No ☒

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PART I

Item 1. Description of Business.

Unless otherwise set forth herein, when we use the term 'we' or any derivation thereof, we mean CVD Equipment Corporation, a New York corporation, formed in 1982 (the "Company").

We design, develop, manufacture, market, install and service Chemical Vapor Deposition and gas control equipment for use in manufacturing semiconductors, solar cells, carbon nanotubes, nanowires and equipment for surface mounting of components onto printed circuit boards. Our products include (1) both batch and single wafer systems used for depositing, rapid thermal processing, annealing, diffusion and etching of semiconductor films, (2) gas and liquid flow control systems, (3) ultra high purity gas and chemical piping delivery systems, (4) standard and custom quartzware, (5) reflow furnaces and rework stations and (6) carbon nanotube and nanowire deposition systems. We also provide equipment consulting and refurbishing of semiconductor processing equipment. Our products are generally manufactured as standard products or customized to the particular specifications of each of our customers.

Semiconductor components are the fundamental electronic building blocks used in modern electronic equipment and systems. These components are classified as either discrete devices (such as transistors) or integrated circuits (in which a number of transistors and other elements are combined to form a more complicated electronic circuit). In an integrated circuit, these elements are formed on a small "chip" of silicon or gallium arsenide, which is then encapsulated in an epoxy, ceramic or metal package having lead wires for connection to a circuit board. Our products are used in the manufacture and mounting of these components.

We conduct our operations through three divisions, CVD, SDC and Conceptronic. Each division operates reasonably autonomously on a day-to-day basis with its own operating manager and with sales and administration being handled by corporate managers. There is an overall corporate coordination in the day-to-day administration of the business, in establishing policy and consistently applying procedures.

CVD Division

Our CVD division designs and manufactures both standard and custom Chemical Vapor Deposition equipment for use in the semiconductor industry. In May, 2005, we acquired certain

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assets from First Nano, Inc., including their nanotechnology process development and equipment. First Nano developed solutions for single and multiwall nanotube and nanowire synthesis and manufactured chemical vapor deposition process equipment suitable for the synthesis of a variety of carbon nanotubes, one-dimensional and nanostructures and nanomaterials. This acquisition enabled the CVD division to expand on its leading edge technology, which is paramount in the semiconductor, optoelectronic, wireless communications, nanotechnology and solar cell arenas.

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SDC Division

The Stainless Design Concepts ("SDC") division of the Company designs and manufactures in its Class 100 cleanroom, ultra high purity gas and chemical delivery control systems for the semiconductor industry, and also provides equipment consulting and refurbishing of semiconductor equipment. The field service group provides for contract maintenance, high purity fabrication and equipment installations and equipment removal.

Conceptronic Division

In December 2001, we acquired the assets of the Surface Mount Technology division of Research Inc., known as Research International ("RI"). RI was a manufacturer of Surface Mount Technology ("SMT") reflow furnaces.

In June 2002, we purchased substantially all of the assets of Conceptronic Inc.'s Surface Mount Technology business. Conceptronic specialized in solder reflow furnaces and rework stations for the printed circuit board and chip scale package industries.

In 2002 we combined the operations of RI and Conceptronic into our Conceptronic division.

The startup of our Conceptronic division provided a base for us to generate new and enhanced standard and custom furnace products to the semiconductor, solar cell and surface mount technology markets based on our own technology and technology that was purchased as part of the acquisition of assets.

Principal Products

Chemical Vapor Deposition - A process which passes a gaseous compound over a target material surface that is heated to such a degree that the compound decomposes and deposits a desired layer onto substrate material. The process is accomplished by combining appropriate gases in a reaction chamber, of the kind produced by the Company, at elevated temperatures (typically 300-1,800 degrees Celsius). Our Chemical Vapor Deposition systems are complete and include all necessary instrumentation, subsystems and components. We provide such standard systems and also specifically engineered products for particular customer applications. Some of the standard systems we offer are for Silicon, Silicon-Germanium, Silicon Dioxide, Silicon Nitride, Polysilicon, Liquid Phase Epitaxial, Metalorganic Chemical Vapor Deposition, Carbon Nanotubes and Nanowires.

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Our Chemical Vapor Deposition systems are available in a variety of models that can be used in production and laboratory research. All models can be offered with total system automation, a microprocessor control system by which the user can measure, predict and regulate gas flow, temperature, pressure and chemical reaction rates, thus controlling the process in order to enhance the quality of the materials produced. Our standard microprocessor control system is extremely versatile and capable of supporting the complete product line and most custom system requirements. These Chemical Vapor Deposition systems range in price from \$100,000 to \$2,500,000.

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Rapid Thermal Processing ("RTP") - Used to heat semiconductor materials to elevated temperatures of 1,000 degrees Celsius at rapid rates of up to 200 degrees Celsius per second. Our RTP systems are offered for implant activation, oxidation, silicide formation and many other processes. We offer systems that can operate both at atmospheric or reduced pressures. Our RTP systems generally range in price from \$75,000 to \$350,000.

Annealing and Diffusion Furnaces - Used for diffusion, oxidation, implant anneal, solder reflow and other processes. The systems are normally operated at atmospheric pressure with gaseous atmospheres related to the process. An optional feature of the system allows for the heating element to be moved away from the process chamber allowing the wafers to rapidly cool or be heated in a controlled environment. Our cascade temperature control system enables more precise control of the wafers. The systems are equipped with an automatic process controller, permitting automatic process sequencing and monitoring with safety alarm provisions. Our Annealing and Diffusion Furnace systems generally range in price from \$75,000 to \$650,000.

Gas and Liquid Control Systems - Our standard and custom designed gas and liquid control systems encompassing (1) gas cylinder storage cabinets, (2) custom gas and chemical delivery systems, (3) gas and liquid valve manifold boxes (VMB's) and (4) gas isolation boxes (GIB's) to provide safe storage and handling of pressurized gases and chemicals. System design allows for automatic or manual control from both a local and remote location. The price range for our Gas and Liquid Control Systems are from \$20,000 to \$350,000.

Ultra High Purity Gas and Chemical Piping and Delivery Systems - We provide field installation of ultra high purity piping systems within a semiconductor plant for the distribution of gases and chemicals to the assorted process tools. As part of field service, we also offer repair service on customer equipment.

Quartzware - We provide standard and custom fabricated quartzware used in our equipment and other customer tools. We also provide repair and replacement of existing quartzware.

Reflow Furnaces and Rework Stations - We provide a standard line for the printed circuit board and chip scale package industries.

Markets and Marketing

Due to the highly technical nature of our products, we believe it is essential to contact customers directly through our sales

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personnel and through a network of domestic and international independent sale representatives and distributors specializing in semiconductor equipment and supplies. Our primary marketing activities include direct sales contacts, participation in trade shows and our internet websites.

The web sites continue to see increased traffic. We have focused our efforts on being in the top listings on many search engines in order to increase the number of "hits" to our web sites.

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We are continuing to work on expanding our product offerings. Many of these products are used in research and production applications. We sell our products primarily to semiconductor manufacturers, institutions involved in electronic research such as universities, government and industrial laboratories and to electronic assembly manufacturers. We have both an international and domestic customer base in excess of 350 customers. For the twelve months ended December 31, 2006 approximately 31% of our revenues were generated from foreign exports compared to 29% for the twelve months ended December 31, 2005. Sales to a single customer in any one year can exceed 10.0% of our total sales; however, we are not dependent on any single customer. In fiscal year 2006, one customer represented 9.0% of our total sales. In 2005, another customer, a distributor, represented 11.5% of our total sales. No other customer represented more than 6.5% or 6.8% of our total sales in fiscal years 2006 or 2005, respectively.

Warranties

We warrant our equipment for a period of twelve to twenty four months after shipment, depending on the product, and pass along any warranties from original manufacturers of components used in our products. We provide for our own equipment servicing with in-house field service personnel. Warranty costs, including those incurred in fiscal year 2006, have been historically insignificant and expensed as incurred.

Competition

We are subject to intense competition. We are aware of other competitors that offer a substantial number of products comparable to ours. Many of our competitors (including customers who may elect to manufacture systems for internal use) have financial, marketing and other resources greater than ours. To date, we have been able to compete in markets that include these competitors, primarily on the basis of price, technical performance, quality and delivery.

Sources of Supply

We do not manufacture many components used in producing our products. They are purchased from unrelated third-party manufacturers of such equipment. We do not have any supply contracts covering these components. We are not dependent on a principal or major supplier and alternate suppliers are available. We do not use a large amount of raw or difficult to obtain materials that could cause a problem in production of our equipment.

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We have our own fully equipped machine shop to fabricate in house, the most complex designed parts of our equipment. Our investment in CNC machines for our machine shop has increased our efficiencies while significantly reducing costs in production. Similarly, our own quartz shop is capable of meeting our quartzware needs.

Materials procured from the outside and/or manufactured internally undergo a rigorous quality control process to ensure that the parts meet or exceed the most stringent specifications. All equipment, upon final assembly, undergoes a final series of complete testing to ensure maximum product performance.

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Backlog

As of December 31, 2006 our order backlog was approximately \$3,565,000 compared to approximately \$2,648,000 at December 31 2005, an increase of 34.6%. The increase can primarily be attributed to our CVD Division. This division, inclusive of its expanded product line of First Nano equipment, continues to experience a demand for new equipment. The timing for completion of the backlog varies depending on the product mix; however, there is generally a one to six month lag in the completion and shipping of backlogged product. Included in the backlog are all accepted purchase orders with the exception of those that are included in our percentage-of-completion. Order backlog is usually a reasonable management tool to indicate expected revenues and projected profits, however it does not provide an assurance of future achievement or profits as order cancellations or delays are possible.

Intellectual Property

We believe that while patents are useful and will be used at times in the future, they are not always necessary to protect our intellectual property. We believe the collective value of our proprietary information such as blueprints, specifications, technical processes, cumulative employee knowledge, know-how and our experience provide us with a measure of protection for our manufacturing and design processes. We protect our proprietary information through non-disclosure agreement and similar agreements with our employees and other parties who have access to such information.

Research and Development

We continue to concentrate our efforts on several research and development projects. We develop and customize equipment for industry and government, university and industry research laboratories around the world. Our research, design and development of equipment, which remains proprietary to us, is used to improve our existing products and develop new products for customers. The amount spent on research and development was \$513,000 (3.8% of revenue) and \$500,000 (4.5% of revenue) for the years ended December 31, 2006 and December 31, 2005, respectively.

Government Regulation

We know of no government requirements for approval of the sale of our products or services except in some export cases, which

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require that we apply for the appropriate export license. As of December 31, 2006, there were no pending government approvals for an export license.

We know of no existing or probable governmental regulations that would have a serious effect on our business.

We have been and are in material compliance with all environmental laws we know to be applicable to our business.

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Insurance

Some of our products are used in connection with explosive, flammable, corrosive and toxic gases. There are potential exposures to personal injury as well as property damage, particularly if operated without regard to the design limits of the systems and components. We believe that our insurance coverage is adequate. We have the following types of insurance coverage:

- o Product liability
- o Property and contents
- o General liability
- o Directors and officers
- o Transportation
- o Business auto
- o Workers compensation
- o Employee benefits liability

Employees

At December 31, 2006, we had 108 employees, 106 of which were full time personnel and 2 which were part time. We had 60 people in manufacturing, 22 in engineering (including research and development and efforts related to product improvement) 7 in field service, 5 in sales and marketing and 14 in general management and administration.

Item 2. Description of Property.

We maintain our headquarters at 1860 Smithtown Avenue, Ronkonkoma, New York, where we own a 50,000 square foot manufacturing facility which we purchased in November, 2002. Our CVD and Conceptronic divisions operate out of this facility. Our SDC division operates out of a 22,000 square foot manufacturing facility situated on five acres of land which we purchased in December 1998 and is located at 1117 Kings Highway, Saugerties, New York. Both facilities are in good operating condition and are adequate to meet our present needs. Both facilities are subject to mortgages which are described in Item 6, Management's Discussion and Analysis of Financial Condition and Results of Operations, under the heading, "Liquidity and Capital Resources."

Item 3. Legal Proceedings.

In September 1999, the Company was named in a lawsuit filed by Precisionflow Technologies, Inc., in the United States District for the Northern District of New York relating to comments allegedly made by CVD's President, Leonard A. Rosenbaum, concerning the intellectual property obtained in the purchase of assets of Stainless Design Corporation. We promptly filed a

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counterclaim for unauthorized use of our intellectual property. The plaintiff is seeking monetary damages and injunctive relief. In our counter claim, we are also seeking monetary damages and injunctive relief. All pre-trial disclosure has been completed. No trial date has been set.

In May 2002, the Company instituted a new action against Precisionflow Technologies, Inc., in the United States District for the Northern District of New York seeking injunctive relief and monetary damages based upon copyright violations. A motion by Precisionflow Technologies, Inc. to dismiss this action has been pending since June 2002.

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

Not applicable.

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PART II

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

The principal market for our common stock which is traded under the symbol "CVV" is the American Stock Exchange. The following table sets forth, for the periods indicated, the high and low closing prices of our common stock on the American Stock Exchange.

		High	Low
	-----	-----	
Year Ended December 31, 2006:			
1st Quarter.....	\$ 4.21	\$ 2.80	
2nd Quarter.....	4.22	2.80	
3rd Quarter.....	3.69	2.25	
4th Quarter.....	7.13	3.09	

		High	Low
	-----	-----	
Year Ended December 31, 2005:			
1st Quarter.....	\$ 5.25	\$ 0.91	
2nd Quarter.....	6.51	2.04	
3rd Quarter.....	4.30	1.90	
4th Quarter.....	4.60	2.72	

As of February 27, 2007, there were approximately 77 holders of record and approximately 788 beneficial owners of our common stock, and the closing sales price of our common stock as reported on the American Stock Exchange was \$5.84.

Dividend Policy

We have never paid dividends on our common stock and we do not anticipate paying dividends on common stock at the present time. We currently intend to retain earnings, if any, for use in our

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business. There can be no assurance that we will ever pay dividends on our common stock. Our dividend policy with respect to our common stock is within the discretion of the Board of Directors and its policy with respect to dividends in the future will depend on numerous factors, including earnings, financial requirements and general business conditions.

Under applicable New York law, we would not be permitted to declare and pay dividends if we were insolvent, or would become insolvent by payment of dividends, or if our net assets remaining after payment of dividends would be less than our stated capital.

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Equity Compensation Plan Information

The following table provides information about shares of our common stock that may be issued upon the exercise of options under all of our existing compensation plans as of December 31, 2006.

Plan Category	Number of securities		Number of securities remaining available for future issuance
	to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	
Equity compensation plans approved by security holders (1)	323,000	\$ 2.73	345,250
Total	323,000	\$ 2.73	345,250