GSE SYSTEMS INC
Form S-3/A
September 28, 2006

As filed with the Securities and Exchange Commission on September 28, 2006 Registration No. 333-134569

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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Amendment No. 3
to
FORM S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

GSE SYSTEMS, INC.
(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

52-1868008
(I.R.S. Employer Identification Number)
7133 Rutherford Road, Suite 200
Baltimore, MD 21244
(410) 277-3740
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

John V. Moran
Chief Executive Officer
GSE Systems, Inc.
7133 Rutherford Road, Suite 200
Baltimore, MD 21244
Tel: (410) 277-3740
Fax: (410) 277-5287
(Name and address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

James R. Hagerty, Esq.
888 17th Street, N.W., Suite 1000
Washington, DC 20006
Tel: (202) 223-5600
Fax: (202) 223-6625

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ( )

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. (x)

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ( )

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ( )

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the commission pursuant Rule 462(e) under the Securities Act, check the following box: ( )

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box: ( )

CALCULATION OF REGISTRATION FEE

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Title of each class of securities to be registered	Amount to be Registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price (5)	Amount of registration fee
Common stock, par value $0.01 per share, issuable upon conversion of the Company's Series A 8% cumulative convertible preferred stock	2,401,133 (1)	$3.68	$8,836,169	$945
Common stock, par value $0.01 per share, issuable upon exercise of warrants	480,226 (1)	$3.68	$1,767,232	$189
Common stock, par value $0.01 per share, issuable upon exercise of warrants	150,000 (2)	$3.68	$552,000	$59
Common stock, par value $0.01 per share, issuable upon exercise of warrants	900,000 (3)	$3.68	$3,312,000	$354
Common stock, par value $0.01 per share, issuable upon exercise of warrants	367,647 (4)	$3.68	$1,352,941	$145
				$1,692.00

(1) Represents shares of our Common Stock issuable upon conversion of the Series A 8% Cumulative Convertible Preferred Stock or upon exercise of Warrants issued in connection with our private placement offering, which closed as of February 28, 2006. The securities being registered hereby do not consist of such indeterminate number of additional shares of common stock as may become issuable upon conversion of such convertible preferred stock or exercise of such warrants to prevent dilution resulting from stock splits, stock dividends or similar transactions, nor do they include such number of additional common stock that may be issued from time to time as a result of anti-dilution adjustments or missed dividend payments pursuant to the terms of the Convertible Preferred Stock and Warrants. The Company shall register such additional shares of Common Stock as necessary.

(2) Represents shares of our Common Stock issuable upon exercise of a warrant issued to Northeast Securities, Inc. as a placement agent fee in connection with the private placement offering, which closed as of February 28, 2006.

(3) Represents shares of our Common Stock issuable upon exercise of a warrant issued to Dolphin Direct Equity Partners, LP in connection with that certain Cancellation and Warrant Exchange Agreement, dated as of February 28, 2006.

(4) Represents shares of our Common Stock issuable upon exercise of a warrant issued to Laurus Master Fund, Ltd. in connection with the Company's new two-year revolving line of credit.

(5) Estimated solely for purposes of calculating the registration fee pursuant to Rule 457(c) of Regulation C under the Securities Act, on the basis of $3.68 per share, the average of the high and low prices for the Common Stock on May

22, 2006 as reported on the American Stock Exchange..

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, AS AMENDED, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

The information in this Prospectus is not complete and may be changed. The selling shareholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED SEPTEMBER 28, 2006

PROSPECTUS

GSE SYSTEMS, INC.

Shares of Common Stock Issuable upon Conversion of Units Consisting of up to $4,250,000 of 8% Cumulative Convertible Preferred Stock and Warrants
and
Shares of Common Stock Issuable upon Exercise of Warrants

This prospectus relates to the disposition by the selling stockholders of up to 4,299,006 shares of our Common Stock issuable upon the conversion of Preferred Stock and the exercise of warrants issued for the account of the stockholders named in this prospectus.

Investing in our securities involves a significant degree of risk. You should carefully read this prospectus and consider the matters described in "Risk Factors" before you decide to invest in these securities.

Our common stock is listed on the American Stock Exchange under the symbol "GVP." For a more detailed description of our securities, see “Description of Our Share Capital” section of this prospectus. On February 28, 2006, the closing sale price of the common stock on the American Stock Exchange was $1.61. These securities have not been approved or disapproved by the Securities and Exchange Commission or any state securities commission nor has the Securities and Exchange Commission or any state securities commission passed upon the accuracy or adequacy of this Prospectus. Any representation to the contrary is a criminal offense.

This Prospectus does not constitute an offer to sell or the solicitation of an offer to buy any securities. Changes may occur after the date of this Prospectus and GSE Systems will not update the information contained herein except in the normal course of their respective public disclosures.

The selling stockholders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell their shares of common stock in the section entitled “Plan of Distribution”. We will not be paying any underwriting discounts or commissions in this offering.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is September , 2006.

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PROSPECTUS SUMMARY

This section contains a general summary of the information contained in this prospectus and highlights selected information described in greater detail elsewhere or incorporated by reference in this prospectus. You should carefully read this entire prospectus, including the risk factors beginning on page 6, and the documents incorporated by reference in this prospectus to fully understand it and our business, results of operations and financial condition. The information in this prospectus is not complete and may be changed. The selling stockholders named in this prospectus may not sell these securities until the registration statement filed with the Securities and Exchange Commission becomes effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy and accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus relates to the sale by the selling stockholders of up to 4,299,006 shares of our Common Stock issuable upon the conversion of Preferred Stock and the exercise of warrants issued in three separate transactions (summarized below) for the account of the stockholders named in this prospectus. The selling stockholders may sell the Common Stock from time to time in the principal market on which the stock is traded at the prevailing market price or in negotiated transactions. We will pay the expense of registering these shares.

The three transactions are summarized here and are more fully explained in separate sections below:

1. On February 28, 2006, we sold units consisting of up to $4,250,000 of Series A 8% Cumulative Convertible Preferred Stock (the “Preferred Stock”) and Warrants (the “Warrants”) in a private offering exempt from registration under the Securities Act of 1933. Northeast Securities, Inc. (“Northeast Securities”) acted as placement agent for this offering. We entered into a registration rights agreement with the individual investors and with the placement agent in the offering in which we agreed, for the benefit of the holders of the Preferred Stock and Warrants, to file a registration statement with the U.S. Securities and Exchange Commission (the “SEC”), with respect to the resale of the Common Stock issuable upon conversion of the Preferred Stock and upon exercise of the Warrants. The exercise price for the Preferred Stock and Warrants is $1.77 per share. See the section captioned “Description of the February 27, 2006 Offering.”

2. On February 28, 2006, we entered into a Cancellation and Warrant Exchange Agreement with Dolphin Direct Equity Partners, LP (the “Cancellation Agreement”). Pursuant to that Cancellation Agreement, we issued Dolphin a warrant to purchase 900,000 shares of our Common Stock at an exercise price equal to $0.67 per share. See the section captioned “Description of the Cancellation and Warrant Exchange Agreement.”

3. On March 7, 2006, we entered into a new two-year revolving credit facility with Laurus Master Fund, Ltd. (“LMF”), a limited liability company organized under the laws of the Cayman Islands, in an amount up to $5.0 million (the “New Facility”). The exact amount of the New Facility that the Company is permitted to draw will be based on the Company’s accounts receivable at an advance rate equal to 90% of eligible billed receivables and 40% of unbilled receivables (subject to a cap of $1.0 million on unbilled receivables) at the time of such draw. In consideration of the New Facility, we issued LMF a warrant to purchase 367,647 shares of our Common Stock at an exercise price of $0.01 per share. See the section captioned “Description of the New Two-Year Revolving Credit Facility.”

The Company

General

GSE Systems, Inc. (the “Company,” “GSE” or “GSE Systems” or “we” or “us”) is organized under the laws of the State o Delaware and is a leader in real-time, high fidelity simulation. The Company provides simulation solutions and services to the nuclear and fossil electric utility industry, the chemical and petrochemical industries and to the U.S. Military Complex. In addition, the Company provides plant monitoring and signal analysis monitoring and optimization software primarily to the power industry. GSE Systems, Inc.’s executive offices are located at 7133 Rutherford Road, Suite 200, Baltimore, Maryland 21244. The Company’s telephone number is (410) 277-3740 and its facsimile number is (410) 277-5287. GSE maintains a Web site at http://www.gses.com. Nothing contained in such Web site should be deemed a part of this prospectus.

Recent Developments

For the six months ended June 30, 2006, the Company has incurred operating income of $651,000, but has incurred a net loss of $1.2 million. The Company’s backlog has increased from $12.3 million at December 31, 2005 to $28.5 million at June 30, 2006.

In the fourth quarter 2005, the Company announced the formation of the Emirates Simulation Academy, LLC (ESA), a United Arab Emirates company, to build and operate simulation training academies in the Arab Gulf Region. GSE is a 10% owner of ESA. These simulation training centers will be designed to train and certify indigenous workers for deployment to a nation’s critical infrastructure facilities including power plants, oil refineries, petrochemical plants, desalination units and other industrial facilities. In January 2006, the Company announced the award of a contract valued at over $15 million from ESA to supply five simulators and an integrated training program. ESA accounted for 12.6% of the Company’s consolidated revenue for the six months ended June 30, 2006. Under the terms of the contract, the Company provided a $2.1 million performance bond to ESA that will remain outstanding until the end of the warranty period on October 31, 2008 (See the section captioned "Relationships And Related Transactions" for a more detailed description of our relationship to ESA and the ESA Contract).

In order to ensure that the Company would have sufficient working capital in 2006, the Company completed several financing transactions in early 2006 which are fully described below in the sections entitled “Description of the February 27, 2006 Offering”, “Description of the Cancellation and Warrant Exchange Agreement” and “Description of the New Two-Year Revolving Credit Facility”. In conjunction with the cancellation of the Company’s 2.0 million Senior Subordinated Secured Convertible Promissory Note and warrant payable to Dolphin Direct Equity Partners, LP described below, the Company incurred a $1.4 million loss on extinguishment of debt. This loss was comprised of a $1.1 million charge from the write off of the remaining unamortized Original Issue Discount, a $185,000 charge from the write off of the remaining unamortized deferred financing charges, and a $868,000 charge for the value of the new warrants issued to Dolphin which charges were partially offset by a $698,000 credit from the write off of the remaining liabilities related to the Dolphin Note conversion feature and the related warrants. After the completion of these financing transactions, the Company believes that it has sufficient liquidity and working capital for its operations in 2006.

Also in October 2005, the Company signed an “Assignment of Lease and Amendment to Lease” that assigns and transfers to another tenant (the “assignee”) the Company’s rights, title and interest in its Columbia, Maryland facility lease. The assignee’s obligation to pay rent under the lease began on February 1, 2006. The Company remains fully liable for the payment of all rent and for the performance of all obligations under the lease through the scheduled expiration of the lease, May 31, 2008, should the assignee default on its obligations. In October 2005, the Company relocated its Maryland operations from its facility in Columbia to the Baltimore facility.

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Description of the February 27, 2006 Offering

The Company offered Units consisting of up to $4.25 million of shares of Preferred Stock and Warrants. The minimum investment was $50,000 and the price per share of Preferred Stock was $100 (or 500 shares per the minimum investment). The Preferred Stock is convertible at any time into a total of 2,401,133 shares of GSE Common Stock at a conversion price of $1.77 per share. The conversion price was equal to 110% of the closing price of the Company's Common Stock on February 28, 2006, the date the sale of the Convertible Preferred Stock was completed. In addition to Preferred Stock, each investor received a five-year Warrant to purchase GSE Common Stock equal to 20% of the shares they would receive from the conversion of the Convertible Preferred Stock, at an exercise price of $1.77. In aggregate, the Company issued Warrants to purchase a total of 480,226 shares of GSE Common Stock.

The Preferred Stock holders are entitled to an 8% cumulative dividend, payable on a semiannual basis every June 30 and December 30. If the Company does not make two consecutive dividend payments on the dates such payments are due, there will be an additional 30% warrant coverage of five-year warrants at a conversion price of $1.77 per share. At any time after March 1, 2007, the Company has the right to convert the Preferred Stock into shares of GSE common stock when the average of the current stock price during the twenty trading days immediately prior to the date of such conversion exceeds 200% of the Series A Conversion Price.

This offering was made only to "accredited investors," as that term is used in rules and regulations of the SEC. The proceeds of the private placement offering were used to pay off the Dolphin Note and the Company's line of credit balance and for other working capital purposes. The offering described above in brief is more fully described in the Form 8-K filed with the SEC on March 13, 2006 (the "March 13th 8-K") and is incorporated by reference herein. (See the section captioned "Selling Security Holders" below.)

Description of the Cancellation and Warrant Exchange Agreement

On February 28, 2006, the Company and Dolphin Direct Equity Partners, LP, a Delaware limited partnership ("Dolphin"), entered into a Cancellation and Warrant Exchange Agreement (the "Cancellation Agreement"). Pursuant to the terms of the Cancellation Agreement, Dolphin agreed to cancel its senior subordinated secured convertible promissory note issued by the Company to Dolphin on May 26, 2005 in the aggregate principal amount of $2,000,000 (the "Note"), all as further provided for in the Senior Subordinated Secured Convertible Note and Warrant Purchase Agreement dated as of May 26, 2005 (the "Purchase Agreement") wherein the Company agreed to issue to Dolphin a warrant to purchase an aggregate of 380,952 shares of common stock, par value $0.01 per share (the "Exchange Warrant") in addition to the Note.

In exchange for Dolphin's agreement to enter into the Cancellation Agreement and for the participation of Dolphin Offshore Partners, L.P. in the private placement offering, the Company paid off the Note and exchanged the warrant issued pursuant to the Purchase Agreement for the Exchange Warrant. Upon exercise of the Exchange Warrant, Dolphin will acquire 900,000 shares of the Company's common stock at a price per share (the "Exercise Price") equal to $0.67 cents. The Cancellation Agreement described above in brief is more fully described in the March 13th 8-K and is incorporated by reference herein. (See the section captioned "Selling Security Holders" below and Footnote 18 to the beneficial ownership table thereunder.)

Description of the New Two-Year Revolving Credit Facility

On March 7, 2006, GSE entered into the New Facility with LMF in an amount up to $5.0 million (all as further described in the March 13th 8-K and incorporated by reference herein). The exact amount of the New Facility that the Company is permitted to draw will be based on the Company's accounts receivable at an advance rate equal to 90% of

eligible billed receivables and 40% of unbilled receivables (subject to a cap of $1.0 million on unbilled receivables) at the time of such draw. The interest rate on the New Facility is the Prime Rate (as reported in the *Wall Street Journal*) plus 2.0%, provided that the minimum interest rate is 8.0%.

The New Facility is secured by a first lien on certain assets and receivables of the Company as set out more fully in that certain Security Agreement dated as of March 7, 2006 (attached as an Exhibit to the March 13th 8-K and incorporated by reference herein), including but not limited to: (i) a security interest in the patents and trademarks of the Company and GSE Power Systems, Inc. ("GSE Power"), a Delaware corporation and wholly owned subsidiary of GSE Systems, Inc.; (ii) a security interest in favor of LMF in all of the right, title and interest of the Company in and to any and all equity interests issued by GSE Services, LLC ("GSE Services"), a Delaware limited liability company owned and controlled by the Company; and (iii) a security interest in certain defined collateral of (a) MSHI, Inc. ("MSHI"), a Virginia corporation and wholly owned subsidiary of the Company, (b) GSE Power, (c) GSE Erudite Software, Inc. ("GSE Erudite"), a Delaware corporation and wholly owned subsidiary of the Company, (d) GSE Process Solutions, Inc. ("GSE Process"), a Delaware corporation and wholly owned subsidiary of the Company, and (e) GSE Government & Military Simulation Systems, Inc. ("GSE Military" and together with MSHI, GSE Power, GSE Erudite, GSE Process, GSE Military and GSE Services, the "Subsidiaries"), a Delaware corporation and wholly owned subsidiary of the Company.

In connection with entering into the New Facility, the Company also issued to LMF a Warrant to purchase up to 367,647 shares of the Company's Common Stock, at a price per share equal to $0.01 (the "LMF Warrant"). (See the section captioned "Selling Security Holders" below.) The Company paid LMF $15,000 in due diligence fees and $30,000 in structuring fees associated with the New Facility. On July 31, 2006, LMF exercised its warrant in a cashless exercise transaction and received 366,666 shares of the Company's restricted Common Stock.

The Company agreed that it would use its best efforts to prepare and file a registration statement with the Securities and Exchange Commission (the "Commission") and the American Stock Exchange within 60 days of LMF funding the New Facility and use reasonable best efforts to have such Registration Statement declared effective within 120 days thereafter.

The key agreements underlying the New Facility are described in brief below and complete copies of each key agreement were attached as exhibits to the March 13th 8-K and are incorporated by reference herein:

Subsidiary Guaranty: In consideration of the Company and LMF entering into the New Facility, the Subsidiaries unconditionally guaranteed all present and future obligations and liabilities of any and all kinds of each Company to LMF. The Guaranty is a guaranty of payment and not of collection. LMF has no obligation to take any action whatsoever.

Security Agreements and Interests: Capitalized terms used herein have the same meaning as indicated in the Security Agreement.

Pursuant to a Security Agreement by and among the Company, GSE Power and LMF dated as of March 7, 2006, the Company and GSE Power are jointly and severally liable for payment of interest at the Contract Rate on the unpaid principal balance of each Loan made by LMF under the Security Agreement.

In addition, upon execution of the Security Agreement, the Company agreed to pay Laurus Capital Management, LLC ("LCM") a closing payment in an amount equal to three and three-fifths (3.60%) of the Capital Availability Amount which would be deemed fully earned on the Closing Date and not be subject to rebate or pro-ration. All amounts that are incurred are due and payable by the Company monthly, in arrears, on the first business of each calendar month and upon expiration of the Term. Furthermore, the Company paid LMF $15,000 in due diligence fees and $30,000 in structuring fees associated with the New Facility.

Furthermore, pursuant to the terms of that certain Grant of Security Interest in Patents and Trademarks by and among GSE Systems, GSE Power and LMF dated March 7, 2006, LMF was granted a security interest that extends to all right, title and interest in and to the Trademarks and Patents, and all proceeds thereof, together with the business as well as the goodwill of the business symbolized by, or related or pertaining to, the Trademarks, and the customer lists and records related to the Trademarks and Patents and all causes of action which may exist by reason of infringement of any of the Trademarks and Patents (collectively, the "T&P Collateral").

Stock Pledge Agreement: Pursuant to a Stock Pledge Agreement by and among GSE Services, MSHI, GSE Power and GSE Process and LMF dated as of March 7, 2006, each of which pledged and granted a security interest to LMF in certain collateral, including certain shares of stock, together with (i) any additional shares of stock or other equity interests acquired by any Pledgor (the "Pledged Stock"); (ii) the certificates representing the Pledged Stock and all dividends, cash, instruments and other property or proceeds received, receivable or otherwise distributed in respect of or in exchange for any or all of the Pledged Stock; (iii) all additional shares of stock of any issuer of the Pledged Stock acquired by any Pledgor; (iv) the certificates representing such additional shares, and (v) all dividends, cash, instruments and other property or proceeds received, receivable or otherwise distributed in respect of or in exchange for any or all of such shares; (vi) and all options and rights to any shares of any Pledged Stock and all dividends, cash, instruments and other property or proceeds received, receivable or otherwise distributed in respect of or in exchange for any or all such options and rights.

Registration Rights

In connection with each of the above described transactions, the Company agreed that it would use its best efforts to prepare and file a registration statement with the Securities and Exchange Commission (the "Commission") and the American Stock Exchange within 60 days of the completion of the foregoing transactions to cover resales of the Common Stock underlying the securities.

Other Information

Our common stock trades on the American Stock Exchange under the symbol "GVP."

Our principal executive offices are located at 7133 Rutherford Road, Suite 200, Baltimore, Maryland 21244. Our telephone number is (410) 277-3740.

Our website address is www.gses.com. Except for any documents that are incorporated by reference into this prospectus that may be accessed from our website, the information available on or through our website is not part of this prospectus.

RISK FACTORS

You should carefully consider the risks described below before making an investment decision. The risks and uncertainties described below may not be the only ones we will face. Additional risks and uncertainties not presently known to us or that we currently deem not material may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations could be materially adversely affected. In such case, the trading price of our common stock could decline, and you may lose all or part of your investment.

The Company has limited cash resources. If the Company is unable to generate adequate cash flow from operations, it will need additional capital to fund its operations.

In 2005, the Company incurred a net loss of $4.8 million. The Company's revenue and profitability were impacted by the low volume of orders logged in 2004 and 2005 and the Company's backlog decreased from $19.6 million at December 31, 2004 to $12.3 million at December 31, 2005. In addition, the Company continued to spend heavily on business development activities in order to expand the Company's simulation business into new sectors, such as integrating its simulation capabilities with broader training and educational programs. Accordingly, the Company's cash position weakened during the year, with total cash used in operating activities of $1.9 million. Although the Company took actions that will reduce its operating expenses in 2006, including the termination of a number of employees and by restructuring two facility leases, our ability to meet our debt obligations and to reduce our debt level depends on our future performance which is affected by general economic conditions and financial, business and other factors, and there can be no assurance the Company will continue to be able to reduce its operating expenses.

Based on the Company's known expenditures and cash flow, we believe we will need $6.8 million to fund our operations through December 31, 2006 and $26.4 million to fund our operations for the twelve months ended December 31, 2007. Although the Company believes that, as a result of the transactions described in this prospectus and based on the Company's current forecasted cash flows, it will have sufficient liquidity and working capital for its operations, the Company may be required to look for additional capital to fund its operations if the Company is unable to operate profitably and generate sufficient cash from operations. There can be no assurance that the Company would be successful in raising such additional funds.

The Company's expense levels are based upon its expectations as to future revenues, so it may be unable to adjust spending to compensate for a revenue shortfall. Accordingly, any revenue shortfall would likely have a disproportionate effect on the Company's operating results.

The Company's revenue was $22.0 million, $29.5 million and $25.0 million for the years ended December 31, 2005, 2004 and 2003, respectively. The Company's operating income (loss) was ($4.7 million), $2,000 and ($1.0 million) in 2005, 2004 and 2003, respectively. The Company's operating results have fluctuated in the past and may fluctuate significantly in the future as a result of a variety of factors, including purchasing patterns, timing of new products and enhancements by the Company and its competitors, and fluctuating foreign economic conditions. Since the Company's expense levels are based in part on its expectations as to future revenues and includes certain fixed costs, the Company may be unable to adjust spending in a timely manner to compensate for any revenue shortfall and such revenue shortfalls would likely have a disproportionate adverse effect on operating results. The Company believes that these factors may cause the market price for its common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations.

Risk of International Sales and Operations

Sales of products and the provision of services to end users outside the United States accounted for approximately 65% of the Company's consolidated revenue in 2004 and 63% of the Company's consolidated revenue in 2005. As a result, the Company may be subject to certain risks, including risks associated with the application and imposition of protective legislation and regulations relating to import or export (including export of high technology products) or otherwise resulting from trade or foreign policy and risks associated with exchange rate fluctuations. Additional risks include potentially adverse tax consequences, tariffs, quotas and other barriers, potential difficulties involving the Company's strategic alliances and managing foreign sales agents or representatives and potential difficulties in accounts receivable collection. The Company currently sells products and provides services to customers in emerging market economies such as Russia, Ukraine, Bulgaria, and the Czech Republic. Although end users in the Ukraine accounted for 18%, 21%, and 29% of the Company's consolidated revenue in 2005, 2004, and 2003, respectively, GSE's customer for these projects was Battelle's Pacific Northwest National Laboratory, which is the purchasing agent for the U.S. Department of Energy ("DOE"). The DOE provides funding for various projects in Eastern and Central Europe. Accordingly, the Company is not subject to the political and financial risks that are normally faced when doing business in the Ukraine. The Company has taken steps designed to reduce the additional risks associated with doing business in these countries, but the Company believes that such risks may still exist and include, among others, general political and economic instability, lack of currency convertibility, as well as uncertainty with respect to the efficacy of applicable legal systems. There can be no assurance that these and other factors will not have a material adverse effect on the Company's business, financial condition or results of operations.

The Company relies on one customer for a substantial portion of its revenue. The loss of this customer could have a material adverse effect upon the Company's revenues and results of operations.

For the years ended December 31, 2005, 2004, and 2003, one customer (Battelle's Pacific Northwest National Laboratory) accounted for approximately 25%, 24%, and 29%, respectively, of the Company's consolidated revenue. The Pacific Northwest National Laboratory is the purchasing agent for the DOE and the numerous projects the Company performs in Eastern and Central Europe. If the Company lost this customer, the Company's revenue and results of operations would be materially and adversely affected.

The Company's business is substantially dependent on sales to the nuclear power industry. Any disruption in this industry would have a material adverse effect upon the Company's revenue.

In 2005, 83% of GSE's revenue was from customers in the nuclear power industry. The Company will continue to derive a significant portion of its revenue from customers in the nuclear power industry for the foreseeable future. The Company's ability to supply nuclear power plant simulators and related products and services is dependent on the continued operation of nuclear power plants and, to a lesser extent, on the construction of new nuclear power plants. A wide range of factors affect the continued operation and construction of nuclear power plants, including the political and regulatory environment, the availability and cost of alternative means of power generation, the occurrence of future nuclear incidents, and general economic conditions.

The Company's new line of credit agreement with Laurus Master Fund Ltd. imposes significant operating and financial restrictions, which may prevent it from capitalizing on business opportunities.

GSE's new line of credit agreement imposes significant operating and financial restrictions. These restrictions affect, and in certain cases limit, among other things, the Company's ability to:

¨ incur additional indebtedness and liens;

¨ make capital expenditures;

¨ make investments and acquisitions and sell assets;

¨ consolidate, merge or sell all or substantially all of its assets.

There can be no assurance that these restrictions will not adversely affect the Company's ability to finance its future operations or capital needs or to engage in other business activities that may be in the interest of stockholders.

The Company is dependent on product innovation and research and development, which costs are incurred prior to revenues for new products and improvements.

The Company believes that its success will depend in large part on its ability to maintain and enhance its current product line, develop new products, maintain technological competitiveness and meet an expanding range of customer needs. The Company's product development activities are aimed at the development and expansion of its library of software modeling tools, the improvement of its display systems and workstation technologies, and the advancement and upgrading of its simulation technology. The life cycles for software modeling tools, graphical user interfaces, and simulation technology are variable and largely determined by competitive pressures. Consequently, the Company will need to continue to make significant investments in research and development to enhance and expand its capabilities in these areas and to maintain its competitive advantage.

The Company relies upon its intellectual property rights for the success of its business; however, the steps it has taken to protect its intellectual property may be inadequate.

Although the Company believes that factors such as the technological and creative skills of its personnel, new product developments, frequent product enhancements and reliable product maintenance are important to establishing and maintaining a technological leadership position, the Company's business depends, in part, on its intellectual property rights in its proprietary technology and information. The Company relies upon a combination of trade secret, copyright, patent and trademark law, contractual arrangements and technical means to protect its intellectual property rights. The Company enters into confidentiality agreements with its employees, consultants, joint venture and alliance partners, customers and other third parties that are granted access to its proprietary information, and limits access to and distribution of its proprietary information. There can be no assurance, however, that the Company has protected or will be able to protect its proprietary technology and information adequately, that the unauthorized disclosure or use of the Company's proprietary information will be prevented, that others have not or will not develop similar technology or information independently, or, to the extent the Company owns patents, that others have not or will not be able to design around those patents. Furthermore, the laws of certain countries in which the Company's products are sold do not protect the Company's products and intellectual property rights to the same extent as the laws of the United States.

The industries in which GSE operates are highly competitive. This competition may prevent the Company from raising prices at the same pace as its costs increase.

The Company's businesses operate in highly competitive environments with both domestic and foreign competitors, many of whom have substantially greater financial, marketing and other resources than the Company. The principal factors affecting competition include price, technological proficiency, ease of system configuration, product reliability, applications expertise, engineering support, local presence and financial stability. The Company believes that competition in the simulation fields may further intensify in the future as a result of advances in technology, consolidations and/or strategic alliances among competitors, increased costs required to develop new technology and the increasing importance of software content in systems and products. As the Company's business has a significant international component, changes in the value of the dollar could adversely affect the Company's ability to compete internationally.

The nuclear power industry, the Company's largest customer group, is associated with a number of hazards which could create significant liabilities for the Company.

The Company's business could expose it to third party claims with respect to product, environmental and other similar liabilities. Although the Company has sought to protect itself from these potential liabilities through a variety of legal and contractual provisions as well as through liability insurance, the effectiveness of such protections has not been fully tested. Certain of the Company's products and services are used by the nuclear power industry primarily in operator training. Although the Company's contracts for such products and services typically contain provisions designed to protect the Company from potential liabilities associated with such use, there can be no assurance that the Company would not be materially adversely affected by claims or actions which may potentially arise.

The Common Stock issuable upon conversion of the Convertible Preferred Stock may be diluted.

The number of shares of our Common Stock issuable upon conversion is subject to adjustment only for stock splits and combinations, stock dividends and specified other transactions. The number of shares of our common stock issuable upon conversion is not subject to adjustment for other events, such as employee stock option grants, offerings of our common stock, or in connection with acquisitions or other transactions which may adversely affect the price of our Common Stock. The terms of our Convertible Preferred Stock do not restrict our ability to offer Common Stock in the future or to engage in other transactions that could dilute our Common Stock. We have no particular obligation to consider the interests of the holders of our Convertible Preferred Stock in engaging in any such offering or transaction.

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Our Convertible Preferred Stock may be diluted upon the issuance of a new series of preferred stock on parity with the shares sold in this offering.

While the terms of our Convertible Preferred Stock restrict our ability to offer a new series of preferred stock that would rank senior to our Convertible Preferred Stock, they do not restrict our ability to offer a new series of preferred stock that is on parity with our Convertible Preferred Stock in the future or engage in other transactions that could dilute our Convertible Preferred Stock. We have no particular obligation to consider the interests of the holder of our Convertible Preferred Stock in engaging in any such offering or transaction.

Our Convertible Preferred Stock will rank behind our current debt obligations.

Until such time as our current debt obligations are satisfied, our Convertible Preferred Stock will rank junior to our outstanding debt obligations as to payment of dividends and distribution of assets upon dissolution, liquidation or winding up of the Company.

You should consider the tax considerations relating to investing in the Convertible Preferred Stock and Warrants.

Investors in this offering may face adverse federal, state and local tax consequences by virtue of their purchase, ownership and holdings of Convertible Preferred Stock and Warrants. Prospective investors should consult their own tax advisors regarding these and other possible tax consequences to them of an investment in this offering.

FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain “forward-looking” statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act that are based on management’s assumptions, expectations and projections about us, and the industry within which we operate, that have been made pursuant to the Private Securities Litigation Reform Act of 1995 which reflect our expectations regarding our future growth, results of operations, performance and business prospects and opportunities. Wherever possible, words such as “anticipate,” “believe,” “continue,” “estimate”, “intend”, “may,” “plan”, “potential”, “predict”, “expect”, “should”, “ expressions, or the negative of these terms or other comparable terminology, have been used to identify these forward-looking statements. These forward-looking statements may also use different phrases. These statements regarding our expectations reflect our current beliefs and are based on information currently available to us. Accordingly, these statements by their nature are subject to risks and uncertainties, including those listed under “Risk Factors,” which could cause our actual growth, results, performance and business prospects and opportunities to differ from those expressed in, or implied by, these statements. Discussions containing these forward-looking statements may be found, among other places, in “Business” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” incorporated by reference from our most recent annual report on Form 10-K and in our most recent quarterly report on Form 10-Q subsequent to the filing of our most recent annual report on Form 10-K with the SEC, as well as any amendments thereto reflected in subsequent filings with the SEC. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. Except as otherwise required by federal securities law, we are not obligated to update or revise these forward-looking statements to reflect new events or circumstances. We caution you that a variety of factors, including but not limited to the factors described below under the heading “Risk Factors” and the following, could cause our business conditions and results to differ materially from what is contained in forward looking statements:

- changes in the rate of economic growth in the United States and other major international economies;
- changes in investment by the nuclear and fossil electric utility industry, the chemical and petrochemical industries and the U.S. military-industrial complex;
- changes in the financial condition of our customers;
- changes in regulatory environment;
- changes in project design or schedules;
- contract cancellations;
- changes in our estimates of costs to complete projects;
- changes in trade, monetary and fiscal policies worldwide;
- currency fluctuations;
- war and/or terrorist attacks on facilities either owned or where equipment or services are or may be provided;
- outcomes of future litigation;
- protection and validity of our patents and other intellectual property rights;
- increasing competition by foreign and domestic companies;
- compliance with our debt covenants;
- recoverability of claims against our customers and others; and
- changes in estimates used in our critical accounting policies.

Other factors and assumptions not identified above were also involved in the formation of these forward looking statements and the failure of such other assumptions to be realized, as well as other factors, may also cause actual results to differ materially from those projected. Most of these factors are difficult to predict accurately and are generally beyond our control. You should consider the areas of risk described above in connection with any forward looking statements that may be made by us. You should not place undue reliance on any forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which factors will arise.

We undertake no obligation to publicly update any forward looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any additional disclosures we make in proxy statements, quarterly reports on Form 10-Q, annual reports on Form 10-K and current reports on Form 8-K filed with the SEC.

GUIDE TO READING THIS PROSPECTUS

We urge you to read the entire prospectus, including “Risk Factors,” and the information contained in the public documents that we have filed with the Securities and Exchange Commission (the “Commission”). You should read this prospectus together with additional information described under the headings “Where You Can Find More Information” and “Incorporation of Documents by Reference.”

Certain of the information contained in this prospectus was obtained from other sources. This prospectus also incorporates by reference important business and financial information about us that is not included in or delivered with this prospectus.

You should rely only on the information contained in this prospectus or any supplement and any information incorporated by reference in this prospectus or any supplement. We have not authorized anyone to provide you with any information that is different from such information. If you receive any unauthorized information, you should not rely on it. You should disregard anything we said in an earlier document that is inconsistent with what is included or incorporated by reference in this prospectus or any supplement.

You should not assume that the information in this prospectus or any supplement is current as of any date other than the date on the front page of this prospectus or on the date of any supplement as to information contained in it. This prospectus is not an offer to sell nor is it seeking an offer to buy these securities in any state or jurisdiction where

the offer or sale is not permitted.

We include cross references to captions in this prospectus where you can find further related discussions. The above table of contents tells you where to find these captions.

Throughout this prospectus, we refer to ourselves, GSE Systems, Inc. as the “Company,” “GSE” or “GSE Systems”, “we” or “us”.

USE OF PROCEEDS

The Company will not receive any of the proceeds from the sale of the resale shares by the selling security holders. All proceeds from the resale of shares will be for the accounts of the selling security holders named in this prospectus, any supplement to this prospectus or in any amendment to the registration statement of which this prospectus forms a part. We will, in the ordinary course of business, receive proceeds from the issuance of shares upon exercise of the warrants described in this prospectus, which we will use for general corporate purposes.

The Company used the net proceeds of the private placement offering, in combination with currently available funds, to refinance existing senior debt obligations, fund its ongoing business operations and other general corporate purposes, including development of new training simulators, pursuance of new contracts, marketing, and other working capital requirements.

The Company intends to draw down the New Facility for working capital and to fund its ongoing business operations and for other general corporate purposes.

DIVIDEND POLICY

The holders of convertible preferred stock are entitled to receive cumulative dividends on a semiannual basis every June 30 and December 30, commencing on June 30, 2006. On June 30, 2006, the Company paid dividends totaling $115,000 to the preferred stockholders. If the Company does not make two consecutive dividend payments on the dates such payments are due, the Company will issue to holders of Convertible Preferred Stock additional warrants to purchase such number of shares of Common Stock equal to 30% of the dollar amount invested in Convertible Preferred Stock divided by $1.77. Should the Company miss its dividend payments and issue the additional warrants as described above, the Company will undertake to register with the SEC and with AMEX such number of additional shares of Common Stock as necessary to cover the issuance of the warrants.

Except as described above, the Company intends to retain its future earnings, if any, to finance the further development and expansion of our business and do not intend to pay dividends for the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in our current and future financing instruments and other factors our board of directors deems relevant.

DESCRIPTION OF OUR SHARE CAPITAL

The following description of the Company’s share capital summarizes certain provisions of the Company’s certificate of incorporation and by-laws and a certificate of designation in respect of the preferred shares and of applicable U.S. law. Such summaries are not complete and are subject to, and are qualified in their entirety by reference to, all of the provisions of the Company’s certificate of incorporation and by-laws, and the certificate of designation in respect of the preferred shares, copies of which have been filed as exhibits to the registration statement of which this prospectus forms a part. Prospective investors are urged to read those exhibits carefully.

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Authorized Capital Stock

As of the date of this prospectus, we are authorized to issue 20,000,000 shares of common stock, par value $0.01, of which 18,000,000 shares shall be common stock and 2,000,000 shares shall be preferred stock.

As of the date of this prospectus, the Company had 9,456,490 shares of common stock outstanding, and had reserved an additional (1) 2,401,133 shares of common stock for issuance upon conversion of the Preferred Stock, (2) 480,226 shares of common stock for issuance upon exercise of the Warrants, (3) 150,000 shares of common stock for issuance upon exercise of the NESC Warrant and (4) 900,000 shares of common stock for issuance upon exercise of the Exchange Warrant.

Common Stock

Generally. The Company's common shares, into which the Series A convertible preferred shares are convertible, are quoted on the American Stock Exchange under the symbol "GVP". Holders of common shares have no pre-emptive, redemption, conversion or sinking fund rights. The Company's by-laws provide that any variation of the rights attached to the common shares, whether by the amendment, alteration or repeal of the terms of the Company's certificate of association and by-laws relating to the common shares or resulting from any merger, amalgamation or similar business combination, or otherwise would require the approval of holders of at least three fourths of the issued and outstanding common shares, voting as a separate class. This approval can be evidenced either by a unanimous consent in writing or by a resolution passed by the requisite majority at a meeting of the holders of the common shares at which a quorum consisting of at least two persons holding or representing one-third of the issued and outstanding common shares is present.

Liquidation. In the event of the liquidation, dissolution or winding up of the Company, the holders of common shares are entitled to share equally and ratably (with the holders of other shares of the Company entitling the holders to liquidation rights pro rata with the common shares, including holders of preferred shares) in the assets, if any, remaining after the payment of all of the Company's debts and liabilities, subject to any liquidation preference on any outstanding preferred shares.

Voting Rights. Holders of common shares are entitled to one vote per share on all matters submitted to a vote of holders of common shares. Unless a different majority is required by law or by the Company's by-laws, resolutions to be approved by holders of common shares require approval by an affirmative majority of the votes cast at a meeting at which a quorum is present. The common shares and, prior to their becoming convertible, the preferred shares will vote together as a single class except in the case of circumstances which constitute a variation of the rights of the common shares or the preferred shares, as described below or as required by applicable law, when holders of common shares and preferred shares will each vote as a separate class.

Dividend Rights. The Company's board of directors may declare and pay dividends on the common shares or the preferred shares or make distributions out of contributed surplus from time to time unless there are reasonable grounds for believing the Company is or would, after the payment, be unable to pay its liabilities as they become due or that the realizable value of its assets would thereby be less than the aggregate of its liabilities and issued share capital and share premium accounts. The board of directors may declare that any dividend be paid wholly or partly by the distribution of shares of the Company.

Preferred Stock

Prior to the date of this Prospectus, convertible preferred shares were issued by the Company pursuant to the terms of the offering of units consisting of up to $4.25 million of preferred shares and warrants. However, no such shares were listed on the American Stock Exchange or on any market.

Terms of the Series A Convertible Preferred Shares. A total of 42,500 preferred shares were designated as "Series A Convertible Preferred Shares" pursuant to a certificate of designation adopted by resolution of the board of directors of the Company. The Company began accepting subscription agreements on February 27, 2006 and the Company closed the offering on February 28, 2006. As of March 31, 2006, 42,500 such shares were issued and outstanding and no preferred shares had been converted into common shares. The material terms of the preferred shares are described below.

Holders of preferred shares have no pre-emptive, redemption, or sinking fund rights. The holders of the Series A preferred stock shall be entitled to notice of all stockholder meetings in accordance with the Company's bylaws. Except as otherwise required by applicable law, the holders of the Convertible Preferred Stock shall be entitled to vote on all matters submitted to the stockholders for a vote, together with the holders of the voting Common Stock all voting together as a single class. The holders of Preferred Stock shall be entitled to such number of votes as shall be equal to the whole number of shares of Common Stock into which holder's aggregate number of shares of Preferred Stock are convertible immediately after the close of business on the record date fixed for such meeting where the votes will be cast or the effective date of any written consent.

So long as the Preferred Stock represent ten percent (10%) or more of the outstanding voting stock of the Company (calculated as if each Preferred Stock was converted at the then-current Conversion Price), without the affirmative vote of the holders of a majority of the outstanding Convertible Preferred Stock, all voting together as a single class, the Company shall not:

(i) issue any additional equity securities or other equity securities convertible into equity securities of the Company or effect a reclassification of any of the outstanding capital stock of the Company in each case that is senior to or pari passu with the Preferred Stock; or

(ii) amend the Certificate of Incorporation or By-Laws of the Company in a manner that would materially adversely affect or impair the rights or preferences of the Preferred Stock.

Dividends. The holders of the Series A preferred stock shall be entitled to receive cumulative dividends on a semiannual basis every June 30 and December 30, commencing on June 30, 2006. On June 30, 2006, the Company paid dividends totaling $115,000 to the preferred stockholders. Dividends on each Series A preferred share shall accrue on a daily basis from and including the date of issuance at the rate of 8% per annum of the Liquidation Value (the "Dividend Rate" as that term is defined in the Certificate of Designation, previously filed as an Exhibit to the Company's March 6, 2006 Form 8-K). The dividends shall accrue whether or not they have been declared and whether or not there are profits, surplus or other funds of the Company legally available for the payment of dividends. If the Company does not make two consecutive dividend payments on the dates such payments are due, the Company will issue to holders of Preferred Stock additional Warrants to purchase such number of shares of Common Stock equal to 30% of the dollar amount invested in Preferred Stock divided by $1.77. Such warrants shall have other terms substantially similar to the terms of the other warrants issued to investors in the Preferred Stock.

All holders of Preferred Stock shall be *pari passu* with respect to their entitlement to receive dividends. After payment of all dividends on Preferred Stock, the holders of Preferred Stock shall be entitled to participate with the outstanding Common Stock as to any dividends payable on the Common Stock.

Conversion of the Preferred Stock. The certificate of designation provides that each preferred share is convertible at the holder's option into common shares at a conversion price of $1.77. In order to effect a conversion of preferred shares, a holder must deliver a notice of conversion to the Company. Once the Company receives a notice of conversion, the holder's preferred shares will immediately cease to have the rights and restrictions of a preferred share, and the holder will simultaneously receive common shares in accordance with the terms outlined above. We will also deliver a copy of such notice at any time at the request of a holder of preferred shares. Upon such a conversion of the preferred shares, the number of authorized preferred shares will decrease and the number of authorized, issued and outstanding common shares will increase by a proportionate amount.

MARKET PRICE INFORMATION

For the week beginning August 21, 2006 and ending August 25, 2006, the high and low sale price for the Company's Common Stock, as reported by the American Stock Exchange, was $3.79 (high) and $3.65 (low). The following table sets forth, for the periods indicated, the high and low sale prices for the Company's common stock reported by the American Stock Exchange:

2006

Quarter	High	Low
First	**$ 1.90**	**$ 1.30**
Second	**$ 4.56**	**$ 1.70**

2005

Quarter	High	Low
First	**$ 2.76**	**$ 1.75**
Second	**$ 2.20**	**$ 1.70**
Third	**$ 1.80**	**$ 1.25**
Fourth	**$ 1.58**	**$ 1.06**

2004

Quarter	High	Low
First	**$ 2.33**	**$ 1.72**
Second	**$ 2.70**	**$ 1.45**
Third	**$ 2.78**	**$ 2.35**
Fourth	**$ 2.70**	**$ 1.95**

The following table sets forth the equity compensation plan information as of June 30, 2006:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plan approved by security holders	2,007,150	$2.49	217,486
Equity compensation plan not approved by security holders	--	$ --	--
Total	2,007,150	$2.49	217,486

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There were approximately 74 holders of record of the common stock as of June 30, 2006. The Company has never declared or paid a cash dividend on its common stock. The Company currently intends to retain future earnings to finance the growth and development of its business and, therefore, does not anticipate paying any cash dividends in the foreseeable future on its common stock. In December 2001, the Company issued to ManTech International Corp. ("ManTech") 39,000 shares of convertible preferred stock which accrued dividends at an annual rate of 6% payable quarterly. ManTech elected to convert the preferred stock to common stock in October 2003. At the date of the conversion, the Company's credit facility restricted the Company from paying any dividends on the preferred stock. At June 30, 2006, the Company had accrued dividends payable to ManTech of $316,000. The unpaid dividends accrue interest at 6% per annum. At June 30, 2006, the Company had an accrual for interest payable of $70,000.

The Company believes factors such as quarterly fluctuations in results of operations and announcements of new products by the Company or by its competitors may cause the market price of the common stock to fluctuate, perhaps significantly. In addition, in recent years the stock market in general, and the shares of technology companies in particular, have experienced extreme price fluctuations. The Company's common stock has also experienced a relatively low trading volume, making it further susceptible to extreme price fluctuations. These factors may adversely affect the market price of the Company's common stock.

RELATIONSHIPS AND RELATED TRANSACTIONS

GSE is a member of the Emirates Simulation Academy, LLC ("ESA"), headquartered in Abu Dhabi, United Arab Emirates. ESA was formed in November 2005 to build and operate simulation training academies in the Arab Gulf Region. The initial focus of ESA will be on the training and certification of plant operators, maintenance personnel and engineers at power plants, desalination plants, and oil refineries and platforms. GSE holds one of the three director positions, and has a ten percent (10%) minority ownership interest in ESA. The other two members of ESA and their respective ownership percentages are as follows: (1) Al Qudra Holding PJSC of the United Arab Emirates (60%) ("Al Qudra") and (2) The Centre of Excellence for Applied Research and Training of the United Arab Emirates (30%) ("The Centre"). All decisions of the ESA Board of Directors must be unanimous, and holders of at least seventy five percent (75%) of the ESA ownership interests must be present for a Board meeting to be convened. As a minority owner, GSE is not involved in the day-to-day operations of ESA.

In conjunction with the development of the first training academy by ESA in Abu Dhabi, on January 5, 2006 we announced that we were awarded a $15.1 million contract from ESA on January 3, 2006 (the "ESA Contract") to provide five real-time, high fidelity simulators including a gas turbine power plant, a desalination plant, a combined cycle plant, a petroleum refinery and an oil platform. In addition, GSE will develop the training programs associated with the simulators, as well as the development of traditional classroom and online training content. We believe that the terms of this transaction are no more or less favorable to us than the terms that could be obtained from unaffiliated third parties. The ESA Contract contemplates GSE's performance under the agreement as an independent contractor, and it incorporates a license and technology transfer agreement, a software license agreement, a milestone payment schedule, an option for an additional hardware component and a confidentiality provision. Outside of any applicable cure period, in the event of material breach, the non-breaching party may terminate the ESA Contract with written notice to the breaching party.

For the three and six months periods ended June 30, 2006, the Company recognized $818,000 and $1.6 million, respectively, of revenue under the ESA Contract using the percentage-of-completion method.

In January 2006, the Company issued a $2.1 million invoice to ESA for an advance payment. The Company received $1.5 million of the receivable in July 2006 and expects to receive the remaining $600,000. No bad debt reserve has been established for the $600,000 past due amount. Under the terms of the ESA Contract, the Company provided a $2.1 million performance bond to ESA that will remain outstanding until the end of the warranty period on October 31, 2008.

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SELLING SECURITY HOLDERS

We initially issued the preferred stock and warrants to the selling security holders, as initial purchasers in transactions exempt from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"). To the best of our knowledge and after due inquiry, with the exception of Dolphin (see "Description of the Cancellation and Warrant Exchange Agreement"), none of the selling security holders owned any of the Company's securities prior to the transactions described in the sections captioned "Prospectus Summary" and "Recent Developments."

The selling security holders, including their transferees, pledges, donees or other successors, may from time to time offer and sell pursuant to this prospectus any and all of the common stock issuable upon conversion of the preferred stock or exercise of the warrants. Any selling security holder may also elect not to sell any common stock issuable upon conversion of the preferred stock or exercise of the warrants.

To sell common stock issuable upon exercise of the Series A preferred stock or warrants pursuant to the registration statement, each investor will be required to, among other things, be named as a selling security holder in the prospectus. We are registering the shares of preferred stock and warrants in order to permit the stockholders to offer the shares for resale from time to time. None of the selling security holders has, or had any position, office or other material relationship with us or any of our affiliates beyond their investment in or receipt of our securities, except for Dolphin Offshore Equity Partners, L.P., and Northeast Securities, Inc. (the placement agent for the private placement).

The following table is prepared based on information supplied to us by the selling security holders. Although we have assumed for purposes of the table below that the selling security holders will sell all of the shares offered by this prospectus, because the selling security holders may offer from time to time all of their shares covered under this prospectus, or in another permitted manner, no assurances can be given as to the actual number of shares that will be resold by the selling security holders or that will be held by the selling security holders after completion of the resales.

Certain of the selling shareholders and/or their affiliates provide or from time to time have provided or in the future may provide certain investment banking and other services to us and/or our affiliates and subsidiaries, for which they receive or have received customary fees and commissions or for which we expect them to receive customary fees and commissions. In addition, affiliates of certain of the selling shareholders from time to time have acted or in the future may act as agents and lenders to us and/or our affiliates and subsidiaries under our credit facility, for which services they have received or expect to receive customary compensation.

Name of Selling Shareholder	Shares of Common Stock Beneficially Owned Prior to the Offering: Common Stock	Number of Shares of Common Stock Underlying Series A Preferred Stock	Number of Shares of Common Stock Underlying Warrants	Total	Percent of Outstanding Common Stock (2)	Number of Shares of Common Stock Offered	Shares of Common Stock Beneficially Owned After the Offering (1)	Percent of Outstanding Common Stock (2)
Dolphin Offshore Partners, LP (3)	-	564,972	1,012,994	1,577,966	14.3%	1,577,966	-	*
Select Contrarian Value Partners, LP (4)	53,000	1,129,944	225,989	1,408,933	12.5%	1,355,933	53,000	*
Laurus Master Fund, Ltd (5)	-	-	367,647	367,647	3.9%	367,647	-	*
Gregory H. Ekizian Revocable Trust (6)	-	225,989	45,198	271,187	2.8%	271,187	-	*
Opallo Investment Ltd. (7)	-	169,492	33,898	203,390	2.1%	203,390	-	*
O. Lee Tawes, III (8)	-	56,497	56,299	112,796	1.2%	112,796	-	*
The Churchill Funds QP, LP (9)	-	79,096	15,819	94,915	1.0%	94,915	-	*
The Churchill Funds, LP (10)	-	62,147	12,429	74,576	*	74,576	-	*
TEBO Capital, LLC (11)	-	28,249	5,650	33,899	*	33,899	-	*
TEBO Capital, LLC SEP (12)	-	28,249	5,650	33,899	*	33,899	-	*

Harvey Ginsberg (13)	**-**	**28,249**	**5,650**	**33,899**	*	**33,899**	**-**	*
Peter Duchin (14)	**-**	**28,249**	**5,650**	**33,899**	*	**33,899**	**-**	*
K. Leslie McCall (15)	**-**	**-**	**20,000**	**20,000**	*	**20,000**	**-**	*
David T.R. Tsiang (16)	**-**	**-**	**20,000**	**20,000**	*	**20,000**	**-**	*
Northeast Securities, Inc. (17)	**-**	**-**	**15,000**	**15,000**	*	**15,000**	**-**	*
William P. Behrens (18)	**-**	**-**	**10,000**	**10,000**	*	**10,000**	**-**	*
Stephen J. Perrone (19)	**-**	**-**	**10,000**	**10,000**	*	**10,000**	**-**	*
Robert A. Bonelli (20)	**-**	**-**	**10,000**	**10,000**	*	**10,000**	**-**	*
Yaudoon David Chiang (21)	**-**	**-**	**8,000**	**8,000**	*	**8,000**	**-**	*
Boaz Rahav (22)	**-**	**-**	**7,000**	**7,000**	*	**7,000**	**-**	*
Andrew Russell (23)	**-**	**-**	**5,000**	**5,000**	*	**5,000**	**-**	*

(1) Assumes all of the Common Stock registered is sold.

(2) * Indicates less than 1%.

(3) Includes 1,012,994 shares of Common Stock issuable upon exercise of warrants held by Dolphin Offshore Partners, LP (“Dolphin’) which are currently exercisable, as well as 564,972 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by Dolphin. (See “Recent Developments”, page 2 and “Description of the Cancellation and Warrant Exchange Agreement”, page 3). Peter E. Salas is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering and the February 28, 2006 Cancellation Agreement.

(4) Based on a Schedule 13G filed jointly by Kaizen Capital, LLC, Kaizen Management, LP and Select Contrarian Value Partners, LP (“SCVP”) with the SEC on March 22, 2006 and a Form 4 filed with the SEC on August 14, 2006. Kaizen Management, LP is the general partner of SCVP. Includes 53,000 shares of common stock owned directly by SCVP, 225,989 shares of Common Stock issuable upon exercise of warrants held by SCVP which are currently exercisable, and 1,129,944 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by SCVP. David W. Berry is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. In accordance with the provisions of Item 507, Regulation S-K, except as herein, no other material transactions occurred in the last three years. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(5) Includes 366,666 shares of restricted Common Stock issued to LMF upon exercise of warrants, as well as the 981 shares of Common Stock withheld by the Company as payment of the exercise price of the warrants upon LMF's cashless exercise thereof. Eugene Grin and David Grin are the natural persons with shared voting or dispositive power

over the shares held by the selling security holder. (See Section “Recent Developments”, page 2 and “Description of the New Two-Year Revolving Credit Facility”, pages 4-5). The selling security holder acquired the securities to which this prospectus relates from us in connection with the March 7, 2006 New Facility.

(6) Includes 45,198 shares of Common Stock issuable upon exercise of warrants held by Gregory H. Ekizian Revocable Trust ("GHERT") which are currently exercisable, as well as 225,989 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by GHERT. Gregory H. Ekizian is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(7) Includes 33,898 shares of Common Stock issuable upon exercise of warrants held by Opallo Investment Ltd. ("Opallo") which are currently exercisable, as well as 169,492 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by Opallo. Joelle Mamane is the natural person with sole/shared voting power over the shares held by the selling security holder.In accordance with the provisions of Item 507, Regulation S-K, except as herein, no other material transactions occurred in the last three years. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(8) Includes 56,299 shares of Common Stock issuable upon exercise of warrants held by O. Lee Tawes III which are currently exercisable, as well as 56,497 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by Mr. Tawes. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering and as compensation from Northeast Securities as further described hereinbelow.

(9) Includes 15,819 shares of Common Stock issuable upon exercise of warrants held by The Churchill Funds QP, LP which are currently exercisable, as well as 79,096 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by The Churchill Funds QP, LP. Cecilia Brancato is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(10) Includes 12,429 shares of Common Stock issuable upon exercise of warrants held by The Churchill Funds, LP which are currently exercisable, as well as 62,147 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by The Churchill Funds, LP. Cecilia Brancato is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(11) Includes 5,650 shares of Common Stock issuable upon exercise of warrants held by TEBO Capital, LLC which are currently exercisable, as well as 28,249 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by TEBO Capital, LLC. Todd A. Tumbleson is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(12) Includes 5,650 shares of Common Stock issuable upon exercise of warrants held by TEBO Capital, LLC SEP which are currently exercisable, as well as 28,249 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by TEBO Capital LLC SEP. Todd A. Tumbleson is the natural person with sole or shared voting or dispositive power over the shares held by the selling security holder. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(13) Includes 5,650 shares of Common Stock issuable upon exercise of warrants held by Harvey Ginsberg which are currently exercisable, as well as 28,249 shares of Common Stock issuable upon conversion of Series A Cumulative Convertible Preferred Stock held by Mr. Ginsberg. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(14) Includes 5,650 shares of Common Stock issuable upon exercise of warrants held by Peter Duchin which are currently exercisable, as well as 28,249 shares of Common Stock issuable upon conversion of Series A Cumulative

Convertible Preferred Stock held by Mr. Duchin. The selling security holder acquired the securities to which this prospectus relates from us in the February 28, 2006 offering.

(15) Includes 20,000 shares of Common Stock issuable upon exercise of warrants held by K. Leslie McCall which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(16) Includes 20,000 shares of Common Stock issuable upon exercise of warrants held by David T.R.Tsiang which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(17) Includes 15,000 shares of Common Stock issuable upon exercise of warrants held by Northeast Securities Inc. which are currently exercisable. (See “Recent Developments”, page 2 and “Description of the February 27, 2006 Offering”, page 2). The selling security holder acquired the securities to which this prospectus relates as compensation for services provided as placement agent in connection with the February 28, 2006 offering as further described hereinbelow.

(18) Includes 10,000 shares of Common Stock issuable upon exercise of warrants held by William P. Behrens which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(19) Includes 10,000 shares of Common Stock issuable upon exercise of warrants held by Stephen J. Perrone which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(20) Includes 10,000 shares of Common Stock issuable upon exercise of warrants held by Robert A. Bonelli which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(21) Includes 8,000 shares of Common Stock issuable upon exercise of warrants held by Yaudoon David Chiang which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(22) Includes 7,000 shares of Common Stock issuable upon exercise of warrants held by Boaz Rahav which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

(23) Includes 5,000 shares of Common Stock issuable upon exercise of warrants held by Andrew Russell which are currently exercisable. The selling security holder acquired the securities to which this prospectus relates as compensation from Northeast Securities as further described hereinbelow.

With the exception of Northeast Securities, none of the selling security holders are registered broker-dealers or affiliated with a registered broker-dealer.

As is more fully described in the Section labeled, “Prospectus Summary” and in the Company’s Form 8-K filed with the Commission on March 6, 2006 (the “March 6th 8-K”), Northeast Securities provided advice to the Company with respect to raising funds and acted as the placement agent for the Company’s offering of Preferred Stock and Warrants. Northeast Securities received 6% of the gross proceeds received by the Company from the offering ($255,000) plus five-year warrants to purchase 150,000 shares of the Company’s common stock at an exercise price of $1.77 per share (the “NESC Warrant”) as compensation for services provided as placement agent in connection with the February 27, 2006 offering of up to $4.25 million of shares of the Company’s Preferred Stock and Warrants. Subsequent to completion of the offering and receipt of its earned compensation, Northeast Securities’ counsel notified the Company that it elected to grant a portion of the NESC Warrant received as compensation to certain of its employees as stated in the table and footnotes above.

As is more fully described in the Section labeled, “Prospectus Summary” and in the March 6th 8-K, Dolphin must exercise the Exchange Warrant promptly after the Company notifies Dolphin that (i) the Company has filed a registration statement with respect to the resale of the Common Stock issuable upon exercise of the Exchange Warrant and such registration statement shall have been declared effective by the Commission, (ii) the Common Stock has been listed on the American Stock Exchange and the Company has not received any communication from such exchange regarding the Company’s failure to meet listing qualifications or the institution of any delisting proceeding at any time up to and including May 30, 2006 (the “Mandatory Exercise Date”), (iii) the Current Stock Price shall not be less than $1.25 on the Mandatory Exercise Date and (iv) the average of the Current Stock Prices for each trading day of the 30 calendar day period up to and including the Mandatory Exercise Date shall not be less than $1.25. The Company also agreed to use its best efforts to file a registration statement with respect to the resale of the Common Stock issuable upon exercise of the Exchange Warrant with the Commission within 30 days after the original issuance of the Preferred Stock and Warrants as set forth in the Registration Rights Agreement. The Company also agreed to pay to Dolphin Advisors, L.L.C. a transaction fee in the amount of $3,000 in respect of services it rendered to Dolphin

related to the Cancellation Agreement transaction. Furthermore, Dolphin Offshore Partners, L.P., an affiliate of Dolphin, agreed to invest in the Company's private placement offering.

In addition, and as more fully described in the section labeled "Prospectus Summary" and in the Company's March 13th 8-K, LMF provided the Company with up to $5 million in financing in the form of two-year revolving credit facility secured by a first lien on certain assets and receivables of the Company. As additional consideration the Company also issued to LMF a warrant to purchase up to 367,647 shares of the Company's Common Stock, at a price per share equal to $0.01. The Company also paid LMF $15,000 in due diligence fees and $30,000 in structuring fees. On July 31, 2006, LMF exercised its warrant in a cashless transaction and received 366,666 shares of the Company's restricted Common Stock.

Other than the relationships discussed above, we are not aware of any position, office, or any other material relationship of any of the selling shareholders named above with the registrant or any of its predecessors or affiliates within the past three years.

PLAN OF DISTRIBUTION

In addition to registering the 2,401,133 common shares issuable upon conversion of the 42,500 Units sold in the private placement offering, the Company agreed to pay all expenses of the registration of the common stock issuable upon conversion of (1) 480,226 shares of common stock for issuance upon exercise of warrants, (2) 150,000 shares of common stock for issuance upon exercise of warrants, (3) 900,000 shares of common stock for issuance upon exercise of warrants, and (4) 367,647 shares of common stock for issuance upon exercise of warrants.

If the selling security holders effect such transactions by selling the shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive compensation in the form of discounts, concessions or commissions from the selling security holders and/or the purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal, or both (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of any securities or otherwise, the selling security holders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with these transactions, such broker-dealers and financial institutions may engage in short sales (i) of shares of the Company’s common stock or (ii) of securities convertible into or exchangeable for shares of the Company’s common stock in the course of hedging positions they assume with the selling shareholders. The selling shareholders may also enter into options or other transactions with broker-dealers or other financial institutions, which require the delivery to such broker-dealers and financial institutions of shares of the Company’s common stock offered in this prospectus, which shares may be resold by the broker-dealer or financial institution, pursuant to this prospectus (as amended or supplemented to reflect such transaction). Subject to any contrary terms of the Agreement, the selling security holders may also sell securities short and deliver securities covered by this prospectus to close out short positions. The selling security holders may also loan or pledge securities to broker-dealers that in turn may sell such securities.

The selling security holders, including their donees, pledgees, transferees or other successors-in-interest, may sell shares of common stock received as a gift, pledge, partnership distribution or other transfer from a selling stockholder after the date of this prospectus. The selling security holders may, from time to time, sell, transfer pledge or grant a security interest in or otherwise dispose of some or all of the shares of Company common stock owned by them on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. If they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933, as amended (the "Securities Act"), amending, if necessary, the list of selling security holders to include the donee, pledgee, transferee or other successors-in-interest as selling security holders under this prospectus. The selling security holders also may transfer, gift, pledge, or donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees, transferees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus and such donees, pledgees, transferees or other successors-in-interest may offer and sell the shares from time to time under this prospectus, provided that this prospectus has been amended under Rule 424(b)(3) or other applicable provision of the Securities Act to include the names of such donees, pledgees, transferees or other successors-in-interest in the list of selling stockholders under this prospectus.

The selling security holders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be “underwriters" within the meaning of Section 2(11) of the Securities Act, and any commission received by, paid, or any discounts or concessions allowed to, the selling security holder or any such broker-dealer or any profit on the resale of the shares of Company common stock sold by the selling shareholders or the broker-dealer while acting as principals may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the securities is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of securities being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling security holders and any discounts, commissions or concessions allowed or real lowed or paid to broker-dealers. Additionally, the selling shareholders may be subject to the prospectus delivery requirements of the Securities Act. The selling shareholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares of Company common stock against certain liabilities, including liabilities arising under the Securities Act.

Under the securities laws of some states, the securities may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares of common stock have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

The selling security holders may choose not to sell any or may choose to sell less than all of the shares of common stock registered pursuant to the shelf registration statement, of which this prospectus forms a part.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account under this prospectus;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- “at the market” or through market makers or into an existing market for the shares;
- short sales entered into after the effective date of the registration statement of which this prospectus is a part;

- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise, after the effective date of the registration statement of which this prospectus is a part;

- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

- a combination of any such methods of sale; and

- any other method permitted pursuant to applicable law.

The Company has informed the selling security holders and any other person participating in such distribution that they will be subject to applicable provisions of the 1934 Act, and the rules and regulations hereunder, including, without limitation, the anti-manipulative provisions of Regulation M of the 1934 Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling security holders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. In addition, all of the selling security holders have been apprised of the Commission's position on short sales. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

The selling shareholders may resell all or a portion of their shares of Company common stock in open market transactions in reliance upon Rule 144 under the Securities Act, provided they meet the criteria and conform to the requirements of Rule 144.

Upon the Company being notified by the selling shareholders that any material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing:

- the name of the selling shareholders and each of the participating broker-dealer(s);

- the number of shares involved;

- the initial price at which such shares are to be sold;

- the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable;

- that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus; and

- other facts material to the transactions.

We will pay all expenses of the registration of the common stock pursuant to the Agreement; provided, however, that a selling security holder will pay all underwriting discounts and commissions and selling commissions, if any. We will provide customary indemnification of the selling security holders against liabilities, including some liabilities under the 1933 Act.

Once sold under the registration statement, of which this prospectus forms a part, the shares of common stock will be freely tradable in the hands of persons other than our affiliates.

INTERESTS OF NAMED EXPERTS AND COUNSEL

Certain legal matters with respect to the securities offered through this prospectus, to include the validity of the common shares, preferred shares and warrants and the corporate authority of the Company to issue the preferred shares and warrants will be passed upon for us by Kalbian Hagerty LLP.

The consolidated financial statements of GSE Systems, Inc. as of December 31, 2005 and 2004, and for each of the years in the three-year period ended December 31, 2005 have been incorporated herein and in the registration statement in reliance upon the report of KPMG LLP, an independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the "Commission"). The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities offered by this prospectus.

We file annual, quarterly and special reports, proxy statements and other information with the Commission. You may read, without charge, and copy any document we file at the Commission's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the SEC's public reference facilities by calling the SEC at 1-800-SEC-0330. You can request copies of these documents by writing to the Commission and paying a fee for the copying cost. You can also access copies of this material electronically, without charge, on the SEC's home page on the World Wide Web at http://www.sec.gov.

You may write or telephone us to obtain at no cost a copy of any or all of the documents incorporated by reference. You should direct written requests to, 7133 Rutherford Road, Suite 200 Baltimore, Maryland 21244, Attn: Secretary. Our telephone number is (410) 277-3740. However, we will not send you exhibits to a document, unless the exhibits are specifically incorporated by reference in the document.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC permits us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is important and is considered to be part of this prospectus, and information that we file with the SEC after the date of this prospectus will automatically update and supersede this information. However, any information contained herein shall modify or supersede information contained in documents we filed with the SEC before the date of this prospectus. We incorporate by reference the documents listed below and any future filings the Company may make with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this prospectus and prior to the termination of this offering shall be deemed to be incorporated by reference:

- Our Annual Report on Form 10-K for the year ended December 31, 2005 filed on March 31, 2006.
- Our Current Report on Form 8-K filed on March 6, 2006.
- Our Current Report on Form 8-K filed on March 13, 2006.
- Our Current Report on Form 10-Q filed on August 14, 2006.

To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus supplement shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus. Statements contained in this prospectus as to the contents of any contract, or other document, are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to the registration statement.

We will furnish without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the information that has been incorporated into this prospectus by reference (except exhibits, unless they are specifically incorporated into this prospectus by reference). You should direct any requests for copies to:

GSE Systems, Inc.
7133 Rutherford Road, Suite 200
Baltimore, MD 21244
(410) 277-3740

If you request any incorporated documents from us, we will mail them to you by first-class mail, or another equally prompt means, within one business day after we receive your request.

GSE SYSTEMS, INC.

Shares of Common Stock Issuable upon Conversion of Units Consisting of up to $4,250,000 of 8% Cumulative Convertible Preferred Stock and Warrants
and
Shares of Common Stock Issuable upon Exercise of Warrants

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses in connection with the issuance and distribution of the securities registered hereby and the offerings described in this registration statement, other than underwriting discounts and commissions. All amounts are estimated except the SEC registration fee.

SEC Registration fee	$1,692.00
Accounting fees and expenses	$20,000.00
Legal fees and expenses	$58,000.00
Printing expenses	--
AMEX registration fee	$45,000.00
Miscellaneous	$1,885.00
TOTAL	$126,577.00

Item 15. Indemnification of Directors and Officers.

Under Section 145 of the General Corporation Law of the State of Delaware (the "DGCL"), a corporation may indemnify its directors, officers, employees and agents and its former directors, officers, employees and agents and those who serve, at the corporation's request, in such capacities with another enterprise, against expenses (including attorney's fees), as well as judgments, fines and settlements in no derivative lawsuits, actually and reasonably incurred in connection with the defense of any action, suit or proceeding in which they or any of them were or are made parties or are threatened to be made parties by reason of their serving or having served in such capacity. The DGCL provides, however, that such person must have acted in good faith and in a manner he or she reasonably believed to be in (or not opposed to) the best interests of the corporation and, in the case of a criminal action, such person must have had no reasonable cause to believe his or her conduct was unlawful. In addition, the DGCL does not permit indemnification in an action or suit by or in the right of the corporation, where such person has been adjudged liable to the corporation, unless, and only to the extent that, a court determines that such person fairly and reasonably is entitled to indemnity for costs the court deems proper in light of liability adjudication. Indemnity is mandatory to the extent a claim, issue or matter has been successfully defended.

The Company's Third Amended and Restated Certificate of Incorporation (the "Restated Certificate") provides that the Company shall indemnify and hold harmless, to the fullest extent permitted by Section 145 of the DGCL, as the same may be amended and supplemented, every person who was or is made a party or is threatened to be made a party or is otherwise involved in any action, suit of proceeding by reason of the fact that such person is or was serving as a director or officer of the Company or, while serving as a director or officer of the Company, is or was serving at the request of the Company as a director, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against all expense, liability and loss reasonably incurred or suffered by such person in connection therewith if such person satisfied the applicable level of care to permit such indemnification under the DGCL. The Restated Certificate provides that, subject to any requirements imposed by law or the Company's Bylaws, the right to indemnification includes the right to be paid expenses incurred in defending any proceeding in advance of its final disposition. The Company's Amended and Restated By-Laws (the "By-Laws") provide that, if and to the extent required by the DGCL, such an advance payment will only be made upon delivery to the Company of an undertaking, by or on behalf of the director or officer, to repay all amounts so advanced if it is ultimately determined

that such director is not entitled to indemnification.

Section 102(b)(7) of the DGCL permits a corporation to include in its certificate of incorporation a provision eliminating or limiting the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation 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 DGCL (relating to unlawful payment of dividends and unlawful stock purchase and redemption) or (iv) for any transaction from which the director derived an improper personal benefit.

The Restated Certificate also provides that a director shall, to the maximum extent permitted by Section 102(b)(7) of the DGCL (or any successor provision), have no personal liability to the Company or its stockholders for monetary damages for breach of fiduciary duty as a director.

Item 16. Exhibits.

Number Description

3(i)	Third Amended and Restated Certificate of Incorporation of the Company. Previously filed in connection with the GSE Systems, Inc. Form 8-K as filed with the Securities and Exchange Commission on October 24, 2001 and incorporated herein by reference.
3(ii)	Form of Amended and Restated Bylaws of the Company. Previously filed in connection with Amendment No.1 to the GSE Systems, Inc. Form S-1 Registration Statement as filed with the Securities and Exchange Commission on June 14, 1995 and incorporated herein by reference.
4.1	Cancellation and Warrant Exchange Agreement dated February 28, 2006 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.2	Registration Rights Agreement dated February 28, 2006 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.3	Senior Subordinated Secured Convertible Note and Warrant Purchase Agreement dated as of May 26, 2005 by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.4	Form of Senior Subordinated Secured Convertible Promissory Note dated as of May 26, 2005 issued by and among GSE Systems, Inc. and Dolphin Direct Equity Partners, LP in the aggregate principal amount of $2,000,000, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.5	Form of Warrant to Purchase 900,000 Shares of Common Stock of GSE Systems, Inc. dated as of February 28, 2006, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.6	Form of Warrant to Purchase 380,952 shares of Common Stock of GSE Systems, Inc. dated as of May 26, 2005, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.7	Form of Warrant to Purchase 150,000 shares of Common Stock of GSE Systems, Inc. dated as of February 28, 2006, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.8	Certificate of Designation, Preferences and Rights of Series A Cumulative Preferred Stock dated as of February 28, 2006 providing for the issuance of a series of 42,500 shares of Series A Cumulative

	Convertible Preferred Stock, par value $0.01 per share, as filed with the Securities and Exchange Commission on March 6, 2006 and incorporated herein by reference.
4.9	Form of Warrant to Purchase 367,647 shares of the Company's Common Stock dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.10	Grant of Security Interest in Patents and Trademarks by and among GSE Systems, Inc, GSE Power Systems, Inc. and Laurus Master Fund, Ltd. dated March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.

4.11	Subsidiary Guaranty by and among GSE Company Services LLC, MSHI, Inc., GSE Power Systems, Inc., GSE Erudite Software Inc., GSE Government & Military Simulations Systems, Inc., and GSE Process Solutions, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.12	Control Agreement by and among GSE Systems, Inc., Laurus Master Fund, Ltd. and GSE Services Company LLC dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.13	Security Agreement by and among GSE Systems, Inc., GSE Power Systems, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.14	Registration Rights Agreement by and among GSE Systems, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.15	Stock Pledge Agreement by and among the Company, MSHI, Inc., GSE Power Systems, Inc., GSE Process Solutions, Inc. and Laurus Master Fund, Ltd. dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
4.16	Secured Non-Convertible Revolving Note dated as of March 7, 2006, as filed with the Securities and Exchange Commission on March 13, 2006 and incorporated herein by reference.
5.1	Opinion of Kalbian Hagerty LLP regarding legality and validity of the securities being registered and as to the corporate authority to issue such securities, filed herewith.
23.1	Consent of KPMG LLP, filed herewith.
23.2	Consent of Kalbian Hagerty LLP (contained in exhibit 5.1).
24.1	Power of Attorney for Directors' and Officers' Signatures on Form S-3, filed herewith.

Item 17. Undertakings.

The undersigned registrant 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 of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the 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 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 (1)(i), (1)(ii) and (1)(iii) do not apply if the registration statement is on Form S-3 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Securities and Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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.

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.

That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

The undersigned registrant hereby further undertakes that, for 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 Section 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 the 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.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described under “Item 15 - Indemnification of Directors and Officers” above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant 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 registrant 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 of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 2 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Baltimore, the State of Maryland, on the 28th day of September, 2006.

GSE SYSTEMS, INC.

By: /s/ John V. Moran

Name: John V. Moran
Title: Chief Executive Officer

POWERS OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John V. Moran and Jeffery G. Hough, and each of them, with full power of substitution and reconstitution and each with full power to act without the other, his or her true and lawful attorney-in-fact and agent, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission or any state, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their, his or her substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

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 date indicated.

Date: April 7, 2006 /s/ John V. Moran
John V. Moran
Chief Executive Officer and Director
(Principal Executive Officer)

Date: April 7, 2006 /s/ Jeffery G. Hough
Jeffery G. Hough
Senior Vice President and Chief
Financial
Officer
(Principal Financial and Accounting
Officer)

Date: April 7, 2006 /s/ Jerome I. Feldman
Jerome I. Feldman
Chairman of the Board

Date: April 7, 2006 /s/ Michael D. Feldman
Michael D. Feldman
Director

Date: April 7, 2006 /s/ Dr. Sheldon L. Glashow
Dr. Sheldon L. Glashow
Director

Date: April 7, 2006 /s/ Scott N. Greenberg
Scott N. Greenberg
Director

Date: April 7, 2006 /s/ Dr. Roger Hagengruber
Dr. Roger Hagengruber
Director

Date: April 7, 2006 /s/ Andrea Kantor
Andrea Kantor
Director

Date: April 7, 2006 /s/ Joseph W. Lewis
Joseph W. Lewis
Director

Date: April 7, 2006 /s/ George J. Pedersen
George J. Pedersen
Director

Date: April 7, 2006 /s/ Douglas Sharp
Douglas Sharp
Director