
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CVD EQUIPMENT CORPORATION

(Exact Name of Registrant as Specified in Its Charter)

New York

(State or other Jurisdiction of Incorporation or Organization)

11-2621692

(I.R.S. Employer Identification No.)

1860 Smithtown Avenue
Ronkonkoma, New York 11779
(Address of Principal Executive Offices)

CVD EQUIPMENT CORPORATION
2001 STOCK OPTION PLAN
(Full Title of the Plan)

Glen Charles
Chief Financial Officer
CVD Equipment Corporation
1860 Smithtown Avenue
Ronkonkoma, New York 11779
(Name and Address of Agent for Service)

Copies to:
Robert B. Murphy, Esq.
Pepper Hamilton LLP
Hamilton Square
600 Fourteenth Street, N.W.
Washington, DC 20005-2004

CALCULATION OF REGISTRATION FEE

Title of Securities To Be Registered	Amount to Be Registered	Proposed Maximum Offering Price Per Share (1)	Proposed Maximum Aggregate Offering Price (1)	Amount of Registration Fee
Common Stock \$.01 par value	300,000	\$4.44	\$1,332,000	\$142.52

(1) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and (h) under the Securities Act of 1933, as amended. The price per share is estimated based on the average of the high and low trading prices for CVD Equipment Corporation's common stock as reported by the American Stock Exchange on November 17, 2006.

PART I

INFORMATION REQUIRED IN SECTION 10(a) PROSPECTUS

The document(s) containing the information specified by Part I of this Form S-8 Registration Statement (the “Registration Statement”) will be sent or given to participants in the CVD Equipment Corporation 2001 Stock Option Plan (the “Plan”) of CVD Equipment Corporation, a New York corporation (the “Company”), as specified in Rule 428(b)(1) promulgated by the Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”). Such document(s) are not being filed with the Commission but constitute (along with the documents incorporated by reference into the Registration Statement pursuant to Item 3 of Part II hereof), a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents have been filed by CVD Equipment Corporation (the “Company”) with the Securities and Exchange Commission (the “Commission”) and are hereby incorporated by reference in this Registration Statement:

- a. The Company’s Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, as filed with the Commission on March 27, 2006;
- b. The Company’s Quarterly Report on Form 10-QSB for the quarter ended September 30, 2006, as filed with the Commission on November 15, 2006;
- c. The Company’s Quarterly Report on Form 10-QSB for the quarter ended June 30, 2006, as filed with the Commission on August 14, 2006;
- d. The Company’s Quarterly Report on Form 10-QSB for the quarter ended March 31, 2006, as filed with the Commission on May 15, 2006;
- e. The description of the Company’s class of Common Stock, \$.01 par value, which is set forth in the Certificate of Incorporation of the Company on Form 8-A12B (Registration No. 001-16525) filed with the Commission on June 1, 2001 under Section 12(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”);
- f. All documents subsequently filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) of the Securities Exchange Act of 1934, prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents.

Item 4. Description of Securities.

The description of the Company’s class of Common Stock to be offered pursuant to this registration statement has been incorporated by reference into this Registration Statement as described in Item 3 of this Part II.

Item 5. Interest of Name Experts and Counsel.

None.

Item 6. Indemnification of Directors and Officers.

Sections 721 through 726 of the New York Business Corporation Law provide for indemnification of directors and officers. If a director or officer is successful on the merits or otherwise in a legal proceeding, he must be indemnified to the extent he was successful. Further, indemnification is permitted in both third-party and derivative suits if he acted in good faith and for a purpose he reasonably believed was in the best interest of the Registrant, and if, in the case of a criminal proceeding, he had no reasonable cause to believe his conduct was unlawful.

Indemnification under this provision applies to judgments, fines, amounts paid in settlement and reasonable expenses, in the case of third party actions, and amounts paid in settlement and reasonable expenses, in the case of derivative actions. In a derivative action, however, a director or officer may not be indemnified for amounts paid to settle such a suit or for any claim, issue or matter as to which such person shall have been adjudged liable to the Registrant absent a court determination that the person is fairly and reasonably entitled to indemnity.

Notwithstanding the failure of the Registrant to provide indemnification and despite any contrary resolution of the board or shareholders, indemnification shall be awarded by the proper court pursuant to Section 724 of the New York Business Corporation Law.

Under New York law, expenses may be advanced upon receipt of an undertaking by or on behalf of the director or officer to repay the amounts in the event the recipient is ultimately found not to be entitled to indemnification. The advance is conditioned only upon receipt of the undertaking and not upon a finding that the officer or director has met the applicable indemnity standards.

The Registrant carries directors' and officers' insurance which covers its directors and officers against certain liabilities they may incur when acting in their capacity as directors or officers of the Registrant.

Item 7. Exemption from Registration Claimed.

Not Applicable.

Item 8. Exhibits.

**Exhibit
Number**

Description

*4.1	CVD Equipment Corporation 2001 Stock Option Plan.
4.2	Articles of Incorporation of the Registrant (incorporated by Reference to Exhibits 3.1, 3.2, and 3.3 to the Annual Report of the Registrant on Form 10-KSB for the year ended December 31, 2005).
4.3	By-laws of the Registrant (incorporated by reference to Exhibit 3.4 to the Annual Report of the Registrant on Form 10-KSB for the year ended December 31, 2005).
*5	Opinion of Pepper Hamilton LLP, Counsel to the Registrant as to the legality of the share being registered under this Registration Statement.
*23.1	Consent of Moore Stephens, P.C, Independent Auditors
*23.2	Consent of Pepper Hamilton LLP (included in opinion as Exhibit 5).
*24	Powers of Attorney of Directors and Certain Officers of the Company (included on the signature pages hereof).
99	Not Applicable.

* Filed herewith

Item 9. Undertakings.

(a) The undersigned Company hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in the

volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided however, that paragraphs (a)(i) and (a)(ii) above do not apply if the information required to be included in a post-effective amendment by those subparagraphs is contained in periodic reports filed by the Registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934, that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for the purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling person of the Company pursuant to the foregoing provisions described in Item 6 of this Registration Statement, or otherwise, the Company has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and had duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Ronkonkoma, State of New York on this 20th day of November, 2006.

CVD EQUIPMENT CORPORATION

By: /s/ GLEN CHARLES
Glen Charles
Chief Financial Officer and Controller
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

SIGNATURES

Each person whose signature appears below appoints Glen Charles his attorney-in-fact and agent, with full power of substitution and resubstitution, to sign and file with the Securities and Exchange Commission any amendments to the Registration Statement (including post-effective amendments), any registration statement permitted under Rule 462(b) under the Securities Act of 1933 and any amendments thereto and to file with the Securities and Exchange Commission one or more supplements to any prospectus included in any of the foregoing, and generally to do anything else necessary or proper in connection therewith.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates stated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ LEONARD A. ROSENBAUM Leonard A. Rosenbaum	Chairman of the Board, President, Chief Executive Officer and Director (Principal Executive Officer)	November 20, 2006
/s/ GLEN CHARLES Glen Charles	Chief Financial Officer and Controller (Principal Financial and Accounting Officer)	November 20, 2006

/s/ MARTIN J. TEITELBAUM Martin J. Teitelbaum	Director	November 20, 2006
/s/ ALAN H. TEMPLE_____ Alan H. Temple, Jr.	Director	November 20, 2006
/s/ CONRAD GUNTHER_____ Conrad Gunther	Director	November 20, 2006
/s/ BRUCE T. SWAN_____ Bruce T. Swan	Director	November 20, 2006

EXHIBIT INDEX

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99	Not Applicable.

* Filed herewith

November 20, 2006

Board of Directors
CVD Equipment Corporation
1860 Smithtown Avenue
Ronkonkoma, NY 11779

Re: Registration Statement on Form S-8 for
CVD Equipment Corporation
2001 Stock Option Plan

Dear Sirs:

We are acting as counsel to CVD Equipment Corporation, a New York Corporation (the "Corporation"), in connection with the preparation and filing of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended, (the "Act") with the Securities and Exchange Commission (the "Commission") relating to the registration of 300,000 shares of common stock, \$.01 par value per share (the "Shares"), of the Corporation offered for sale pursuant to CVD Equipment Corporation 2001 Stock Option Plan (the "Plan").

In connection with this opinion, we have examined and relied upon copies certified or otherwise identified to our satisfaction of: (i) the Plan; (ii) an executed copy of the Registration Statement; (iii) the Corporation's Articles of Incorporation, and the Corporation's By-laws; and (iv) the minute books and other records of corporate proceedings of the Corporation, as made available to us by officers of the Corporation. In addition, we have reviewed such matters of law as we have deemed necessary or appropriate for the purpose of rendering this opinion.

For purposes of this opinion we have assumed the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified or photostatic copies, and the authenticity of the originals of all documents submitted to us as copies. We have also assumed the legal capacity of all natural persons and the genuineness of all signatures on all documents examined by us. As to certain factual matters material to the opinion expressed herein, we have relied, to the extent we deemed proper, upon representations, warranties and statements as to the factual matters of officers and other representatives of the Corporation. This opinion is limited to the State of New York and the federal laws of the United States of America. Without limiting the foregoing, we express no opinion with respect to the applicability thereto or effect of municipal laws or the rules, regulations or orders of any municipal agencies within any such state.

Based upon and subject to the foregoing qualifications, assumptions and limitations and the further limitations set forth below, it is our opinion that the Shares to be issued by the Company pursuant to the Plan have been duly authorized and reserved for issuance and, when certificates for the Shares have been duly executed by the Company, countersigned by a transfer agent, duly registered by a registrar for the Shares and issued and paid for in accordance with the terms of the Plan, the Shares will be validly issued, fully paid and non-assessable.

This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein. We assume no obligation to revise or supplement this opinion should the present laws of the State of New York or the federal laws of the United States of America be changed by legislative action, judicial decision or otherwise.

We hereby consent to the filing of this letter as an Exhibit 5 to the Registration Statement. In given such consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder.

This opinion is furnished to you in connection with the filing of the Registration Statement and is not to be used, circulated, quoted or otherwise relied upon for any other purpose.

Very truly yours,

PEPPER HAMILTON LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement of CVD Equipment Corporation on Form S-8, pertaining to the 2001 Stock Option Plan of CVD Equipment Corporation, of our report dated March 9, 2006, relating to the consolidated financial statements of CVD Equipment Corporation included in the Annual Report on Form 10-KSB for the year ended December 31, 2005.

Moore Stephens, P.C.

MOORE STEPHENS, P.C.
Certified Public Accountants.

Cranford, New Jersey
November 21, 2006