

NANOGEN INC
Form PRE 14A
December 07, 2007
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a)
of the Securities Exchange Act of 1934

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- | | | | |
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| <input checked="" type="checkbox"/> | Preliminary Proxy Statement | <input type="checkbox"/> | Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2)) |
| <input type="checkbox"/> | Definitive Proxy Statement | | |
| <input type="checkbox"/> | Definitive Additional Materials | | |
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NANOGEN, INC.

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.

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Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

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(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:

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10398 Pacific Center Court

San Diego, California 92121

Tel: (858) 410-4600

Fax: (858) 410-4949

[*], 2007

Dear Stockholder:

You are cordially invited to attend a special meeting of stockholders of Nanogen, Inc. (the Company), which will be held on [*], 2007 at 10:00 a.m. Pacific Time at the Company s principal executive offices located at 10398 Pacific Center Court, San Diego, California 92121, and any adjournments or postponements thereof for the following purposes:

1. To approve and ratify the Company s debt financing in August 2007 in which the Company issued and sold an aggregate of \$20,000,000 of senior convertible notes, convertible initially into an aggregate of up to 15,748,030 shares of the Company s common stock, and related warrants to purchase shares of our common stock, exercisable initially into an aggregate of 11,023,621 shares of our common stock, and may become exercisable for an additional 6,299,212 shares of our common stock;
2. To approve an amendment to the Company s Certificate of Incorporation to effect a reverse stock split of our common stock, \$0.001 par value per share, at a specific ratio within a range of 1:5 to 1:15, to be determined by our Board of Directors, in its sole discretion, within a twelve month period following stockholder approval;
3. To approve an amendment to the Company s Certificate of Incorporation to increase the number of authorized shares of common stock from one hundred thirty-five million (135,000,000) to two hundred and fifty million (250,000,000); and
4. To transact such other business as may properly come before the special meeting and any adjournment thereof.

These matters are described more fully in this Proxy Statement which we are sending to you along with this notice.

After reading the Proxy Statement, please mark, date, sign and return, as soon as possible, the enclosed proxy card in the prepaid envelope, or vote via Internet or telephone in accordance with the instructions on the proxy card, to ensure that your shares will be represented. YOUR SHARES CANNOT BE VOTED UNLESS YOU SIGN, DATE AND RETURN THE ENCLOSED PROXY CARD, VOTE VIA INTERNET OR TELEPHONE, OR ATTEND THE SPECIAL MEETING IN PERSON.

Sincerely Yours,

HOWARD C. BIRNDORF

Chairman of the Board and

Chief Executive Officer

[*], 2007

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10398 Pacific Center Court

San Diego, California 92121

Tel: (858) 410-4600

Fax: (858) 410-4949

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON [*], 2007

[*], 2007

Dear Stockholder:

NOTICE IS HEREBY GIVEN that a special meeting of stockholders of Nanogen, Inc. (the Company) will be held on [*], 2007 at 10:00 a.m. Pacific Time at the Company's principal executive offices located at 10398 Pacific Center Court, San Diego, California 92121, and any adjournments or postponements thereof for the following purposes:

1. To approve and ratify the Company's debt financing in August 2007 in which we issued and sold an aggregate of \$20,000,000 of senior convertible notes, convertible initially into an aggregate of up to 15,748,030 shares of the Company's common stock, and related warrants to purchase shares of our common stock, exercisable initially into an aggregate of 11,023,621 shares of our common stock, and may become exercisable for an additional 6,299,212 shares of our common stock;
2. To approve an amendment to the Company's Certificate of Incorporation to effect a reverse stock split of our common stock, \$0.001 par value per share, at a specific ratio within a range of 1:5 to 1:15, to be determined by our Board of Directors, in its sole discretion, within a twelve month period following stockholder approval;
3. To approve an amendment to the Company's Certificate of Incorporation to increase the number of authorized shares of common stock from one hundred thirty-five million (135,000,000) to two hundred and fifty million (250,000,000); and
4. To transact such other business as may properly come before the special meeting and any adjournment thereof.

These matters are described more fully in this Proxy Statement which we are sending to you along with this notice.

The Board of Directors has fixed the close of business on [*], 2007, as the record date for determining the stockholders entitled to notice of and to vote at the special meeting and any adjournment thereof. A complete list of stockholders entitled to vote will be available at the Company's principal executive offices located at 10398 Pacific Center Court, San Diego, California 92121, for ten days prior to the meeting.

WHETHER OR NOT YOU INTEND TO BE PRESENT AT THE SPECIAL MEETING, WE URGE YOU TO MARK, DATE, SIGN AND RETURN THE ENCLOSED PROXY CARD PROMPTLY.

By order of the Board of Directors

William L. Respass, Esq.

Senior Vice President, General

Counsel and Secretary

[*], 2007

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NANOGEN, INC.

PROXY STATEMENT

This Proxy Statement is furnished in connection with the solicitation by the Board of Directors of Nanogen, Inc., a Delaware corporation (Nanogen or the Company), of proxies in the accompanying form to be used at the special meeting of Stockholders to be held at the Company's principal executive offices located at 10398 Pacific Center Court, San Diego, California 92121 on [*], 2007 at 10:00 a.m. Pacific Time, and at any adjournment or postponement of the special meeting (the Special Meeting).

This Proxy Statement and the accompanying form of proxy are being mailed to stockholders on or about [*], 2007.

ABOUT THE MEETING

WHY AM I RECEIVING THESE MATERIALS?

At the Special Meeting, stockholders will act upon matters described in the notice of meeting contained in this Proxy Statement. We sent you this Proxy Statement and the enclosed proxy card because the Board of Directors of the Company is soliciting your proxy to vote at the Special Meeting. You are invited to attend the Special Meeting to vote on specific proposals described in this Proxy Statement, the approval of which the Board of Directors believes will have certain beneficial effects on the Company. In particular, we believe that stockholder approval of these proposals will improve the Company's ability to raise money to fund its business operations. It is critical for the Company to raise more money in the immediate future to continue its business operations and fund its research and development activities. Therefore your vote is very important at the Special Meeting.

WHO IS ENTITLED TO VOTE?

Only holders of the Company's common stock outstanding as of the close of business on [*] (the Record Date) will be entitled to vote at the Special Meeting. At the close of business on the Record Date, the Company had [*] shares of common stock issued and outstanding and entitled to vote at the meeting. Each stockholder is entitled to one vote for each share of common stock he or she held on the Record Date.

HOW MAY I VOTE?

You may vote your shares at the Special Meeting. However, you do not need to attend the meeting to vote your shares. If your shares are registered in your own name you may vote over the Internet at <http://proxy.georgeson.com>, by telephone at 1-800-850-5909, or by signing and returning a proxy in the enclosed form. Instructions for voting over the Internet or by telephone are set forth in the enclosed proxy card. If your shares are registered in the name of a bank or brokerage firm, you will receive instructions from them that must be followed in order for them to vote the shares in accordance with your instructions.

WHO CAN ATTEND THE SPECIAL MEETING?

All stockholders, or individuals holding their duly appointed proxies, may attend the Special Meeting. Appointing a proxy in response to this solicitation will not affect a stockholder's right to attend the Special Meeting and to vote in person. Please note that if you hold your shares in street name (in other words, through a broker, bank, or other nominee), you will need to bring a copy of a brokerage statement reflecting your stock ownership as of the Record Date to gain admittance to the Special Meeting.

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WHAT CONSTITUTES A QUORUM AT THE SPECIAL MEETING?

Holders of a majority of the outstanding shares of our common stock on the Record Date must be present or represented by proxy at the Special Meeting in order to have a quorum. Shares that are marked withheld or abstain are treated as being present for purposes of determining the presence of a quorum at the Special Meeting. Once a share is represented at the Special Meeting, it will be deemed present for quorum purposes throughout the Special Meeting (including any adjournment or postponement of that meeting unless a new record date is or must be set for such adjournment or postponement).

If you hold your common stock through a bank, broker or other nominee, the broker may be prevented from voting shares held in your account on some proposals (a broker non-vote) unless you have given voting instructions to your bank, broker or nominee. Shares that are subject to a broker non-vote are counted for purposes of determining whether a quorum exists.

CAN I CHANGE MY VOTE AFTER I RETURN MY PROXY CARD?

Yes. Even after you have submitted your proxy, you may revoke or change your proxy vote at any time before it is actually voted at the Special Meeting by (i) sending a written notice of revocation to the Secretary of the Company, (ii) submitting another proxy with a later date to the Secretary of the Company, or (iii) entering a new vote by telephone or on the Internet. You may also revoke your proxy by attending and voting in person at the Special Meeting, but your attendance at the Special Meeting will not, by itself, constitute a revocation of your proxy. If your shares are registered in the name of a bank or other brokerage firm, you will receive instructions from them that you must follow in order to have your shares voted.

WHAT AM I VOTING ON?

You are voting on three proposals as described in more detail in this Proxy Statement. Proposal No. 1 is a proposal to approve and ratify the Company's debt financing in August 2007 in which we issued and sold an aggregate of \$20,000,000 of our senior convertible notes (the Notes), convertible initially into an aggregate of up to 15,748,030 shares of our common stock, and related warrants (the Warrants) to purchase shares of our common stock, exercisable initially into an aggregate of 11,023,621 shares of our common stock, and may become exercisable for an additional 6,299,212 shares of our common stock. Proposal No. 2 is a proposal to approve an amendment to our Certificate of Incorporation to effect a reverse stock split at a specific ratio, within a range of 1:5 to 1:15, to be determined by the Board of Directors in its sole discretion within a twelve month period following stockholder approval. Proposal No. 3 is a proposal to approve an amendment to our Certificate of Incorporation to increase the number of shares of authorized common stock from one hundred and thirty-five million (135,000,000) to two hundred and fifty million (250,000,000). Details of the proposals and the effect of stock approval of each of the proposals are set forth below in this Proxy Statement.

WHAT ARE THE BOARD'S RECOMMENDATIONS?

The Board recommends a vote:

FOR the approval and ratification of the debt financing completed in August 2007 (Proposal No. 1);

FOR the approval of an amendment to our Certificate of Incorporation to effect a reverse stock split of our common stock at a specific ratio, within a range of 1:5 to 1:15, to be determined by the board of directors, in its sole discretion, within a twelve month period following stockholder approval (Proposal No. 2); and

FOR the approval of an amendment to our Certificate of Incorporation to increase the number of authorized shares of common stock from one hundred and thirty-five million (135,000,000) to two hundred and fifty million (250,000,000) (Proposal No. 3).

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WHAT VOTE IS REQUIRED TO APPROVE THE PROPOSALS?

The vote required to approve Proposal No. 1 (approval of August 2007 debt financing) is a majority of the total votes cast on such proposal, provided a quorum is present. The vote required to approve Proposal No. 2 (authorizing a reverse stock split) and Proposal No. 3 (authorizing an increase in authorized number of shares of common stock) is a majority of the outstanding stock entitled to vote at the Special Meeting.

An abstaining vote and a broker non-vote are counted as present, and are therefore included for the purposes of determining whether a quorum of shares is present at the Special Meeting. A broker non-vote occurs when a broker or nominee holding shares in street name for a stockholder does not vote on a particular proposal because such broker or nominee does not have the discretionary voting authority with respect to that proposal and has not received instructions from the stockholder. Under the rules that govern brokers who are voting with respect to shares held by them as nominee, brokers have the discretion to vote such shares only on routine matters. Routine matters include, among other things, the election of directors and ratification of auditors. However, the proposals included in this Proxy Statement are non-routine matters, therefore the brokers do not have discretionary voting authority to vote such shares.

Broker non-votes are considered votes cast and therefore have no impact on matters requiring a majority of the votes cast, such as Proposal No. 1. However, broker non-votes will have the effect of a negative vote for matters that require a majority of the outstanding stock entitled to vote, such as Proposal No. 2 and Proposal No. 3.

ARE THERE ANY OTHER ITEMS THAT ARE TO BE DISCUSSED AT THE SPECIAL MEETING?

No. The Company is not aware of any other matters that you will be asked to vote on at the Special Meeting. If other matters are properly brought before the Special Meeting, the Board of Directors or proxy holders will use their discretion on these matters as they may arise.

WHO PAYS TO PREPARE, MAIL, AND SOLICIT THE PROXIES?

The Company will bear the expense of printing and mailing proxy materials. In addition to the solicitation of proxies by mail, solicitation may be made by the Company's directors, officers or other employees by telephone, facsimile or other means. No additional compensation will be paid to such persons for such solicitation. The Company will reimburse brokerage firms and others for their reasonable expenses in forwarding solicitation materials to beneficial owners of our common stock. The Company has retained Georgeson Inc. to assist in the solicitation of proxies for a fee of approximately \$10,000, plus certain out of pocket expenses.

HOW CAN I CONTACT THE MEMBERS OF THE BOARD?

Although we do not have a formal policy regarding stockholder communications, stockholders may communicate with the Board of Directors, including the non-management directors, by sending a letter to Nanogen's Board of Directors, c/o Corporate Secretary, Nanogen, Inc. 10398 Pacific Center Court, San Diego, California 92121.

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WHO CAN HELP TO ANSWER MY ADDITIONAL QUESTIONS?

If you would like additional copies, without charge, of this Proxy Statement or if you have additional questions about the proposals, including with respect to the procedures for voting your shares, you should contact

Nanogen, Inc.

10398 Pacific Center Court

San Diego, California 92121

Telephone: (858) 410-4600

or

Georgeson

199 Water Street, 26th Floor

New York, NY 10038

Telephone: (800) 501-4283

IMPORTANT

WHETHER OR NOT YOU INTEND TO BE PRESENT AT THE SPECIAL MEETING, WE URGE YOU TO MARK, DATE AND SIGN THE ENCLOSED PROXY CARD AND RETURN IT AT YOUR EARLIEST CONVENIENCE IN THE ENCLOSED POSTAGE-PREPAID RETURN ENVELOPE. THIS WILL NOT LIMIT YOUR RIGHTS TO ATTEND OR VOTE AT THE SPECIAL MEETING.

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PROPOSAL NO. 1

APPROVAL OF THE AUGUST 2007 DEBT FINANCING, THE ISSUANCE AND SALE OF AN AGGREGATE OF \$20,000,000 OF SENIOR CONVERTIBLE NOTES AND RELATED WARRANTS TO PURCHASE SHARES OF COMMON STOCK, AND THE ISSUANCE OF SHARES OF COMMON STOCK UPON CONVERSION OF THE NOTES AND EXERCISE OF THE WARRANTS

Introduction

We are seeking stockholder approval of a registered debt financing we completed in August 2007 in which we issued and sold an aggregate of \$20.0 million in principal amount of our senior convertible notes, or the Notes, convertible initially into an aggregate of up to 15,748,030 shares of our common stock (the Common Stock), and Series A warrants, Series B warrants and Series C warrants, or the Warrants, to purchase shares of common stock, exercisable initially into an aggregate of 11,023,621 shares of our common stock, and may become exercisable for an additional 6,299,212 shares of our common stock (the Debt Financing). The Notes and Warrants were sold pursuant to an effective shelf registration statement and the terms of a Securities Purchase Agreement, dated August 26, 2007, between us and certain institutional investors (the Securities Purchase Agreement). The terms of the Notes are set forth in an indenture dated as of August 27, 2007 with The Bank of New York Trust Company, N.A., as trustee, which was supplemented by the first supplemental indenture dated as of August 27, 2007 (the Indenture).

As discussed below, pursuant to the terms of the Securities Purchase Agreement, we agreed to seek stockholder approval of the Debt Financing. If this approval is obtained, it will eliminate the \$1.2675 floor on adjustments to the conversion price of the Notes and the \$1.13 floor on adjustment to the exercise price of the Warrants, in the event of future issuances of shares of our common stock (or securities convertible into or exercisable for common stock) at a price per share that is less than the then current conversion price of the Notes or the then current exercise price of the Warrants.

We believe that stockholder approval of Proposal No. 1 will also provide us with more flexibility to raise capital by removing certain restrictions on our ability to conduct equity financing in the future. We will need to raise more money in the immediate future to continue our business operations and fund our research and development activities, therefore stock approval of Proposal No. 1 is critical in ensuring that we will have the ability to do so.

The following discussion includes summaries of the Securities Purchase Agreement, the Indenture and the Warrants, copies of which are attached to this proxy statement as Appendices A, B, and C, respectively. These summaries are qualified in their entirety by reference to those documents.

Basic Terms of the Notes

The initial maturity date of the Notes is August 27, 2010, subject to extension under certain circumstances. The Notes bear interest at 6.25% per annum, payable quarterly in arrears commencing on September 30, 2007. The interest will be paid, subject to certain conditions, in cash or shares of common stock, or a combination of cash and shares of common stock. Upon and during the occurrence of an Event of Default (as defined in the Indenture), the interest rate under the Notes will increase to 12% per annum. Past due amounts, including principal and interest, are subject to a late charge of 15% per annum from the date due until paid.

The principal amount of the Notes, together with any accrued and unpaid interest and any late charges (the Conversion Amount), are convertible by the holders of the Notes at any time into shares of common stock at an initial conversion price of \$1.27 per share, subject to certain limitations on beneficial ownership and the rules and regulations of the NASDAQ Global Market. The Conversion Amount will also include the net present value of interest on the Note calculated at a 6.25% discount rate upon any conversion event or redemption event, subject to certain limitations.

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The conversion price is subject to anti-dilution adjustments, including full ratchet anti-dilution protection for any equity or convertible securities issuances within eighteen (18) months of the issuance of the Notes and weighted-average anti-dilution protection thereafter. If through the eighteen (18) month anniversary of the issuance date of the Notes, we issue or sell any shares of our common stock (except for certain issuances of securities such as stocks and options under employee benefit plans) for a consideration per share (the New Issuance Price) less than a price (the Applicable Price) equal to the Conversion Price in effect immediately prior to such issue or sale (the foregoing a Dilutive Issuance), then immediately after such issuance or sale, the Conversion Price then in effect shall be reduced to an amount equal to the New Issuance Price. If on or after the eighteen (18) month anniversary of the issuance date of the Notes, we issue or sell any shares of common stock (except for certain issuances of securities such as stocks and options under employee benefit plans) in a Dilutive Issuance, then immediately after such Dilutive Issuance, the Conversion Price then in effect will be reduced to an amount equal to the product of (A) the Conversion Price in effect immediately prior to such Dilutive Issuance and (B) the quotient determined by dividing (1) the sum of (I) the product derived by multiplying the Conversion Price in effect immediately prior to such Dilutive Issuance and the number of shares of common stock deemed outstanding immediately prior to such Dilutive Issuance plus (II) the consideration, if any, received by us upon such Dilutive Issuance, by (2) the product derived by multiplying (I) the Applicable Price in effect immediately prior to such Dilutive Issuance by (II) the number of shares of common stock deemed outstanding immediately after such Dilutive Issuance.

The anti-dilution adjustment described above is subject to a floor, such that no adjustment will be made if it causes the conversion price to be less than \$1.2675 (Conversion Price Floor) as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction, unless we receive stockholder approval that may be required under applicable rules of NASDAQ. Pursuant to the Securities Purchase Agreement, we have agreed to solicit stockholder approval for the issuance of the Notes and the Warrants at or prior to our annual stockholders meeting in 2008.

If at any time after the twenty-four-month anniversary of the issuance date of the Notes, the last closing sale price of our common stock on the NASDAQ Global Market exceeds \$2.2225 for 20 out of 30 consecutive trading days, then we have the right, subject to compliance with certain conditions, to require holders of the Notes to convert all or any portion of the Notes.

The Indenture contains event of default provisions, which include, but are not limited to, suspension of Common Stock from trading, failure to cure conversion failures or maintain sufficient shares of common stock available for conversion, breaches of covenants, breaches of material representations, failure to repay certain indebtedness exceeding \$250,000, the occurrence of bankruptcy or similar events, default under our material agreements, and the rendering of a final judgment in excess of \$500,000 not covered by insurance. After the occurrence of an Event of Default, any holder may require the Company to redeem all or a portion of the holder's Note at a redemption price in cash equal to the greater of (i) the product of (x) the Conversion Amount to be redeemed and (y) the applicable redemption premium (120%), and (ii) the product of (A) the Conversion Amount divided by the conversion price in effect at such time as the holder delivers the redemption notice and (B) the greater of (1) Closing Sale Price of the Common Stock on the date immediately preceding the Event of Default, and (2) the Closing Sale Price of the Common Stock on the date immediately after the Event of Default and (3) the Closing Sale Price of the Common Stock on the date the holder delivers the redemption notice.

In connection with a Change of Control (as defined in the Indenture), the holders of the Notes will have the right to require the Company to redeem all or any portion of their Notes at a redemption price (the Change of Control Redemption Price) in cash equal to the sum of (1) accrued and unpaid interest and late charges and (2) the greater of (i) the product of (x) the Conversion Amount (excluding interest and late charges) being redeemed and (y) the quotient determined by dividing (A) the greater of the Closing Sale Price of the Common Stock immediately prior to the consummation of the Change of Control, the Closing Sale Price of the Common Stock immediately following the public announcement of such proposed Change of Control and the Closing Sale Price of the Common Stock immediately prior to the public announcement of such proposed Change of Control

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by (B) the then applicable conversion price, and (ii) 120% of the Conversion Amount (excluding interest and late charges) being redeemed.

In the event of a Change of Control, the Company has the right to redeem all of the Notes at a price in cash equal to the sum of (1) accrued and unpaid interest on the Notes and late charges and (2) the greater of (i) the product of (x) the Conversion Amount (excluding interest and late charges) of the Notes being redeemed and (y) the quotient determined by dividing (A) the greater of the Closing Sale Price of the Common Stock immediately prior to the consummation of the Change of Control, the Closing Sale Price of the Common Stock immediately following the public announcement of such proposed Change of Control and the Closing Sale Price of the Common Stock immediately prior to the public announcement of such proposed change of control by (B) the then applicable conversion price, and (ii) 120% (if the acquirer is not a publicly traded company) or 140% (if the acquirer is a publicly traded company) of the Conversion Amount (excluding interest and late charges) of the Notes being redeemed.

Upon the occurrence of any Fundamental Transaction (as defined in the Indenture), the Company will be required to reaffirm to the holders its obligations under the Notes and financing agreements as well as to provide a confirmation that following the consummation of the Fundamental Transaction, the Note will be convertible into either (i) Common Stock or other shares of publicly traded Common Stock (or their equivalent) of the Company, or the Company as the Successor Entity (as defined in the Indenture), or (ii) if the Company is not a publicly traded entity following the Fundamental Transaction, the securities or other cash or assets that the Note holder would have received had it converted the Note immediately prior to the consummation of the Fundamental Transaction.

The Indenture contains customary covenants which, among other things, restrict the Company's ability to (i) incur additional indebtedness other than in connection with existing indebtedness or certain other permitted indebtedness under the terms of the Indenture; (ii) grant liens on the Company's assets other than certain ordinary permitted liens; and (iii) make distributions on or repurchase shares of Common Stock.

In addition, we will not be obligated to issue any shares of common stock upon conversion of the Notes, and the holders of the Notes shall not have the right to receive upon conversion of the Notes any shares of common stock, if the issuance of such shares of common stock would exceed the aggregate number of shares of common stock permitted under the NASDAQ, unless we obtain the approval of our stockholders as required by the applicable rules of NASDAQ.

Basic Terms of the Warrants

The Warrants entitle the holders to purchase initially an aggregate of 11,023,622 shares of the Common Stock. Series A Warrants are exercisable at any time during a five (5)-year period following the date of issuance at an initial exercise price of \$1.14. At any time following the termination of the letter of credit, if the closing sales price of the Common Stock is at least 135% of the applicable exercise price of Series A Warrants for 20 out of 30 consecutive trading days, the Company may require holders of the Series A Warrants to exercise the Series A Warrants.

Series B Warrants become exercisable only if any Series A Warrant is exercised, whether at the option of the holders or following the Company Exercise Right. The number of exercisable Series B Warrants will equal to the number of Series A Warrants exercised. With respect to Series B Warrants that become exercisable in any calendar quarter, the exercise price will equal to 110% of the Closing Sales Price of the Common Stock on last trading day of such calendar quarter. On the date when all of Series A Warrants are exercised, the exercise price for any previously unexercised Series B Warrants will be equal to 110% of the Closing Sales Price of the Common Stock on such date, provided that such exercise price is subject to a floor and cannot be less than \$1.13 per share, unless we receive stockholder approval that may be required under applicable rules of NASDAQ. Each Series B Warrant has a three (3)-year term from the date on which the Series B Warrant becomes exercisable.

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Series C Warrants are exercisable at any time during a five (5)-year period following the date of issuance at an initial exercise price of \$1.14. At any time after the later of (i) six-month anniversary of the issuance date of Series C Warrants; (ii) thirty (30) days after the date when all Series A Warrants are exercised; and (iii) thirty (30) days after the termination of the letter of credit, if the closing sales price of the Common Stock is at least 125% of the applicable exercise price for 20 out of 30 consecutive trading days, the Company may require holders of the Series C Warrants to exercise the Series C Warrants.

The exercise price of the Warrants is subject to anti-dilution adjustments that are identical to those described above for the Notes, including full ratchet anti-dilution protection for any equity or convertible securities issuances within eighteen (18) months of the issuance of the Warrants and weighted-average anti-dilution protection thereafter. The anti-dilution adjustment is subject to a floor, such that no adjustment will be made if it causes the exercise price to be less than \$1.13 (Exercise Price Floor) as adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction, unless we receive stockholder approval that may be required under applicable rules of NASDAQ. Pursuant to the Securities Purchase Agreement, we have agreed to solicit stockholder approval for the issuance of the Notes and the Warrants at or prior to our annual stockholders meeting in 2008.

In the event of a Fundamental Transaction (as defined in the Warrants), the Purchaser has certain right to require the Company to exchange the Warrants or to reaffirm its obligations after the Fundamental Transaction. The Warrants may only be exercised on a cashless exercise basis in the event that the Shelf Registration Statement or another registration statement is not available at the time of exercise of such Warrants.

In addition, we will not be obligated to issue any shares of common stock upon exercise of the Warrants, and the holders of the Warrants shall not have the right to receive upon exercise of Warrants any shares of common stock, if the issuance of such shares of common stock would exceed the aggregate number of shares of common stock permitted under the rules or regulations of the NASDAQ, unless we obtain the approval of our stockholders as required by the applicable rules of the NASDAQ.

Restricted Cash and Letter of Credit

Pursuant to the Securities Purchase Agreement, we issued a letter of credit in favor of holders of the Notes in the amount of \$7.0 million to secure our obligations under the Notes. We deposited \$7.3 million of the total \$20.0 million proceeds from the Debt Financing in a cash collateral account with Wells Fargo Bank to secure our reimbursement obligations in respect of the letter of credit. The funds in the cash collateral account will be released to us if we meet certain conditions, which include, but are not limited to, the following: (i) the closing sales price of our common stock on the NASDAQ Global Market is equal to or exceeds \$1.524 per share for 20 out of 30 consecutive trading days; (ii) there is no event of default under the Indenture; and (iii) our common stock has not been suspended for trading on NASDAQ. The Notes are not secured by any of our assets or assets of our subsidiaries.

Use of Proceeds

The net proceeds we received from the Debt Financing was approximately \$19.04 million, after deducting the placement agent fees and estimated offering expenses. At closing we deposited \$7.3 million in cash from the proceeds of the Debt Financing in a cash collateral account with Wells Fargo Bank to secure our reimbursement obligations in respect of the letter of credit. See the section above entitled *Letter of Credit* under the heading *Basic Terms of Notes*. We may receive additional funds in the event of any cash exercise of the Warrants.

We intend to use the net proceeds we received from the Debt Financing for working capital, acquisitions and other general corporate purposes, including the development and support of our sales and marketing organization, support for our continuing research and development efforts and, if opportunities arise, to acquire businesses, products, technologies or licenses that are complementary to our business and make strategic

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investments in businesses complementary to our business. As of the date of this proxy statement, we have no specific agreements, understandings, commitments or arrangements with regard to any particular future acquisition or strategic investment, and no assurance can be given that we will be able to consummate any such acquisitions or strategic investments or that, if consummated, such acquisitions or investments would be on terms that are favorable to us.

Why We Are Seeking Stockholder Approval of Proposal No. 1

We are seeking stockholder approval of the Debt Financing and the issuance of common stock upon conversion of the Note and exercise of the Warrants in order to (i) eliminate the Conversion Price Floor and Exercise Price Floor contained in the Note and the Warrants, respectively; (ii) improve our ability to raise capital by removing certain restriction on equity financing; (ii) comply with the NASDAQ Marketplace Rules, and (iii) fulfill a covenant made by us under the Securities Purchase Agreement.

Elimination of Pricing Floors. In the event we issue shares of our common stock or securities convertible into share of our common stock at prices below the conversion price of the Notes or the exercise price of the Warrants, or dilutive issuances, the anti-dilution provisions in the Notes and Warrants prohibit us to adjust the conversion price or the exercise price to below the Conversion Price Floor or the Exercise Price Floor, respectively. If these pricing floors are eliminated, then following future dilutive issuances, it is possible for such conversion or exercise price to be adjusted to a price that is below the market price of the common stock as of the closing of the Debt Financing. As such, the holders of the Notes will receive full benefit of the anti-dilution protection. In addition, it will also be possible for the number of shares of common stock to be issued upon conversion of the Notes and/or exercise of the Warrants to equal or exceed 20% of the outstanding shares or voting power as of the closing of the Debt Financing.

Improved Ability to Raise Capital. We will need to raise more money in the immediately future to continue our business operations and fund our research and development activities, and to further develop our current products, bring our products to market and enhance our manufacturing and marketing capabilities. We depend heavily on equity financing to fund our operations, especially when we are not able to access the funds in the cash collateral account with Wells Fargo due to the performance of our stock. However, the Securities Purchase Agreement prohibits us from issuing or selling shares of our common stock, warrants or other equity securities at a price per share that is less than the conversion price of the Note or the exercise price of the Warrants without first obtaining stockholder approval to eliminate the Conversion Price Floor and the Exercise Price Floor. If stockholder approval is obtained, it will remove this restriction and provide us with more flexibility to raise capital through equity financing in the future. Therefore, stockholder approval of Proposal No. 1 is critical in ensuring that we will have the ability to raise the necessary capital to continue our operations.

NASDAQ Marketplace Rules. Rule 4350(i) of the NASDAQ Marketplace Rules requires stockholder approval for the issuance of securities other than in a public offering at a price per share less than the greater of the book or market value of a company's stock, where the amount of securities being issued represents 20% or more of an issuer's outstanding listed securities or 20% or more of the voting power outstanding before the issuance.

We are subject to the NASDAQ Marketplace Rules because our common stock is listed on the NASDAQ Global Market. The issuance of the Notes and Warrants in the Debt Financing, and the issuance of shares of common stock upon conversion of the Notes and exercise of the Warrants, did not require stockholder approval under NASDAQ Marketplace Rule 4350(i) because of the applicable Conversion Price Floor and Exercise Price Floor. We are seeking stockholder approval pursuant to Rule 4350(i) so that under the terms of the Notes and the Warrants, if stockholder approval is obtained, the Conversion Price Floor and Exercise Price Floor contained in the Convertible Note and the Warrants will be eliminated. In addition, it will also be possible for the number of shares of common stock to be issued upon conversion of the Convertible Note or exercise of the Warrants to equal or exceed 20% of the outstanding shares or voting power as of the closing of the Debt Financing.

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Covenant of the Debt Financing. The Securities Purchase Agreement includes a covenant that requires us to seek stockholder approval of the Debt Financing in accordance NASDAQ Marketplace Rules prior to our annual stockholders meeting in 2008. We will satisfy this obligation by seeking and obtaining such stockholders approval at the Special Meeting.

No Appraisal Rights

Under Delaware law, stockholders are not entitled to appraisal or other similar rights in connection with Debt Financing.

Effect of the Approval of this Proposal No. 1 on Current Stockholders

If the stockholders approve Proposal No. 1, then the conversion price of the Notes and exercise price of the Warrants would be adjusted downward if we issue or sell our securities at a price less than the current conversion price of the Notes or exercise price of the Warrants. As a result, the issuance of Common Stock upon a future conversion of Notes or exercise of the Warrants could potentially result in additional and significant dilution to the voting interest of our existing stockholders.

If we obtained stockholder approval of Proposal No. 1, the total number of shares of common stock that may be issued upon conversion of the Notes and exercise of the Warrants, and as interest payment under the Notes, may exceed 20% of outstanding shares or voting power as of the closing of the Debt Financing. The 33,070,863 shares of Common Stock initially issuable upon conversion of the Note and exercise of the Warrants (without regard to additional shares which may become issuable due to anti-dilution adjustments, interest payment and other adjustments under the terms of the Notes and Warrants) represent approximately [*]% of the shares of Common Stock outstanding as of the Record Date and, assuming such shares of common stock are issued, represent a significant dilution of the voting interests of existing stockholders. The issuance of shares of common stock pursuant to the Notes and the Warrants will also have a dilutive effect on earnings per share and may adversely affect the market price of our common stock.

In addition, if the stockholders approve Proposal No. 1, we will no longer be subject to the restrictions under the Securities Purchase Agreement to sell shares of our common stock at a discounted price, which will improve our ability to raise capital and fund our operations through equity financing. It is critical that we raise more money in the immediate future to continue our operations, therefore it is important that we obtain stockholder approval of Proposal No. 1.

Finally, if the stockholders approve Proposal No. 1, we will have satisfied our obligations under the Securities Purchase Agreement to seek stockholders approval of the Debt Financing and comply with NASDAQ Marketplace Rules as described above.

Approval Required

The vote of a majority of the total votes cast on Proposal No. 1 is required to approve the Debt Financing. Abstentions and broker non-votes will not have an impact on the approval of Proposal No. 1.

Further Information

The terms of the Notes, Warrants and other transaction documents in the Debt Financing are complex and only briefly summarized above. For further information on the Debt Financing and the rights of the holders of the Notes, please refer to the descriptions contained in a prospectus supplement and the accompanying prospectus filed with the SEC on August 27, 2007 and the Current Report on Form 8-K filed on August 27, 2007 and the transaction documents filed as exhibits to such report.

Recommendation

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE FOR APPROVAL OF PROPOSAL NO. 1.

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PROPOSAL NO. 2

APPROVAL OF AMENDMENT TO THE COMPANY S CERTIFICATE OF INCORPORATION

TO EFFECT A REVERSE STOCK SPLIT

Introduction

The Board is recommending that the stockholders approve an amendment to our Certificate of Incorporation to effect a reverse stock split of outstanding shares of our common stock at a ratio within a range of 1:5 to 1:15. If this proposal is approved, the Board or a committee of the Board will have the authority to decide, within twelve months from the Special Meeting, whether to implement the split and the exact ratio of the split within this range if it is to be implemented. If the Board then decides to implement the split, it will become effective after filing the amendment with the Secretary of State of the State of Delaware (the Effective Date). Even if the stockholders approve the reverse split, it is within the discretion of the Board or a committee of the Board when to effect the reverse stock split, if at all, within twelve months from the Special Meeting, and to select the appropriate exchange ratio.

If the reverse stock split is implemented, the number of issued and outstanding shares of common stock would be reduced in accordance with the exchange ratio selected by the Board or committee. Following the reverse stock split, all of our securities convertible into or exercisable for shares of common stock, including the Notes and Warrants, will be convertible or exercisable at a higher price for such lesser number of shares of common stock for or into which such security was previously convertible or exercisable as determined by the exchange ratio and such documents governing such security. The reverse stock split, if implemented, would not change the number of authorized shares of common stock or the par value of our common stock, which is why we are making a separate proposal to increase the number of authorized shares of our common stock. See PROPOSAL NO. 3. The form of amendment to the Company s Certificate of Incorporation to effect the reverse split is attached as Appendix D to this proxy statement.

Purpose of the Reverse Stock Split

The Board s primary objectives in proposing the reverse stock split are to raise the per share trading price of our common stock and to increase the number of shares of our authorized but unissued common stock. The Board believes that a higher per share trading price would, among other things, (i) better enable us to maintain the listing of our common stock on The NASDAQ Global Market, (ii) facilitate higher levels of institutional stock ownership, where investment policies generally prohibit investments in lower-priced securities and (iii) better enable us to raise funds to finance our business operations.

Our common stock is currently quoted on The NASDAQ Global Market. In order for the common stock to continue to be quoted on The NASDAQ Global Market, we must satisfy various listing standards established by NASDAQ, including the requirement that we maintain a minimum bid price of our common stock above \$1.00 per share. If the closing bid price of our common stock is under \$1.00 per share for 30 consecutive trading days and does not thereafter reach \$1.00 per share or higher for a minimum of ten (10) consecutive trading days during 180 calendar days following notification by NASDAQ, NASDAQ may delist the common stock from trading. We believe that maintaining the listing of our common stock on the NASDAQ Global Market is in the best interests of the Company and our stockholders.

On November 27, 2007, we received a letter from NASDAQ Stock Market informing us that the closing bid price of our common stock was under \$1.00 per share for 30 consecutive business days, and that we have 180 calendar days, or until May 27, 2008, to regain compliance with the minimum bid requirement under NASDAQ rules. The closing sale price of our common stock on December 6, 2007 was \$0.565 per share. The reverse stock split could increase the per share bid price of our common stock, thereby help us regain compliance with the minimum bid price requirement under the listing standard of NASDAQ Global Market and avoid delisting of our common stock.

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The Board further believes that an increased stock price may encourage investor interest and improve the marketability of our common stock to a broader range of investors, and thus enhance liquidity. Because of the trading volatility often associated with low-priced stocks, many brokerage firms and institutional investors have internal policies and practices that either prohibit them from investing in low-priced stocks or tend to discourage individual brokers from recommending low-priced stocks to their customers. The Board believes that the anticipated higher market price resulting from a reverse stock split would enable institutional investors and brokerage firms with such policies and practices to invest in our common stock.

Furthermore, the Board believes that the reverse split would facilitate our efforts to raise capital to fund our planned operations. It is critical for the Company to raise more money in the immediate future to continue its business operations and fund its research and development activities. We depend heavily on the issuance of equity securities as a source of funding. The reverse stock split would reduce the number of shares of common stock outstanding without reducing the total number of authorized shares of Common Stock (we are also seeking stockholder approval to increase the authorized number of shares in Proposal No. 3). As a result, the Company would have a larger number of authorized but unissued shares from which to issue additional shares of common stock, or securities convertible or exercisable into shares of common stock, in equity financing transactions.

The purpose of seeking stockholder approval of a range of exchange ratios from 1:5 to 1:15 (rather than a fixed exchange ratio) is to provide us with the flexibility to achieve the desired results of the reverse stock split. If our stockholders approve this proposal, the Board or a committee of the Board would effect a reverse stock split only upon the Board or committee's determination that a reverse stock split would be in the best interests of the Company at that time. If the Board were to effect a reverse stock split, the Board would set the timing for such a split and select the specific ratio within the range of 1:5 to 1:15. No further action on the part of stockholders would be required to either implement or abandon the reverse stock split. If the stockholders approve the proposal, and the Board or a committee of the Board determines to effect the reverse stock split, we would communicate to the public, prior to the Effective Date, additional details regarding the reverse split, including the specific ratio selected by the Board or committee. If the Board or a committee of the Board does not implement the reverse stock split within twelve months from the Special Meeting, the authority granted in this proposal to implement the reverse stock split will terminate. The Board reserves its right to elect not to proceed with the reverse stock split if it determines, in its sole discretion, that this proposal is no longer in the best interests of the Company.

Criteria to be Used for Decision to Effectuate the Reverse Stock Split

If the stockholders approve the reverse stock split, the Board or a committee of the Board will be authorized to proceed with the reverse split. In determining whether to proceed with the reverse split and setting the exact amount of split, if any, the Board or committee will consider a number of factors, including market conditions, existing and expected trading prices of our common stock, The NASDAQ Global Market listing requirements, the Company's additional funding requirements and the amount of the Company's authorized but unissued common stock. In determining a specific reverse stock split ratio, the Board will consider, in addition to any other factors that it deems relevant, which ratio it believes enhances the likelihood that we will remain eligible for listing on The NASDAQ Global Market and attractive to potential investors without excessively reducing the liquidity in the common stock due to the fewer number of shares outstanding.

Material Effects of Proposed Reverse Stock Split

The Board believes that the reverse stock split will increase the per share price of our common stock in order to, among other things, ensure continued compliance with the NASDAQ minimum bid price listing requirement and generate interest in the Company among investors. The Board cannot predict, however, the effect of the reverse split upon the market price for the common stock. The market price per share of our common stock after the reverse split may not rise in proportion to the reduction in the number of shares of common stock outstanding resulting from the reverse split, which would reduce the market capitalization of the

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Company. The market price per share after the reverse stock split may not remain in excess of the \$1.00 minimum bid price as required by NASDAQ, or the Company may not otherwise meet the requirements for continued listing on The NASDAQ Global Market. The market price of the common stock may also be based on our performance and other factors, the effect of which the Board cannot predict.

The reverse split will affect all stockholders of the Company uniformly and will not affect any stockholder's percentage ownership interests or proportionate voting power, except to the extent that the reverse split results in any of stockholders owning a fractional share. In lieu of issuing fractional shares, we may either (i) directly pay each stockholder who would otherwise have been entitled to a fraction of a share an amount in cash equal to the closing sale price of the common stock, as quoted on NASDAQ on the Effective Date, multiplied by the fractional share amount, or (ii) make arrangements with our transfer agent to aggregate all fractional shares otherwise issuable in the reverse stock split and sell these whole shares as soon as possible after the Effective Date at then prevailing market prices on the open market on behalf of those stockholders, and then pay each such stockholder his, her or its pro rata portion of the sale proceeds.

The principal effects of the reverse split will be that (i) the number of shares of common stock issued and outstanding will be reduced from shares as of December 3, 2007 to a range of 14,625,316 to 4,875,106 shares, depending on the exact split ratio chosen by the Board or a committee of the Board, (ii) all outstanding options and warrants, including the Warrants issued in the Debt Financing, entitling the holders to purchase shares of common stock will enable such holders to purchase, upon exercise of their options or warrants, one-fifth to one-fifteenth of the number of shares of common stock which such holders would have been able to purchase upon the exercise of their options or warrants immediately preceding the reverse split, at an exercise price equal to five to fifteenth times the exercise price specified before the reverse split, resulting in the same aggregate price being required to be paid upon exercise thereof immediately preceding the reverse split; (iii) all outstanding restricted stock units, entitling the holders to be issued shares of common stock following the vesting of those units will entitle the holders to be issued one-fifth to one-fifteenth of the number of shares of common stock such holders would have been issued pursuant to those units immediately preceding the reverse split; (iv) all outstanding Notes entitling the holders to convert into shares of common stock will enable such holders to convert one-fifth to one-fifteenth of the number of shares of common stock which such holders would have been able to convert immediately preceding the reverse split, at a conversion price equal to five to fifteen times the conversion price specified before the reverse split, resulting in the same aggregate price being required to be paid upon conversion thereof immediately preceding the reverse split; and (v) the following adjustments will be made to the Company's 1997 Stock Incentive Plan, 2002 Stock Bonus Plan, Employee Stock Purchase Plan and the Epoch Biosciences, Inc. 2003 Stock Incentive Plan (the "Plans"): (a) the number of shares reserved for issuance pursuant to each of the Plans will be reduced to one-fifth to one-fifteenth of the number of shares currently reserved for issuance under each such plan; (b) the maximum number of option shares and stock appreciation rights that may be granted to any one participant in a single calendar year under the 1997 Stock Incentive Plan will be reduced to one-fifth to one-fifteenth of the number of shares that may currently be granted to any participant; (c) the maximum number of shares purchasable per participant at each semi-annual purchase interval under the Employee Stock Purchase Plan will be reduced to one-fifth to one-fifteenth of the number of shares currently purchasable per participant at each such semi-annual purchase interval; and (d) the annual automatic increase to the share reserve under the Epoch Biosciences, Inc. 2003 Stock Incentive Plan will be limited each year to one-fifth to one-fifteenth of the number of shares that would otherwise have been added to the plan pursuant to such automatic increase.

The reverse stock split will not affect the par value of our common stock. As a result, on the Effective Date, the stated capital on the Company's balance sheet attributable to the common stock will be reduced to one-fifth to one-fifteenth of its present amount, depending on the exact amount of the split, and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. The per share net income or loss and net book value of the common stock will be retroactively increased for each period because there will be fewer shares of common stock outstanding. The reverse stock split, if implemented, would not change the number of authorized shares of common stock.

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The reverse stock split and amendment of our Certificate of Incorporation will not change the terms of the common stock. After the reverse split, the shares of common stock will have the same voting rights and rights to dividends and distributions, if any, and will be identical in all other respects to the Common Stock now authorized. Each stockholder's percentage ownership of the new common stock will not be altered except for the effect of eliminating fractional shares. The common stock issued pursuant to the reverse split will remain fully paid and non-assessable. The reverse split is not intended as, and will not have the effect of, a going private transaction covered by Rule 13e-3 under the Securities Exchange Act of 1934, as amended. Following the reverse split, we will continue to be subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended.

Procedure for Effecting Reverse Stock Split and Exchange of Stock Certificates

If the reverse stock split is approved by our stockholders, and the Board or a committee of the Board determines it is in the best interests of the Company to effect the split, the reverse stock split would become effective at such time as the amendment to the Company's Certificate of Incorporation, the form of which is attached as *Appendix D* to this proxy statement, is filed with the Secretary of State of Delaware. Upon the filing of the amendment, all of our existing common stock will be converted into new common stock as set forth in the amendment.

As soon as practicable after the Effective Date, stockholders will be notified that the reverse split has been effected. Computershare Inc., the Company's transfer agent, will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-reverse split shares will be asked to surrender to the exchange agent certificates representing pre-reverse split shares in exchange for certificates representing post-reverse split shares in accordance with the procedures to be set forth in a letter of transmittal that will be delivered to the Company's stockholders. No new certificates will be issued to a stockholder until the stockholder has surrendered to the exchange agent his, her or its outstanding certificate(s) together with the properly completed and executed letter of transmittal. **STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATE AND SHOULD NOT SUBMIT ANY CERTIFICATE UNTIL REQUESTED TO DO SO.** Stockholders whose shares are held by their broker do not need to submit old share certificates for exchange. These shares will automatically reflect the new quantity of shares based on the reverse split. Beginning on the Effective Date, each certificate representing pre-reverse split shares will be deemed for all corporate purposes to evidence ownership of post-reverse split shares.

Fractional Shares

We will not issue fractional certificates for post-reverse split shares in connection with the reverse split. In lieu of issuing fractional shares, we may either (i) directly pay each stockholder who would otherwise have been entitled to a fraction of a share an amount in cash equal to the closing sale price of the common stock, as quoted on NASDAQ on the Effective Date, multiplied by the fractional share amount, or (ii) make arrangements with the transfer agent to aggregate all fractional shares otherwise issuable in the reverse stock split and sell these whole shares as soon as possible after the Effective Date at then prevailing market prices on the open market on behalf of those holders, and then pay each such holder his, her or its pro rata portion of the sale proceeds.

No Dissenter's Rights

Under the Delaware General Corporation Law, stockholders will not be entitled to dissenter's rights with respect to the proposed amendment to the charter to effect the reverse stock split, and we do not intend to independently provide stockholders with any such right.

Certain U.S. Federal Income Tax Consequences of the Reverse Stock Split

The following is a summary of certain U.S. federal income tax consequences relating to the reverse stock split as of the date hereof. This summary addresses only U.S. holders who hold their common stock as a capital asset for U.S. federal income tax purposes (i.e., generally, property held for investment).

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For purposes of this summary, a U.S. holder means a beneficial owner of common stock who is any of the following for U.S. federal income tax purposes: (i) an individual who is a citizen or resident of the United States, for U.S. federal income tax purposes, (ii) a corporation created or organized in or under the laws of the United States, any state thereof, or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (iv) a trust if (1) its administration is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all of its substantial decisions, or (2) it has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

This summary is based on interpretations of the Internal Revenue Code of 1986, as amended (the Code), and regulations, rulings and judicial decisions as of the date hereof. These authorities may be changed, perhaps retroactively, and may adversely affect the U.S. federal income tax consequences described herein. This summary does not discuss all of the tax consequences that may be relevant to particular stockholders or to stockholders subject to special treatment under U.S. federal income tax laws.

Moreover, this description does not address the U.S. federal estate and gift tax, alternative minimum tax, state, local, foreign or other tax consequences of the reverse stock split.

Each stockholder should consult their own tax adviser concerning the particular U.S. federal tax consequences of the reverse stock split, as well as any consequences arising under the laws of any other taxing authority, such as any state, local or foreign income tax consequences to which they may be subject.

To ensure compliance with Treasury Department Circular 230, each holder of common stock is hereby notified that: (a) any discussion of U.S. federal tax issues in this proxy statement is not intended or written to be used, and cannot be used, by such holder for the purpose of avoiding penalties that may be imposed on such holder under the Code; (b) any such discussion has been included by the Company in furtherance of the reverse stock split on the terms described herein; and (c) each such holder should seek advice based on its particular circumstances from an independent tax advisor.

Generally, a reverse stock split will not result in the recognition of gain or loss by a U.S. holder for U.S. federal income tax purposes (except to the extent of cash received in lieu of a fractional share). The aggregate adjusted basis of the post-reverse split shares will be the same as the aggregate adjusted basis of the pre-reverse split shares, reduced by the amount of the adjusted basis of pre-reverse split shares that is allocated to any fractional share for which cash is received. The holding period of the post-reverse split shares will include a U.S. holder's holding periods for the pre-reverse split shares. A stockholder who receives cash in lieu of a fractional share generally will recognize taxable gain or loss equal to the difference, if any, between the amount of cash received and the amount of the stockholder's aggregate adjusted tax basis in pre-reverse split shares that is allocated to a fractional share. In general, the gain or loss resulting from the payment of cash in lieu of the issuance of a fractional share will be taxed as capital gain or loss. Such capital gain or loss will be short term if the pre-reverse split shares were held for one year or less and long term if held for more than one year.

The Company will not recognize any gain or loss as a result of the reverse stock split.

Approval Required

The affirmative vote of the holders of a majority of the shares of the Company's capital stock outstanding as of the Record Date is required to approve the amendment of the Company's Certificate of Incorporation to effect a reverse stock split of the common stock in the range of 1:5 to 1:15. Abstentions and broker non-votes will not be counted as having been voted on the proposal, and therefore will have the same effect as negative votes.

Recommendation of the Board

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE FOR APPROVAL OF PROPOSAL NO. 2.

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PROPOSAL NO. 3

APPROVAL OF AMENDMENT TO THE COMPANY S CERTIFICATE OF INCORPORATION

TO INCREASE THE AUTHORIZED SHARES OF COMMON STOCK

Introduction

Under Delaware law, we may only issue shares of common stock to the extent such shares have been authorized for issuance under our Certificate of Incorporation. Our Certificate of Incorporation currently authorizes the issuance of up to one hundred thirty-five million (135,000,000) shares of common stock. The Board of Directors has approved, subject to stockholder approval, an amendment to our Certificate of Incorporation to increase the number of authorized shares of common stock from one hundred and thirty-five million (135,000,000) to two hundred and fifty million (250,000,000). The Board of Directors has determined that this amendment is advisable and in the best interests of us and our stockholders. A form of this amendment to our Certificate of Incorporation is attached as Appendix E to this proxy statement. As of December 3, 2007, 73,126,584 shares of our common stock are issued and outstanding.

Purpose of the Increase in Authorized Shares of Common Stock

The Board believes that it is desirable to increase the number of authorized shares of common stock in order to (i) meet its current share issuance obligations and (ii) ensure that there is a sufficient number available to provide the Company with adequate flexibility to issue common stock for proper corporate purposes that may be identified in the future, including any equity financing transactions.

The Company is obligated, and may potentially be required, to issue and reserve additional shares of its common stock (as calculated prior to giving effect to any reverse stock split described in Proposal No. 2 above), among other transactions, as follows:

18,428,221 shares of common stock issuable upon conversion of the Notes and exercise of the Warrants;

2,157,042 shares of common stock issuable upon exercise of options and warrants issued in financing transactions prior to the Debt Financing;

20,693,167 shares of our common stock reserved for issuance under our employee compensation plans, including 1997 Stock Incentive Plan and The Epoch Biosciences, Inc. 2003 Stock Incentive Plan.

In addition, if we satisfy certain conditions set forth in the Indenture, we may issue shares of common stock to holders as interest payment for the Notes. Furthermore, we have agreed to reserve, out of our authorized and unissued common stock, a number of shares of our common stock for the Notes and Warrants equal to 120% of the total number of shares that may be issued upon conversion of the Notes and exercise of the Warrants pursuant to the terms of the Debt Financing. We estimate that as of the date of this Proxy Statement, we are required to reserve approximately 40,000,000 shares of common stock pursuant to the terms of the Debt Financing.

As a result of the foregoing obligations, plus the potential issuance of our common stock in future equity financing transactions, without the increase in authorized stock, we may not have a sufficient number of shares of common stock. The Board of Directors believes that our obligations to issue and reserve additional shares of common stock, including the requirements under the terms of the Notes and Warrant, can be bettered satisfied by increasing the authorized number of shares of Common Stock.

The additional shares of common stock could be used for other important corporate purposes, including public or private financings to raise additional capital, acquisition of other companies and for stock-based employee benefit plans. It is critical for the Company to raise more money in the immediate future to continue its business operations and fund its research and development activities. If the proposed amendment is adopted, the newly authorized shares would be available for issuance by the Company in a financing transaction without

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further stockholder action, except as provided by Delaware law or the rules of any stock exchange or automated quotation system on which the Company's common stock may then be listed or quoted. Since we will need to raise capital to fund our operations, the increase would ensure that we have sufficient number of shares for future equity financing transactions. All of the additional shares resulting from the proposed increase in the Company's authorized common stock would be of the same class if and when they are issued, and holders would have the same rights and privileges as holders of shares of common stock presently issued and outstanding, including the same dividend, voting and liquidation rights.

The holders of the Company's common stock do not have preemptive rights to subscribe to additional securities that may be issued by the Company, which means that current stockholders do not have a prior right to purchase any additional shares in connection with a new issuance of capital stock of the Company in order to maintain their proportionate ownership of the Company's common stock. Accordingly, if the Board elects to issue additional shares of common stock, such issuance could have a dilutive effect on the earnings per share, voting power, and equity ownership of current stockholders. In addition, each share of common stock is entitled to one vote in the election of directors and other matters. The holders of the Company's common stock are not entitled to cumulative voting.

Effect of the Increase

There were 73,126,584 shares of our common stock issued and outstanding as of December 3, 2007, leaving approximately 176,873,416 shares of our common stock available for future issuance after approval of the increase in the authorized number of shares of common stock. The par value of our common stock will remain \$0.001 per share. The terms of the additional shares of common stock will be identical to those of the currently outstanding shares of common stock. This amendment will not alter the current number of issued shares. The relative rights and limitations of the shares of common stock would remain unchanged under such amendment. In addition, the authorized number of shares of common stock after the increase will not be proportionally adjusted in the event of a reverse stock split effected pursuant to the approval of Proposal No. 2.

Effect of the Proposed Increase on Existing Stockholders

The increase in authorized common stock will not have any immediate effect on the rights of existing stockholders. However, the Board of Directors will have the authority to issue common stock without requiring future stockholders approval of such issuances, except as may be required by applicable law or the requirements of the NASDAQ Stock Market. To the extent that additional shares are issued in the future, they would decrease the existing stockholders' percentage equity ownership and, depending on the price at which they are issued, could be dilutive to the existing stockholders.

The increase in the authorized number of shares of common stock and the subsequent issuance of such shares could have the effect of delaying or preventing a change in control of the Company without further action by the stockholders. Shares of authorized and unissued common stock could, within the limits imposed by applicable law, be issued in one or more transactions which would make a change in control of the Company more difficult, and therefore less likely. Any such issuance of additional stock could have the effect of diluting the earnings per share and book value per share of outstanding shares of common stock, and such additional shares could be used to dilute the stock ownership or voting rights of a person seeking to obtain control of the Company. Our Board of Directors is not currently aware of any attempt to take over or acquire us. While it may be deemed to have potential anti-takeover effects, the proposed amendment to increase the authorized common stock is not prompted by any specific effort or takeover threat currently perceived by management.

Procedure for Effecting Increase

If the increase in authorized shares of common stock is approved by our stockholders, the increase would become effective at such time as the amendment to the Company's Certificate of Incorporation, in the form attached as Appendix E to this proxy statement, is filed with the Secretary of State of Delaware.

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Approval Required

The affirmative vote of the holders of a majority of the shares of the Company's capital stock outstanding as of the Record Date is required to approve the amendment of the Company's Certificate of Incorporation to effect an increase in the number of authorized shares of common stock. Abstentions and broker non-votes will not be counted as having been voted on the proposal, and therefore will have the same effect as negative votes.

Recommendation of the Board

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT YOU VOTE FOR APPROVAL OF PROPOSAL NO. 3.

Table of Contents**SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS, DIRECTORS AND MANAGEMENT**

The following table sets forth information as of December 3, 2007 (except as noted below) as to our shares of common stock beneficially owned by (i) each of our directors, (ii) each of our executive officers, (iii) our current directors and executive officers as a group and (iv) each person known by us to be the beneficial owner of more than 5% of the outstanding shares of our common stock. Unless otherwise indicated, the beneficial ownership consists of sole voting and investment power with respect to the shares indicated, except to the extent that a spouse shares authority under applicable law. Except for shares of common stock held in brokerage accounts, which may, from time to time together with other securities in the account, serve as collateral for margin loans made in such accounts, none of the shares reported as beneficially owned have been pledged as security for any loan or indebtedness.

	Beneficial Ownership	
	of Common Stock⁽¹⁾	
	Number of	Percentage of
	Shares	Class
Fisher Scientific International, Inc. ⁽²⁾ Liberty Lane Hampton, NH 03842	5,660,377	7.7%
Howard C. Birndorf ⁽³⁾	2,065,552	2.8%
David G. Ludvigson ⁽⁴⁾	811,213	1.1%
Robert Saltmarsh ⁽⁵⁾	183,977	*
Graham Lidgard ⁽⁶⁾	371,205	*
William L. Respass ⁽⁷⁾	298,036	*
Robert Whalen ⁽⁸⁾	74,399	*
Stelios Papadopoulos ⁽⁹⁾	104,399	*
David Schreiber ⁽¹⁰⁾	70,399	*
Heiner Dreisman ⁽¹¹⁾	34,041	*
All directors and executive officers as a group (9 persons) ⁽¹²⁾	4,013,221	5.5%

* Less than one percent.

- (1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission (the "SEC"), based on factors including voting and investment power with respect to shares. Percentage of beneficial ownership is based on 73,126,584 shares of the Company's common stock outstanding as of December 3, 2007. Shares of common stock issuable upon exercise of options currently exercisable, or exercisable within 60 days as of December 3, 2007 and shares of common stock issuable within 60 days as of December 3, 2007 pursuant to outstanding restricted stock units, are deemed outstanding for purpose of computing the percentage ownership of the person holding such options, but are not deemed outstanding for the computing the percentage ownership of any other person.
- (2) Based on a Schedule 13G filed on March 21, 2006 with the SEC, Fisher Scientific International, Inc. had the sole power to vote or to direct the vote of 5,660,377 shares of common stock and had the sole power to dispose or to direct the disposition of 5,660,377 shares of common stock.
- (3) Includes 1,500,000 shares issuable upon the exercise of option within 60 days of December 3, 2007.
- (4) Includes 798,458 shares issuable upon the exercise of options within 60 days of December 3, 2007.
- (5) Includes 175,000 shares issuable upon the exercise of options within 60 days of December 3, 2007.

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- (6) Includes 362,500 shares issuable upon the exercise of options within 60 days of December 3, 2007.
- (7) Includes 275,001 shares issuable upon the exercise of options within 60 days of December 3, 2007.
- (8) Includes 25,000 shares issuable upon the exercise of options within 60 days of December 3, 2007.

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(9) Includes 55,000 shares issuable upon the exercise of options within 60 days of December 3, 2007.

(10) Includes 25,000 shares issuable upon the exercise of options within 60 days of December 3, 2007.

(11) Includes 26,229 shares issuable upon the exercise of options within 60 days of December 3, 2007

(12) Includes five (5) Board members, one of whom is an executive officer, and four (4) other current executive officers.

STOCKHOLDER PROPOSALS FOR THE 2008 ANNUAL MEETING

Proposals of stockholders submitted pursuant to Rule 14a-8 under the Securities and Exchange Act of 1934, as amended (the Exchange Act) and intended to be presented for consideration at the Company s 2008 annual meeting of stockholders must be received by the Secretary of the Company at its principal executive offices at 10398 Pacific Center Court, San Diego, California 92121 not later than January 6, 2008 in order to be considered for inclusion in the Company s proxy materials for that meeting.

The Company s bylaws also establish an advance notice procedure with respect to certain stockholder proposals and director nominations. If a stockholder wishes to have a stockholder proposal considered at the Company s 2008 annual meeting of stockholders, the stockholder must give timely notice of the proposal in writing to the Secretary of the Company at the Company s principal executive offices at 10398 Pacific Center Court, San Diego, California 92121. To be timely, a stockholder s notice of the proposal must be delivered or mailed and received at the executive offices of the Company not less than 50 days nor more than 75 days prior to the proposed date of the annual meeting; provided, however, that if less than 65 days notice or prior public disclosure of the date of the annual meeting is given or made to stockholders, notice of the stockholder proposal to be timely must be received no later than the earlier of (a) the close of business on the 15th day following the day on which the Company s notice of the date of the annual meeting is mailed or public disclosure of the meeting date is given, whichever first occurs, and (b) two days prior to the date of the scheduled meeting.

HOUSEHOLDING OF PROXY MATERIALS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for proxy statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single proxy statement addressed to those stockholders. This process, which is commonly referred to as householding, potentially means extra convenience for stockholders and cost savings for companies.

A number of brokers with account holders who are our stockholders will be householding the proxy materials. A single proxy statement will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be householding communications to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report, you may (1) notify your broker, (2) direct your written request to the Secretary of the Company at its principal executive offices at 10398 Pacific Center Court, San Diego, California 92121, or (3) contact Nanogen directly at 1-877-626-6436. Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request householding of their communications should contact their broker. In addition, the Company will promptly deliver, upon written or oral request at the address or telephone number above, a separate copy of the proxy statement to a stockholder at a shared address to which a single copy of the documents was delivered.

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OTHER MATTERS

The Board of Directors knows of no other business that will be presented at the Special Meeting. If any other business is properly brought before the Special Meeting, it is intended that proxies in the enclosed form will be voted in accordance with the judgment of the persons voting the proxies.

Any stockholder or stockholder's representative who, because of a disability, may need special assistance or accommodation to allow him or her to participate at the Special Meeting may request reasonable assistance or accommodation from the Company by contacting Nanogen, Inc., 10398 Pacific Center Court, San Diego, California 92121, (858) 410-4600. To provide the Company sufficient time to arrange for reasonable assistance or accommodation, please submit all requests by [*], 2007.

WHETHER YOU INTEND TO BE PRESENT AT THE SPECIAL MEETING OR NOT, WE URGE YOU TO RETURN YOUR SIGNED PROXY CARD PROMPTLY.

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INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

In our filings with the Securities and Exchange Commission, or the SEC, information is sometimes incorporated by reference. This means that we are referring you to information that has previously been filed with the SEC, so the information should be considered as part of the filing you are reading. This Proxy Statement incorporates by reference our Annual Report on Form 10-K for the year ended December 31, 2006 and our Quarterly Reports on Forms 10-Q for the fiscal quarters ended March 31, 2007, June 30, 2007 and September 30, 2007 which contain important information about the Company and the Company's financial condition that is not set forth in this proxy statement. Further, this proxy statement incorporates by reference our Form 8-K filed with the SEC on August 27, 2007. Copies of our Annual Report on Form 10-K, Quarterly Report on Form 10-Q and Current Report on Form 8-K have been filed with the SEC and may be accessed from the SEC homepage (www.sec.gov).

We will furnish without charge to each person, including any beneficial owner, to whom a copy of this Proxy Statement is delivered, upon written or oral request and by first class mail or other equally prompt means within one business day of receipt of such request, a copy of the information that has been incorporated into this Proxy Statement by reference (not including exhibits to the information that is incorporated by reference unless such exhibits are specifically incorporated by reference into the information that the Proxy Statement incorporates). You should direct any requests for copies to:

Nanogen, Inc.

Attn: General Counsel

10398 Pacific Center Court

San Diego, CA 92121

(858) 410-4600

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Appendix A

SECURITIES PURCHASE AGREEMENT

SECURITIES PURCHASE AGREEMENT (the **Agreement**), dated as of August 26, 2007, by and among Nanogen Inc., a Delaware corporation, with headquarters located at 10398 Pacific Center Court, San Diego, California 92121 (the **Company**), and the investors listed on the Schedule of Buyers attached hereto (individually, a **Buyer** and collectively, the **Buyers**).

WHEREAS:

A. The Company and the Buyers desire to enter into this transaction to purchase the Notes (as defined below) and Warrants (as defined below) pursuant to the Registration Statement (as defined below) which is currently effective, has at least \$50,000,000 of initial offering price of unallocated securities available for sale as of the date hereof and has been declared effective in accordance with the Securities Act of 1933, as amended (the **1933 Act**), by the United States Securities and Exchange Commission (the **SEC**).

B. The Company has authorized the issuance of a new series of 6.25% senior convertible notes due 2010 of the Company, in the form attached hereto as Exhibit A to the Indenture (as defined below) (the **Notes**), which Notes shall be convertible into shares of common stock, par value \$0.001 per share, of the Company (the **Common Stock**) (as converted, the **Conversion Shares**), in accordance with the terms of the Notes, which Conversion Shares shall be issued pursuant to the Registration Statement (as defined below), or, if such Registration Statement is not available at the time of issuance of such Conversion Shares, as securities exempt from registration pursuant to Section 3(a)(9) of the 1933 Act.

C. Each Buyer wishes to purchase, and the Company wishes to sell, upon the terms and conditions stated in this Agreement, (i) that aggregate principal amount of the Notes set forth opposite such Buyer's name in column (3) on the Schedule of Buyers attached hereto (which aggregate amount for all Buyers shall be \$20,000,000) (ii) warrants, in substantially the form attached hereto as Exhibit B-1 (the **Series A Warrants**), to acquire up to that number of additional shares of Common Stock set forth opposite such Buyer's name in column (4) of the Schedule of Buyers (as exercised, collectively, the **Series A Warrant Shares**), (iii) warrants, in substantially the form attached hereto as Exhibit B-2 (the **Series B Warrants**), to acquire up to that number of additional shares of Common Stock set forth opposite such Buyer's name in column (5) of the Schedule of Buyers (as exercised, collectively, the **Series B Warrant Shares**) and (iv) warrants in substantially the form attached hereto as Exhibit B-3 (the **Series C Warrants**), together with the Series A Warrants and the Series B Warrants, the **Warrants**) to acquire up to that number of shares of Common Stock set forth opposite such Buyer's name in column (6) on the Schedule of Buyers (as exercised, collectively, the **Series C Warrant Shares**), and together with the Series A Warrant Shares and the Series B Warrant Shares, the **Warrant Shares**), which Warrant Shares shall be issued pursuant to the Registration Statement (as defined below) or, if such Registration Statement is not available at the time of issuance of such Warrant Shares, shall be issued solely pursuant to the cashless exercise provisions of the Warrant as securities exempt from registration pursuant to Section 3(a)(9) of the 1933 Act. The Notes will be issued pursuant to a supplemental indenture in the form attached hereto as Exhibit A, dated August 27, 2007, which supplements the Indenture dated August 27, 2007 by and between the Company and The Bank of New York Trust Company, N.A., as trustee (the **Trustee**), (collectively, the **Indenture**).

D. The Notes bear interest, which, subject to certain conditions, may be paid in shares of Common Stock (the **Interest Shares**).

E. The Notes, the Conversion Shares, the Interest Shares, the Warrants and the Warrant Shares collectively are referred to herein as the **Securities** .

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NOW, THEREFORE, the Company and each Buyer hereby agree as follows:

1. PURCHASE AND SALE OF NOTES AND WARRANTS.

(a) Purchase of Notes and Warrants.

(i) Notes and Warrants. Subject to the satisfaction (or waiver) of the conditions set forth in Sections 6 and 7 below, the Company shall issue and sell to each Buyer, and each Buyer severally, but not jointly, shall purchase from the Company on the Closing Date (as defined below), (w) a principal amount of Notes as is set forth opposite such Buyer's name in column (3) on the Schedule of Buyers, (x) Series A Warrants to acquire up to that number of Warrant Shares as is set forth opposite such Buyer's name in column (4) on the Schedule of Buyers, (y) Series B Warrants to acquire up to that number of Warrant Shares as is set forth opposite such Buyer's name in column (5) on the Schedule of Buyers and (z) Series C Warrants to acquire up to that number of Warrant Shares as is set forth opposite such Buyer's name in column (6) on the Schedule of Buyers (the **Closing**).

(ii) Closing. The date of the Closing (the **Closing Date**) shall be, on the date of notification of satisfaction (or waiver) of the conditions to the Closing set forth in Sections 6 and 7 below at the offices of Schulte Roth & Zabel LLP, 919 Third Avenue, New York, New York 10022 (unless otherwise mutually agreed to by the Company and each Buyer). The Closing shall be deemed to have occurred at 10:00 a.m., New York City time on the Closing Date.

(iii) Purchase Price.

(1) The aggregate purchase price for the Notes and the Warrants to be purchased by each such Buyer at the Closing (the **Purchase Price**) shall be the amount set forth opposite each Buyer's name in column (6) of the Schedule of Buyers. Each Buyer shall pay \$1,000 for each \$1,000 of principal amount of Notes and related Warrants to be purchased by such Buyer at the Closing.

(2) The Buyers and the Company agree that the Notes and the Warrants constitute an investment unit for purposes of Section 1273(c)(2) of the Internal Revenue Code of 1986, as amended (the **Code**) and that the issue price of such investment unit will be allocated 72 percent to the Notes, 12 percent to the Series A Warrants, 7 Percent to the Series B Warrants and 9 percent to the Series C Warrants in accordance with Section 1273(c)(2) of the Code and Treasury Regulation Section 1.1273-2(h). Neither the Buyers nor the Company shall take any position inconsistent with such allocation in any tax return or in any judicial or administrative proceeding in respect of taxes.

(b) Form of Payment. On the Closing Date, (i) each Buyer shall pay its Purchase Price to the Company for the Notes and the Warrants to be issued and sold to such Buyer at the Closing, by wire transfer of immediately available funds in accordance with the Company's written wire instructions and (ii) the Company shall deliver, or cause to be delivered, to each Buyer the Notes (allocated in the principal amounts as such Buyer shall request) which such Buyer is then purchasing hereunder along with the Warrants (allocated in the amounts as such Buyer shall request) which such Buyer is purchasing, in each case duly executed on behalf of the Company and registered in the name of such Buyer or its designee.

2. BUYER'S REPRESENTATIONS AND WARRANTIES. Each Buyer, severally and not jointly, represents and warrants with respect to only itself that:

(a) No Sale or Distribution. Such Buyer is acquiring the Notes and hereunder in the ordinary course of its business for its own account. Such Buyer does not presently have any agreement or understanding, directly or indirectly, with any Person to distribute any of the Notes.

(b) Organization: Authority. Such Buyer is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite power and authority to enter

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into and to consummate the transactions contemplated by the applicable Transaction Documents (as defined below) and otherwise to carry out its obligations thereunder. The execution, delivery and performance by such Buyer of the transactions contemplated by this Agreement has been duly authorized by all necessary action on the part of such Buyer. This Agreement has been duly executed by such Buyer, and when delivered by such Buyer in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Buyer, enforceable against it in accordance with its terms, except (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, (ii) as enforceability of any indemnification and contribution provisions may be limited under the federal and state securities laws and public policy, and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

(c) **No Conflicts**. The execution, delivery and performance by such Buyer of this Agreement and the consummation by such Buyer of the transactions contemplated hereby will not (i) result in a violation of the organizational documents of such Buyer or (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which such Buyer is a party, or (iii) result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws) applicable to such Buyer, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Buyer to perform its obligations hereunder.

(d) **Residency**. Such Buyer is a resident of that jurisdiction specified below its address on the Schedule of Buyers.

(e) **Certain Trading Activities**. Other than with respect to this Agreement and the transactions contemplated herein, since the time that such Buyer was first contacted by the Company, the Agent (as defined below) or any other Person regarding this investment in the Company neither the Buyer nor any Affiliate of such Buyer which (x) had knowledge of the transactions contemplated hereby, (y) has or shares discretion relating to such Buyer's investments or trading or information concerning such Buyer's investments and (z) is subject to such Buyer's review or input concerning such Affiliate's investments or trading (collectively, **Trading Affiliates**) has directly or indirectly, nor has any Person acting on behalf of or pursuant to any understanding with such Buyer or Trading Affiliate, effected or agreed to effect any transactions in the securities of the Company. Such Buyer hereby covenants and agrees not to, and shall cause its Trading Affiliates not to, engage, directly or indirectly, in any transactions in the securities of the Company or involving the Company's securities during the period from the date hereof until such time as (i) the transactions contemplated by this Agreement are first publicly announced as described in Section 4(h) hereof or (ii) this Agreement is terminated in full pursuant to Section 8 hereof. Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect short sales or similar transactions in the future. For the purpose of this Agreement, **Person** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(f) **Acquiring Person**. Such Buyer, after giving effect to the transactions contemplated hereby, will not be the beneficial owner of 20% or more of the Company's outstanding Common Stock. For purposes of this Section 2(f), beneficial ownership shall be determined pursuant to a Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the **1934 Act**).

(g) **Consents**. Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by such Buyer of this Agreement and the consummation of the transactions herein contemplated has been obtained or made and is in full force and effect.

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The Company acknowledges and agrees that each Buyer does not make or has not made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in this Section 2.

3. **REPRESENTATIONS AND WARRANTIES OF THE COMPANY.** The Company represents and warrants to each of the Buyers that, as of the date hereof and as of the Closing Date:

(a) **Shelf Registration Statement.** A shelf registration statement on Form S-3 (File No. 333-144880) with respect to the Securities has been prepared by the Company in conformity in all material respects with the requirements of the 1933 Act, and the rules and regulations (the **Rules and Regulations**) of the SEC thereunder and has been filed with the SEC. The Company and the transactions contemplated by this Agreement meet the requirements and comply with the conditions for the use of Form S-3. The Registration Statement (as defined below) meets the requirements of Rule 415(a)(1)(x) under the 1933 Act and complies in all material respects with said rule. Copies of such registration statement, including any amendments thereto, the base prospectus (meeting in all material respects the requirements of the Rules and Regulations) contained therein and the exhibits, financial statements and schedules, as finally amended and revised, have heretofore been delivered by the Company to the Buyers. Such registration statement, together with any registration statement filed by the Company pursuant to Rule 462(b) under the 1933 Act, is herein referred to as the **Registration Statement**, which shall be deemed to include all information omitted therefrom in reliance upon Rules 430A, 430B or 430C under the 1933 Act and contained in the Prospectus referred to below, has become effective under the 1933 Act and no post-effective amendment to the Registration Statement has been filed as of the date of this Agreement. The term **Prospectus** as used in this Agreement means the form of base prospectus together with the final prospectus supplement relating to the Securities (the **Prospectus Supplement**) first filed with the SEC pursuant to and within the time limits described in Rule 424(b) under the 1933 Act. Any reference herein to the Registration Statement or the Prospectus or to any amendment or supplement to any of the foregoing documents shall be deemed to refer to and include any documents incorporated by reference therein, and, in the case of any reference herein to the Prospectus, also shall be deemed to include any documents incorporated by reference therein, and any supplements or amendments thereto, filed with the SEC after the date of filing of the Prospectus Supplement under Rule 424(b) under the 1933 Act and prior to the termination of the offering of the Securities.

(b) **Prospectus.** As of the Applicable Time (as defined below) and as of the Closing Date (as defined below), neither (x) the General Use Free Writing Prospectus(es) (as defined below) issued at or prior to the Applicable Time, the Prospectus (as defined below), all considered together (collectively, the **General Disclosure Package**), nor (y) any individual Limited Use Free Writing Prospectus (as defined below), when considered together with the General Disclosure Package, included or will include any untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no representations or warranties as to information contained in or omitted from any Issuer Free Writing Prospectus and the General Disclosure Package, in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of the Buyers, specifically for use therein. As used in this subsection and elsewhere in this Agreement:

(i) **Applicable Time** means 5:30 p.m. (New York time) on the date of this Agreement or such other time as agreed to by the Company and the Buyers.

(ii) **Issuer Free Writing Prospectus** means any issuer free writing prospectus, as defined in Rule 433 under the 1933 Act, relating to the Securities in the form filed or required to be filed with the SEC or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) under the 1933 Act.

(iii) **General Use Free Writing Prospectus** means any Issuer Free Writing Prospectus that is identified on Schedule I to this Agreement.

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(iv) **Limited Use Free Writing Prospectus** means any Issuer Free Writing Prospectus that is not a General Use Free Writing Prospectus.

(c) **Organization.** The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus. The Company has no significant subsidiaries (as such term is defined in Rule 1-02 of Regulation S-X promulgated by the SEC) other than as listed in Exhibit 21.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2006 (the **Annual Report**) (collectively, the **Subsidiaries**). Each of the Subsidiaries has been duly organized and is validly existing as an entity in good standing under the laws of the jurisdiction of its organization, with corporate power and authority to own or lease its properties and conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus. The Subsidiaries are the only subsidiaries, direct or indirect, of the Company. The Company and each of the Subsidiaries are duly qualified to transact business in all jurisdictions in which the conduct of their business requires such qualification, except where the failure to be so qualified would not reasonably be expected to (i) result in any material adverse change, or any development that would reasonably be expected to result in a material adverse change, in or affecting the business, results of operations, or financial condition of the Company and of the Subsidiaries taken as a whole, whether or not occurring in the ordinary course of business, or (ii) prevent, burden or impair the consummation of the transactions contemplated by this Agreement (collectively a **Material Adverse Effect**). The outstanding shares of capital stock of each of the Subsidiaries have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company or another Subsidiary free and clear of all liens, encumbrances and equities and claims, except as described in the Registration Statement and the General Disclosure Package; and no options, warrants or other rights to purchase, agreements or other obligations to issue or other rights to convert any obligations into shares of capital stock or ownership interests in the Subsidiaries are outstanding.

(d) **Authorization; Enforcement; Validity.** The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the Notes, the Indenture, the Irrevocable Transfer Agent Instructions (as defined in Section 5(b)), the Warrants and each of the other agreements entered into by the parties hereto in connection with the transactions contemplated by this Agreement (collectively, the **Transaction Documents**) and to issue the Securities in accordance with the terms hereof and thereof. The execution and delivery of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby, including, without limitation, the issuance of the Notes and the Warrants, the reservation for issuance and the issuance of the Conversion Shares issuable upon conversion of the Notes, the reservation for issuance and the issuance of the Interest Shares in accordance with the terms of the Indenture and the Notes and the reservation for issuance and issuance of Warrant Shares issuable upon exercise of the Warrants have been duly authorized by the Company's Board of Directors, and no further filing, consent, or authorization is required by the Company's Board of Directors or its stockholders. This Agreement and the other Transaction Documents of even date herewith have been duly executed and delivered by the Company, and constitute the legal, valid and binding obligations of the Company, enforceable against the Company in accordance with their respective terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation, conservatorship, receivership or similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

(e) **Issuance of Securities.** The outstanding shares of Common Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable; the Securities to be issued and sold by the Company have been duly authorized and when issued and paid for as contemplated herein will be validly issued, fully paid and non-assessable; and no preemptive rights of stockholders exist with respect to any of the Securities or the issue and sale thereof. As of the Closing, a number of shares of Common Stock shall have been duly authorized and reserved for issuance which equals or exceeds 130% of the aggregate of the maximum number of shares of Common Stock issuable as of the Closing Date (i) upon conversion of the

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Notes, (ii) as Interest Shares pursuant to the terms of the Indenture and the Notes and (iii) upon exercise of the Warrants. Neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock. Upon conversion or exercise in accordance with the Indenture and the Notes or the Warrants, as the case may be, the Conversion Shares, the Interest Shares and the Warrant Shares, respectively, will be validly issued, fully paid and nonassessable and free from all preemptive or similar rights, taxes, liens and charges with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock.

(f) Equity Capitalization. As of the date hereof and as of the Closing Date, the Company has or will have, as the case may be, an authorized, issued and outstanding capitalization as is set forth in the Registration Statement and the Prospectus (subject, in each case, to the issuance of shares of Common Stock upon exercise of stock options and warrants disclosed as outstanding in the Registration Statement and the Prospectus and the grant or issuance of options or shares under existing equity compensation plans or stock purchase plans described in the Registration Statement or the Prospectus), and such authorized capital stock conforms to the description thereof set forth in the Registration Statement and the Prospectus. All of the Securities conform to the description thereof contained in the Registration Statement and the Prospectus. The form of certificates for the Conversion Shares, the Interest Shares and the Warrant Shares will conform to the corporate law of the jurisdiction of the Company's incorporation.

(g) Disclosure.

(i) The SEC has not issued an order preventing or suspending the use of any Issuer Free Writing Prospectus or the Prospectus relating to the proposed offering of the Securities, and no proceeding for that purpose or pursuant to Section 8A of the 1933 Act has been instituted or, to the Company's knowledge, threatened by the SEC. The Registration Statement conforms, and the Prospectus and any amendments or supplements thereto will conform to the requirements of the 1933 Act and the Rules and Regulations. The documents incorporated, or to be incorporated, by reference in the Prospectus, at the time filed with the SEC conformed in all material respects, or will conform in all respects, to the requirements of the 1934 Act, or the 1933 Act, as applicable, and the Rules and Regulations. The Registration Statement and any amendment thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact and do not omit, and on the Closing Date will not omit, to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus and any amendments and supplements thereto do not contain, and on the Closing Date will not contain, any untrue statement of a material fact; and do not omit, and on the Closing Date will not omit, to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that the Company makes no representations or warranties as to information contained in or omitted from the Registration Statement or the Prospectus, or any such amendment or supplement, in reliance upon, and in conformity with, written information furnished to the Company by or on behalf of the Buyers, specifically for use therein.

(ii) Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities or until any earlier date that the Company notified or notifies the Buyers as described in the next sentence, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein that has not been superseded or modified. If at any time following issuance of an Issuer Free Writing Prospectus, there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in light of the circumstances, not misleading, the Company has notified or will notify promptly the Buyers so that any use of such Issuer Free Writing Prospectus may cease until it is amended or supplemented. The foregoing two sentences do not apply to statements or omissions from any Issuer Free Writing

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Prospectus based upon and in conformity with written information furnished to the Company by the Buyers specifically for use therein.

(iii) The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Buyers or their agents or counsel with any information that constitutes or could reasonably be expected to constitute material, nonpublic information, that is not included in the 8-K Filing (as defined below) or other public filing of the Company filed prior to the 8-K Filing Time (as defined below). The Company understands and confirms that each of the Buyers will rely on the foregoing representations in effecting transactions in securities of the Company. No event or circumstance has occurred or information exists with respect to the Company or any of its Subsidiaries or its or their business, properties, prospects, operations or financial conditions, which, under applicable law, rule or regulation, requires public disclosure or announcement by the Company but which has not been so publicly announced or disclosed.

(h) Offering Materials. The Company has not, directly or indirectly, distributed and will not distribute any offering material in connection with the offering and sale of the Securities other than the Prospectus, any Permitted Free Writing Prospectus (as defined below) and other materials, if any, permitted under the 1933 Act. The Company will file with the SEC all Issuer Free Writing Prospectuses in the time required under Rule 433(d) under the 1933 Act. The Company has satisfied or will satisfy the conditions in Rule 433 under the 1933 Act to avoid a requirement to file with the SEC any electronic road show.

(i) Ineligible Issuer Status. At the time of filing the Registration Statement and (ii) as of the date hereof (with such date being used as the determination date for purposes of this clause (ii)), the Company was not and is not an ineligible issuer (as defined in Rule 405 under the 1933 Act, without taking into account any determination by the SEC pursuant to Rule 405 under the 1933 Act that it is not necessary that the Company be considered an ineligible issuer), including, without limitation, for purposes of Rules 164 and 433 under the 1933 Act with respect to the offering of the Securities as contemplated by the Registration Statement.

(j) Financial Statements. The condensed consolidated financial statements of the Company and the Subsidiaries, together with related notes and schedules as set forth or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, present fairly in all material respects the financial position and the results of operations and cash flows of the Company and the consolidated Subsidiaries, at the indicated dates and for the indicated periods. Such condensed consolidated financial statements and related schedules have been prepared in accordance with generally accepted principles of accounting (**GAAP**), consistently applied throughout the periods involved, except as disclosed therein, and all adjustments necessary for a fair presentation of results for such periods have been made. The summary and selected consolidated financial and statistical data included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus presents fairly in all material respects the information shown therein, at the indicated dates and for the indicated periods, and such data has been compiled on a basis consistent with the financial statements presented therein and the books and records of the Company. All disclosures, if any, contained in the Registration Statement, the General Disclosure Package and the Prospectus regarding non-GAAP financial measures (as such term is defined by the Rules and Regulations) comply in all material respects with Regulation G of the 1934 Act and Item 10 of Regulation S-K under the 1933 Act, to the extent applicable. The Company and the Subsidiaries do not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations or any variable interest entities within the meaning of Financial Accounting Standards Board Interpretation No. 46), not disclosed in the Registration Statement, the General Disclosure Package and the Prospectus. There are no financial statements (historical or pro forma) that are required to be included in the Registration Statement, the General Disclosure Package or the Prospectus that are not included as required.

(k) Accountants. Ernst & Young LLP, who have certified certain of the financial statements filed with the SEC as part of, or incorporated by reference in, the Registration Statement, the General Disclosure Package and the Prospectus, has represented to the Company that it is an independent registered public

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accounting firm with respect to the Company and the Subsidiaries within the meaning of the 1933 Act and the applicable Rules and Regulations and the Public Company Accounting Oversight Board (United States) (the **PCAOB**).

(l) **Weaknesses or Changes in Internal Accounting Controls**. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company nor any of the Subsidiaries is aware of (i) any material weakness in its internal control over financial reporting or (ii) change in internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(m) **Sarbanes-Oxley**. Solely to the extent that the Sarbanes-Oxley Act of 2002, as amended, and the rules and regulations promulgated by the SEC and The NASDAQ Global Market (the **Principal Market**) thereunder (collectively, the **Sarbanes-Oxley Act**) has been applicable to the Company, there is and has been no failure on the part of the Company to comply in all material respects with any provision of the Sarbanes-Oxley Act. The Company has taken all necessary actions to ensure that it is in compliance in all material respects with all provisions of the Sarbanes-Oxley Act that are in effect with respect to which the Company is required to comply and is actively taking steps to ensure that it will be in compliance with the other provisions of the Sarbanes-Oxley Act which will become applicable to the Company.

(n) **Litigation**. There is no action, suit, claim or proceeding pending or, to the knowledge of the Company, threatened against the Company or any of the Subsidiaries before any court or administrative agency or otherwise which if determined adversely to the Company or any of the Subsidiaries would have, individually or in the aggregate, a Material Adverse Effect, except as set forth in the Registration Statement, the General Disclosure Package and the Prospectus.

(o) **Title**. The Company and the Subsidiaries have good and marketable title to all of the material properties and assets reflected in the condensed consolidated financial statements hereinabove described or described in the Registration Statement, the General Disclosure Package and the Prospectus, subject to no lien, mortgage, pledge, charge or encumbrance of any kind except those reflected in such financial statements or described in the Registration Statement, the General Disclosure Package and the Prospectus or which are not material in amount or would not materially interfere with the use to be made of such properties or assets. The Company and the Subsidiaries occupy their leased properties under valid and binding leases conforming in all material respects to the description thereof set forth in the Registration Statement, the General Disclosure Package and the Prospectus.

(p) **Taxes**. The Company and the Subsidiaries have filed all Federal, State, local and foreign tax returns which have been required to be filed and have paid all taxes indicated by such returns and all assessments received by them or any of them to the extent that such taxes have become due and are not being contested in good faith and for which an adequate reserve for accrual has been established in accordance with GAAP. All tax liabilities have been adequately provided for in the condensed consolidated financial statements of the Company in accordance with GAAP, and the Company does not know of any actual or proposed additional material tax assessments.

(q) **Absence of Certain Changes**. Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus, as each may be amended or supplemented, there has not been any Material Adverse Effect, and there has not been any material transaction entered into by the Company or the Subsidiaries, other than transactions in the ordinary course of business and transactions described in the Registration Statement, the General Disclosure Package and the Prospectus, as each may be amended or supplemented. The Company and the Subsidiaries have no material contingent obligations which are not disclosed in the Company's condensed consolidated financial statements which are included in the Registration Statement, the General Disclosure Package and the Prospectus.

(r) **No Conflicts**. Neither the Company nor any of the Subsidiaries is or with the giving of notice or lapse of time or both, will be in violation of its certificate of incorporation, by-laws, or other organizational documents. The execution and delivery of this Agreement and the consummation of the transactions herein

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contemplated and the fulfillment of the terms hereof will not conflict with or result in a breach of any of the terms or provisions of, or constitute a default under, any indenture, mortgage, deed of trust or other agreement or instrument to which the Company or any Subsidiary is a party or by which the Company or any Subsidiary or any of their respective properties is bound, or of the certificate of incorporation or by-laws of the Company or any law, order, rule or regulation judgment, order, writ or decree applicable to the Company or any Subsidiary of any court or of any government, regulatory body or administrative agency or other governmental body having jurisdiction, except to the extent that such conflict, breach or default would not have a Material Adverse Effect.

(s) **Contracts**. There is no document, contract or other agreement required to be described in the Registration Statement or Prospectus or to be filed as an exhibit to the Registration Statement which is not described or filed as required by the 1933 Act or the Rules and Regulations. Each description of a contract, document or other agreement in the Registration Statement and the Prospectus accurately reflects in all material respects the terms of the underlying contract, document or other agreement. Each contract, document or other agreement described in the Registration Statement and Prospectus or listed in the exhibits to the Registration Statement or incorporated by reference is in full force and effect and is valid and enforceable by and against the Company in accordance with its terms (except as rights to indemnity and contribution thereunder may be limited by federal or state securities laws and matter of public policy and except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principle). Neither the Company nor any of its Subsidiaries nor, to the Company's knowledge, any other party is in default in the observance or performance of any term or obligation to be performed by it under any such agreement or any other agreement or instrument to which the Company or its Subsidiaries is a party or by which the Company or its Subsidiaries or their respective properties or businesses may be bound, and no event has occurred which with notice or lapse of time or both would constitute such a default, in any such case in which the default or event, individually or in the aggregate, would have a Material Adverse Effect.

(t) **Regulatory Approvals**. Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by the Company of this Agreement and the consummation of the transactions herein contemplated (except such additional steps as may be required by the SEC, the National Association of Securities Dealers, Inc. (the **NASD**) or such additional steps as may be required under state securities or Blue Sky laws) has been obtained or made and is in full force and effect.

(u) **Intellectual Property**. Except as described in the Registration Statement and the General Disclosure Package or in any document incorporated by reference therein, the Company and each of the Subsidiaries hold all material licenses, certificates and permits from governmental authorities which are necessary to the conduct of their businesses in the manner in which they are being conducted; the Company and the Subsidiaries each own or possess the right to use all patents, patent rights, trademarks, trade names, service marks, service names, copyrights, license rights, know-how (including trade secrets and other unpatented and unpatentable proprietary or confidential information, systems or procedures) and other intellectual property rights (**Intellectual Property**) necessary to carry on their business in all material respects in the manner in which it is being conducted; to the Company's knowledge, neither the Company nor any of the Subsidiaries has infringed, and none of the Company or the Subsidiaries have received notice of conflict with, any Intellectual Property of any other person or entity. The Company has taken all steps reasonably necessary to secure ownership interests in Intellectual Property created for it by any contractors. There are no outstanding options, licenses or agreements of any kind relating to the Intellectual Property of the Company that are required to be described in the Registration Statement, the General Disclosure Package and the Prospectus and are not described therein in all material respects. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property of any other person or entity that are required to be set forth in the Prospectus and are not described therein in all material respects. None of the technology employed by the Company and material to the Company's business has been obtained or is being used by the Company in violation of any contractual obligation binding on the

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Company or, to the Company's knowledge, any of its officers, directors or employees or, to the Company's knowledge, otherwise in violation of the rights of any persons; the Company has not received any written or oral communications alleging that the Company has violated, infringed or conflicted with, or, by conducting its business as set forth in the Registration Statement, the General Disclosure Package and the Prospectus, would violate, infringe or conflict with, any of the Intellectual Property of any other person or entity. The Company knows of no infringement by others of Intellectual Property owned by or licensed to the Company.

(v) **FDA: Studies.** Since the respective dates as of which information is set forth in the Registration Statement, the General Disclosure Package and the Prospectus, (i) all of the descriptions of the Company's legal and governmental proceedings and procedures before the United States Food and Drug Administration (the **FDA**) or any other national, departmental, state or local governmental body exercising comparable authority are true and correct in all material respects, (ii) the studies, tests and preclinical and clinical trials conducted by or on behalf of the Company and its Subsidiaries that are described in the Registration Statement, the General Disclosure Package and the Prospectus were and, if still pending, are (a) with respect to the foregoing conducted by employees of the Company or any of its Subsidiaries (**Company Studies**), being conducted in accordance with experimental protocols, procedures and controls pursuant to, where applicable, accepted professional scientific standards, in each case in all necessary respects and in all material respects; and (b) with respect to the foregoing conducted on behalf of the Company or independently by others using the Company's or any of its Subsidiaries' technologies, products or product candidates (**Independent Studies**), to the Company's knowledge, being conducted in accordance with experimental protocols, procedures and controls pursuant to, where applicable, accepted professional scientific standards, in each case in all necessary respects and in all material respects; (iii) the descriptions of the results of the Company Studies, and, to the Company's knowledge, the Independent Studies, contained in the Registration Statement, the General Disclosure Package and the Prospectus are true and correct in all material respects; and (iv) except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, neither the Company nor its Subsidiaries have received any notices or correspondence from the FDA, or any national, state or local governmental body exercising comparable authority requiring the termination, suspension or material modification of any of the Company Studies or Independent Studies.

(w) **Manipulation of Prices.** Neither the Company, nor to the Company's knowledge, any of its affiliates, has taken or may take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of Common Stock to facilitate the sale or resale of the Securities.

(x) **Investment Company Act.** Neither the Company nor any Subsidiary is or, after giving effect to the offering and sale of the Securities contemplated hereunder and the application of the net proceeds from such sale as described in the Prospectus, will be an investment company within the meaning of such term under the Investment Company Act of 1940 as amended (the **1940 Act**), and the rules and regulations of the SEC thereunder.

(y) **Internal Accounting Controls.**

(i) The Company and each of the Subsidiaries maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(ii) The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15e and 15d-15e under the 1934 Act); the Company's disclosure controls and procedures are reasonably designed to ensure that all information (both financial and non-financial)

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required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported within the time periods specified in the rules and regulations of the 1934 Act, and that all such information is accumulated and communicated to the Company's management as appropriate to allow timely decisions regarding required disclosure and to make the certifications of the Chief Executive Officer and Chief Financial Officer of the Company required under the 1934 Act with respect to such reports.

(z) **Money Laundering Laws**. The operations of the Company and the Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the **Money Laundering Laws**), and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

(aa) **Office of Foreign Assets Control**. Neither the Company nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (**OFAC**); and the Company will not directly or indirectly use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(bb) **Insurance**. The Company and each of the Subsidiaries carry, or are covered by, insurance in such amounts and covering such risks as is adequate for the conduct of their respective businesses and the value of their respective properties and as is customary for companies engaged in similar businesses.

(cc) **Employee Benefits**. The Company and each Subsidiary is in compliance in all material respects with all presently applicable provisions of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder (**ERISA**); no reportable event (as defined in ERISA) has occurred with respect to any pension plan (as defined in ERISA) for which the Company and each Subsidiary would have any material liability; the Company and each Subsidiary has not incurred and does not expect to incur material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any pension plan or (ii) Sections 412 or 4971 of the Internal Revenue Code of 1986, as amended, including the regulations and published interpretations thereunder (the **Code**); and each pension plan for which the Company or any Subsidiary would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified in all material respects and nothing has occurred, whether by action or by failure to act, which would cause the loss of such qualification.

(dd) **Transactions with Affiliates**. To the Company's knowledge, there are no affiliations or associations between any member of the NASD and any of the Company's officers, directors or 5% or greater securityholders, except as set forth in the Registration Statement. There are no relationships or related-party transactions involving the Company or any of the Subsidiaries or, to the knowledge of the Company, any other person required to be described in the Prospectus which have not been described as required.

(ee) **Environmental Laws**. Neither the Company nor any of the Subsidiaries is in violation of any statute, rule, regulation, decision or order of any governmental agency or body or any court, domestic or foreign, relating to the use, disposal or release of hazardous or toxic substances or relating to the protection or restoration of the environment or human exposure to hazardous or toxic substances (collectively, **environmental laws**), owns or operates any real property contaminated with any substance that is subject to environmental laws, is liable for any off-site disposal or contamination pursuant to any environmental laws, or is subject to any claim relating to any environmental laws, which violation, contamination, liability or claim would, individually or in the aggregate, have a Material Adverse Effect; and the Company is not aware of any pending investigation which would reasonably be expected to lead to such a claim.

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(ff) Listing: 1934 Act Registration. The Common Stock has been approved for listing subject to notice of issuance on the Principal Market. The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Common Stock under the 1934 Act or the quotation of the Common Stock on the Principal Market, nor, has the Company received any notification that the SEC or the Principal Market is contemplating terminating such registration or quotation.

(gg) Contributions: Foreign Corrupt Practices. Neither the Company nor any of the Subsidiaries has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law which violation is required to be disclosed in the Prospectus.

(hh) No Integrated Offering. The Company has not sold or issued any securities that would be integrated with the offering of the Securities contemplated by this Agreement pursuant to the 1933 Act, the Rules and Regulations or the interpretations thereof by the SEC. None of the Company, its Subsidiaries, any of their affiliates, and any Person acting on their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to require approval of stockholders of the Company for purposes of any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated. None of the Company, its Subsidiaries, their affiliates and any Person acting on their behalf will take any action or steps referred to in the preceding sentence that would cause the offering of the Securities to be integrated with other offerings for purposes of any such applicable stockholder approval provisions.

(ii) Brokerage Fees: Commissions. Except as described in the Registration Statement and the General Disclosure Package, neither the Company nor any of its Subsidiaries is a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Buyers for a brokerage commission, finder's fee or like payment in connection with the offering and sale of the Securities. The Company shall pay, and hold the Buyer harmless against, any liability, loss or expense (including, without limitation, attorneys' fees and out-of-pocket expenses) arising in connection with any such claim.

(jj) Consents. Other than as described in Section 3(t) hereof, or as have been obtained, filed or made, neither the Company nor any of its Subsidiaries is required to obtain any consent, authorization or order of, or make any filing or registration with, any court, governmental agency or any regulatory or self-regulatory agency or any other Person in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents, in each case in accordance with the terms hereof or thereof (other than any filings which may be required to be made by the Company with the SEC or the Principal Market subsequent to the date hereof, including but not limited to the Prospectus Supplement and any blue sky filings which may be required to be made). The Company is not in violation of the listing requirements of the Principal Market and has no knowledge of any facts that would reasonably lead to delisting or suspension of the Common Stock in the foreseeable future.

(kk) Acknowledgment Regarding Buyer's Purchase of Securities. The Company acknowledges and agrees that each Buyer is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby and that no Buyer is (i) an officer or director of the Company, (ii) to the knowledge of the Company, an affiliate of the Company or any of its Subsidiaries (as defined in Rule 144 of the 1933 Act) or (iii) to the knowledge of the Company, a beneficial owner of more than 10% of the shares of Common Stock (as defined for purposes of Rule 13d-3 of the 1934 Act). The Company further acknowledges that no Buyer is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by a Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Buyer's purchase of the Securities. The Company further represents to each Buyer that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

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(ll) Dilutive Effect. The Company understands and acknowledges that the number of Conversion Shares issuable upon conversion of the Notes and the Warrant Shares issuable upon exercise of the Warrants will increase in certain circumstances. The Company further acknowledges that its obligation to issue Conversion Shares upon conversion of the Notes in accordance with this Agreement, the Notes and the Indenture and its obligation to issue the Warrant Shares upon exercise of the Warrants in accordance with this Agreement and the Warrants is, in each case, absolute and unconditional regardless of the dilutive effect that such issuance may have on the ownership interests of other stockholders of the Company.

(mm) Application of Takeover Protections: Rights Agreement. The Company and its board of directors have taken all necessary action, if any, in order to exempt the Company's issuance of the Securities and any Buyer's ownership of the Securities from the provisions of any control share acquisition, business combination or other similar anti-takeover provision under the Certificate of Incorporation of the Company or the laws of the state of its incorporation which is or could become applicable to any Buyer as a result of the transactions contemplated by this Agreement. Except as described in the Registration Statement and the General Disclosure Package, the Company does not have any stockholder rights plan or similar arrangement relating to accumulations of beneficial ownership of Common Stock or a change in control of the Company.

(nn) Subsidiary Rights. The Company or one of its Subsidiaries has the unrestricted right to vote, and (subject to limitations imposed by applicable law) to receive dividends and distributions on, all capital securities of its Subsidiaries as owned by the Company or such Subsidiary.

(oo) Off Balance Sheet Arrangements. There is no transaction, arrangement, or other relationship between the Company and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in its 1934 Act filings and is not so disclosed or that otherwise would be reasonably likely to have a Material Adverse Effect.

(pp) Transfer Taxes. On the Closing Date, all stock transfer or other similar taxes (other than income or similar taxes) which are required to be paid in connection with the sale and transfer of the Securities to be sold to each Buyer hereunder will be, or will have been, fully paid or provided for by the Company, and all laws imposing such taxes will be or will have been complied with.

(qq) Acknowledgement Regarding Buyers' Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding, but subject to compliance by the Buyers with applicable law, it is understood and acknowledged by the Company (i) that none of the Buyers have been asked by the Company or its Subsidiaries to agree, nor has any Buyer agreed with the Company or its Subsidiaries, to desist from purchasing or selling, long and/or short, securities of the Company, or derivative securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) that past or future open market or other transactions by any Buyer, including, without limitation, short sales or derivative transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) that any Buyer, and counter parties in derivative transactions to which any such Buyer is a party, directly or indirectly, presently may have a short position in the Common Stock, and (iv) that each Buyer shall not be deemed to have any affiliation with or control over any arm's length counter-party in any derivative transaction. The Company further understands and acknowledges that, subject to compliance by the Buyers with applicable law, (a) one or more Buyers may engage in hedging and/or trading activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Conversion Shares and the Warrant Shares deliverable with respect to Securities are being determined and (b) such hedging and/or trading activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging and/or trading activities are being conducted.

(rr) U.S. Real Property Holding Corporation. The Company is not, nor has it ever been, a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon any Buyer's request.

(ss) Trust Indenture Act. The Indenture is qualified the Trust Indenture Act of 1939, as amended (the Trust Indenture Act).

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4. COVENANTS.

(a) Reasonable Best Efforts. Each party shall use its reasonable best efforts timely to satisfy each of the conditions to be satisfied by it as provided in Sections 6 and 7 of this Agreement.

(b) Maintenance of Registration Statement. For so long as any of the Notes or Warrants remain outstanding, the Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement for the issuance thereunder of the Registrable Securities (as defined below); provided that, if at any time while the Notes or the Warrants are outstanding the Company shall be ineligible to utilize Form S-3 (or any successor form) for the purpose of issuance of the Registrable Securities the Company shall use its reasonable best efforts to promptly amend the Registration Statement on such other form as may be necessary to maintain the effectiveness of the Registration Statement for this purpose. For the purpose of this Agreement, **Registrable Securities** means (i) the Conversion Shares issued or issuable upon conversion of the Notes, (ii) the Interest Shares issued or issuable in accordance with the terms of the Indenture and the Notes, (iii) the Warrant Shares issued or issuable upon exercise of the Warrants and (iv) any shares of capital stock of the Company issued or issuable with respect to the Conversion Shares, the Notes, the Interest Shares, the Warrant Shares and the Warrants as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise, without regard to any limitations on conversions of the Notes or exercises of the Warrants.

(c) Prospectus Supplement and Blue Sky. In the manner required by law, the Company shall have delivered to the Buyers, and as soon as practicable after the Closing the Company shall file, the Prospectus Supplement with respect to the Securities as required under and in conformity with the 1933 Act, including Rule 424(b) thereunder. If required, the Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for or to qualify the Securities for sale to the Buyers at the Closing pursuant to this Agreement under applicable securities or Blue Sky laws of the states of the United States (or to obtain an exemption from such qualification), and shall provide evidence of any such action so taken to the Buyers on or prior to the Closing Date. The Company shall make all filings and reports relating to the offer and sale of the Securities required under applicable securities or Blue Sky laws of the states of the United States following the Closing Date.

(d) Use of Proceeds. The Company will use the proceeds from the sale of the Securities in the manner described in the Registration Statement and the General Disclosure Package, except as otherwise limited by any prohibitions contained in the Indenture for so long as such Notes are outstanding.

(e) Listing. The Company shall promptly secure the listing of all of the Conversion Shares, Interest Shares and Warrant Shares upon each national securities exchange and automated quotation system, if any, upon which the Common Stock is then listed (subject to official notice of issuance) and shall use its reasonable best efforts to maintain, in accordance with the Notes and Warrants, such listing of all Conversion Shares, Interest Shares and Warrant Shares from time to time issuable under the terms of the Transaction Documents. The Company use reasonable best efforts to maintain the Common Stocks authorization for quotation on the Principal Market or if such authorization is not able to be maintained, on another Eligible Market (as defined in the Indenture). Neither the Company nor any of its Subsidiaries shall take any action which would be reasonably expected to result in the delisting or suspension of the Common Stock on the Principal Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4(e).

(f) Fees. Subject to Section 8 below, at Closing, the Company shall pay an expense allowance to Portside Growth and Opportunity Fund (a Buyer) or its designee(s) (in addition to any other expense amounts paid to any Buyer prior to the date of this Agreement) for all actual and accountable reasonable costs and expenses incurred in connection with the transactions contemplated by the Transaction Documents (including all reasonable legal fees and disbursements in connection therewith, documentation and implementation of the transactions contemplated by the Transaction Documents and due diligence in connection therewith), in an amount not to exceed \$105,000 (in addition to any other expense amounts paid to any Buyer prior to the date of this Agreement), which amount shall be withheld by such Buyer from its

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Purchase Price at the Closing. The Company shall be responsible for the payment of any placement agent's fees, financial advisory fees, or broker's commissions (other than for Persons engaged by any Buyer) relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold each Buyer harmless against, any liability, loss or expense (including, without limitation, reasonable attorney's fees and out-of-pocket expenses) arising in connection with any claim relating to any such payment.

(g) Pledge of Securities. The Company acknowledges and agrees that the Securities may be pledged in compliance with applicable law by any holder of Securities (an **Investor**) in connection with a bona fide margin agreement or (but not the enforcement of any pledge) other loan or financing arrangement that is secured by the Securities. The pledge of Securities shall not be deemed to be a transfer, sale or assignment of the Securities hereunder, and no Investor effecting a pledge of Securities shall be required to provide the Company with any notice thereof or otherwise make any delivery to the Company pursuant to this Agreement or any other Transaction Document. The Company hereby agrees, subject to applicable securities laws, to execute and deliver such documentation as a pledgee of the Securities may reasonably request in connection with a pledge of the Securities to such pledgee by an Investor.

(h) Disclosure of Transactions and Other Material Information. On or before 8:30 a.m., New York City time, on the first Business Day following the date of this Agreement (the **8-K Filing Time**), the Company shall issue a press release and file a Current Report on Form 8-K describing the terms of the transactions contemplated by the Transaction Documents in the form required by the 1934 Act and attaching the material Transaction Documents (including, without limitation, this Agreement, the Indenture, the form of the Notes and the form of Warrant) as exhibits to such filing (including all attachments, the **8-K Filing**). As of immediately following the filing of the 8-K Filing with the SEC, no Buyer shall be in possession of any material, nonpublic information received from the Company, any of its Subsidiaries or any of their respective officers, directors, employees or agents, that is not disclosed in the 8-K Filing or in prior filings with the SEC. For so long as the Notes and the Warrants are outstanding, other than notices required to be delivered pursuant to Section 4(m), the Company shall not, and shall cause each of its Subsidiaries and its and each of their respective officers, directors, employees and agents, not to, provide any Buyer with any material, nonpublic information regarding the Company or any of its Subsidiaries from and after the filing of the 8-K Filing with the SEC without the express written consent of such Buyer. For so long as the Notes and the Warrants are outstanding, if a Buyer has, or believes it has, received any such material, nonpublic information regarding the Company or any of its Subsidiaries provided in breach of the preceding sentence, it shall provide the Company with written notice thereof in which case the Company shall, within five (5) Trading Days (as defined in the Indenture) of receipt of such notice, make public disclosure of any such material, nonpublic information provided in breach of the preceding sentence. In the event of a breach of the foregoing covenant by the Company, any of its Subsidiaries, or any of its or their respective officers, directors, employees and agents, in addition to any other remedy provided herein or in the Transaction Documents, a Buyer shall have the right to make a public disclosure, in the form of a press release, public advertisement or otherwise, of such material, nonpublic information without the prior approval by the Company, its Subsidiaries, or any of its or their respective officers, directors, employees or agents. No Buyer shall have any liability to the Company, its Subsidiaries, or any of its or their respective officers, directors, employees, stockholders or agents for any such disclosure. Subject to the foregoing, neither the Company, its Subsidiaries nor any Buyer shall issue any press releases or any other public statements with respect to the transactions contemplated hereby; provided, however, that the Company shall be entitled, without the prior approval of any Buyer, to make any press release or other public disclosure with respect to such transactions (i) in substantial conformity with the 8-K Filing and contemporaneously therewith and (ii) as is required by applicable law, regulation or any Eligible Market on which the Company's securities are then listed or quoted (provided that in the case of clause (i) each Buyer shall be consulted by the Company in connection with any such press release or other public disclosure prior to its release). Without the prior written consent of any applicable Buyer, neither the Company nor any of its Subsidiaries or affiliates shall disclose the name of such Buyer in any filing, announcement, release or otherwise other than in connection with the Registration Statement unless such disclosure is required by law, regulation or any Eligible Market on which the Company's securities are then listed or quoted.

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(i) **Additional Notes; Variable Securities; Dilutive Issuances.** For so long as any Notes remain outstanding, the Company will not issue any Notes other than to the Buyers as contemplated hereby and the Company shall not issue any other securities that would cause a breach or default under the Notes. For so long as any Notes or Warrants remain outstanding, the Company shall not, in any manner, issue or sell any rights, warrants or options to subscribe for or purchase Common Stock or directly or indirectly convertible into or exchangeable or exercisable for Common Stock at a price which varies or may vary with the market price of the Common Stock, including by way of one or more reset(s) to any fixed price unless the conversion, exchange or exercise price of any such security cannot be less than the then applicable Conversion Price (as defined in the Indenture) with respect to the Common Stock into which any Note is convertible or the then applicable Exercise Price (as defined in the Warrants) with respect to the Common Stock into which any Warrant is exercisable. For so long as any Notes or Warrants remain outstanding, the Company shall not, in any manner, enter into or affect any Dilutive Issuances (as defined in the Indenture) if the effect of such Dilutive Issuance is to cause, or but for the Securities Limitations (as defined below) would cause, the Company to be required to issue upon conversion of any Note or exercise of any Warrant any shares of Common Stock in excess of that number of shares of Common Stock which the Company may issue upon conversion of the Notes and exercise of the Warrants without breaching the Company's obligations under the rules or regulations of the Principal Market, in each case without giving effect to (w) the limitations on conversion contained in the Indenture, (x) the application of any Conversion Floor Price (as defined in the Indenture), (y) the limitations on exercise contained in the Warrants, and (z) the application of any Exercise Floor Price (as defined in the Warrants) (the **Securities Limitations**). For so long as any Notes or Warrants are outstanding, unless or until the Stockholder Approval (as defined below) has been obtained, the Company shall not take any action if the effect of such action would be to cause either (i) the Conversion Price to be reduced below the Conversion Floor Price or (ii) the Exercise Price to be reduced below the Exercise Floor Price, in each case without giving effect to any Securities Limitations.

(j) **Corporate Existence.** For so long as any Notes or Warrants remain outstanding, the Company shall not be party to any Fundamental Transaction (as defined in the Indenture) unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Indenture and the Warrants.

(k) **Reservation of Shares.** The Company shall take all action necessary to at all times have authorized, and reserved for the purpose of issuance, no less than 130% of the sum of the number of shares of Common Stock issuable (i) upon conversion of the Notes issued at the Closing, (ii) as Interest Shares pursuant to the terms of the Indenture and the Notes and (iii) upon exercise of the Warrants issued at the Closing (without taking into account any limitations on the Conversion of the Notes or exercise of the Warrants set forth in the Indenture and Warrants, respectively).

(l) **Conduct of Business.** The business of the Company and its Subsidiaries shall not be conducted in violation of any law, ordinance or regulation of any governmental entity, except where such violations would not result, either individually or in the aggregate, in a Material Adverse Effect.

(m) **Additional Issuances of Securities.**

(i) For purposes of this Section 4(m), the following definitions shall apply.

(1) **Convertible Securities** means any stock or securities (other than Options) convertible into or exercisable or exchangeable for shares of Common Stock.

(2) **Options** means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(3) **Common Stock Equivalents** means, collectively, Options and Convertible Securities.

(4) **Shelf Offering** means any Subsequent Placement of Common Stock or Common Stock Equivalents directly by the Company or through an underwriter of the Company to buyers of such Common Stock or Common Stock Equivalents under an effective shelf registration statement pursuant to Rule 415 of the 1933 Act.

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(5) **Other Subsequent Placements** means any Subsequent Placements other than a Shelf Offering.

(ii) From the date hereof until the date that is thirty (30) Trading Days (as defined in the Indenture) following the effective date of the Prospectus Supplement (the **Trigger Date**), the Company will not, directly or indirectly, file any registration statement with the SEC other than the Registration Statement and shall not file any prospectus supplement with respect to any Subsequent Placement (as defined below). From the date hereof until the Trigger Date, the Company will not, directly or indirectly, offer, sell, grant any option to purchase, or otherwise dispose of (or announce any offer, sale, grant or any option to purchase or other disposition of) any of its or its Subsidiaries' equity or equity equivalent securities, including without limitation any debt, preferred stock or other instrument or security that is, at any time during its life and under any circumstances, convertible into or exchangeable or exercisable for shares of Common Stock or Common Stock Equivalents (any such offer, sale, grant, disposition or announcement being referred to as a **Subsequent Placement**).

(iii) From the Trigger Date until the second anniversary of the Closing Date, the Company will not, directly or indirectly, effect any Subsequent Placement unless the Company shall have first complied with this Section 4(m)(iii).

(1) The Company shall deliver to each Buyer a written notice (the **Offer Notice**) of any proposed or intended issuance or sale or exchange (the **Offer**) of the securities being offered (the **Offered Securities**) in a Subsequent Placement, which Offer Notice shall (w) identify and describe the Offered Securities, (x) describe the price and other terms upon which they are to be issued, sold or exchanged, and the number or amount of the Offered Securities to be issued, sold or exchanged, (y) identify the persons or entities (if known) to which or with which the Offered Securities are to be offered, issued, sold or exchanged and (z) offer to issue and sell to or exchange with such Buyers at least thirty percent (30%) of the Offered Securities, allocated among such Buyers (a) based on such Buyer's pro rata portion of the aggregate principal amount of Notes purchased hereunder (the **Basic Amount**), and (b) with respect to each Buyer that elects to purchase its Basic Amount, any additional portion of the Offered Securities attributable to the Basic Amounts of other Buyers as such Buyer shall indicate it will purchase or acquire should the other Buyers subscribe for less than their Basic Amounts (the **Undersubscription Amount**), which process shall be repeated (other than any requirement to provide an updated Offer Notice reflecting such Undersubscription Amount which shall not be required to be repeated in the event that such process is appropriately described in the initial Offer Notice) until the Buyers shall have an opportunity to subscribe for any remaining Undersubscription Amount.

(2) To accept an Offer, in whole or in part, such Buyer must deliver a written notice to the Company prior to the end of (x) with respect to a Shelf Offering, the third (3rd) Business Day or (y) with respect to an Other Subsequent Placement, the seven (7th) Business Day after such Buyer's receipt of the Offer Notice (the **Offer Period**), setting forth the portion of such Buyer's Basic Amount that such Buyer elects to purchase and, if such Buyer shall elect to purchase all of its Basic Amount, the Undersubscription Amount, if any, that such Buyer elects to purchase (in either case, the **Notice of Acceptance**); provided, however, that the Buyers may not accept an Offer by electing to purchase less than 5% of the Offered Securities on an aggregate basis. If the Basic Amounts subscribed for by all Buyers are less than the total of all of the Basic Amounts, then each Buyer who has set forth an Undersubscription Amount in its Notice of Acceptance shall be entitled to purchase, in addition to the Basic Amounts subscribed for, the Undersubscription Amount it has subscribed for; provided, however, that if the Undersubscription Amounts subscribed for exceed the difference between the total of all the Basic Amounts and the Basic Amounts subscribed for (the **Available Undersubscription Amount**), each Buyer who has subscribed for any Undersubscription Amount shall be entitled to purchase only that portion of the Available Undersubscription Amount as the Basic Amount of such Buyer bears to the total Basic Amounts of all Buyers that have subscribed for Undersubscription Amounts, subject to rounding.

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by the Company to the extent its deems reasonably necessary. Notwithstanding anything to the contrary contained herein, if the Company desires to modify or amend any material terms or conditions of the Offer prior to the expiration of the Offer Period, the Company may deliver to the Buyers a new Offer Notice and the Offer Period shall expire on (x) with respect to a Shelf Offering, the third (3rd) Business Day or (y) with respect to an Other Subsequent Placement, the seventh (7th) Business Day after such Buyer's receipt of such new Offer Notice.

(3) The Company shall have fifteen (15) Business Days from the expiration of the Offer Period above to offer, issue, sell or exchange all or any part of such Offered Securities as to which a Notice of Acceptance has not been given by the Buyers (the **Refused Securities**), but only to the offerees described in the Offer Notice (if so described therein) and only upon terms and conditions (including, without limitation, unit prices and interest rates) that are not more favorable to the acquiring person or persons or less favorable to the Company than those set forth in the Offer Notice and (ii) to publicly announce (a) the execution of such Subsequent Placement Agreement, and (b) either (x) the consummation of the transactions contemplated by such Subsequent Placement Agreement or (y) the termination of such Subsequent Placement Agreement, which shall be filed with the SEC on a Current Report on Form 8-K with such Subsequent Placement Agreement and any documents contemplated therein filed as exhibits thereto.

(4) In the event the Company shall propose to sell less than all the Refused Securities (any such sale to be in the manner and on the terms specified in Section 4(m)(iii)(3) above), then each Buyer may, at its sole option and in its sole discretion, reduce the number or amount of the Offered Securities specified in its Notice of Acceptance to an amount that shall be not less than the number or amount of the Offered Securities that such Buyer elected to purchase pursuant to Section 4(m)(iii)(2) above multiplied by a fraction, (i) the numerator of which shall be the number or amount of Offered Securities the Company actually proposes to issue, sell or exchange (including Offered Securities to be issued or sold to Buyers pursuant to Section 4(m)(iii)(3) above prior to such reduction) and (ii) the denominator of which shall be the original amount of the Offered Securities. In the event that any Buyer so elects to reduce the number or amount of Offered Securities specified in its Notice of Acceptance, the Company may not issue, sell or exchange more than the reduced number or amount of the Offered Securities unless and until such securities have again been offered to the Buyers in accordance with Section 4(m)(iii)(1) above.

(5) Upon the closing of the issuance, sale or exchange of all or less than all of the Refused Securities, the Buyers shall acquire from the Company, and the Company shall issue to the Buyers, the number or amount of Offered Securities specified in the Notices of Acceptance, as reduced pursuant to Section 4(m)(iii)(4) above if the Buyers have so elected, upon the terms and conditions specified in the Offer. The purchase by the Buyers of any Offered Securities is subject in all cases to the preparation, execution and delivery by the Company and the Buyers of a purchase agreement relating to such Offered Securities reasonably satisfactory in form and substance to the Buyers and their respective counsel.

(6) Any Offered Securities not acquired by the Buyers or other persons in accordance with Section 4(m)(iii)(3) above may not be issued, sold or exchanged until they are again offered to the Buyers under the procedures specified in this Agreement.

(7) The Company and the Buyers agree that if any Buyer elects to participate in the Offer, (x) neither the agreement regarding the Subsequent Placement (the **Subsequent Placement Agreement**) with respect to such Offer nor any other transaction documents related thereto (collectively, the **Subsequent Placement Documents**) shall include any term or provisions whereby any Buyer shall be required to agree to any restrictions in trading as to any securities of the Company owned by such Buyer prior to such Subsequent Placement and (y) the Buyers shall be entitled to the same registration rights provided to other investors in the Subsequent Placement.

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(8) Notwithstanding anything to the contrary in this Section 4(m) and unless otherwise agreed to by the Buyers, the Company shall either confirm in writing to the Buyers that the transaction with respect to the Subsequent Placement has been abandoned or shall publicly disclose its intention to issue the Offered Securities, in either case in such a manner such that the Buyers will not be in possession of material non-public information, by the fifteen (15th) Business Day following delivery of the Offer Notice. If by the fifteen (15th) Business Day following delivery of the Offer Notice no public disclosure regarding a transaction with respect to the Offered Securities has been made, and no notice from the Company regarding the abandonment of such transaction has been received by the Buyers, such transaction shall be deemed to have been abandoned and the Buyers shall not be deemed to be in possession of any material, non-public information with respect to the Company. Should the Company decide to pursue such transaction with respect to the Offered Securities, the Company shall provide each Buyer with another Offer Notice and each Buyer will again have the right of participation set forth in this Section 4(m)(iii). The Company shall not be permitted to deliver more than one such Offer Notice to the Buyers in any 60 day period (other than the Offer Notices contemplated by the last sentence of Section 4(m)(iii)(2) of this Agreement or the prior sentence of this Section 4(m)(iii)(8)).

(iv) The restrictions contained in subsections (ii) and (iii) of this Section 4(m) shall not apply in connection with the issuance of any Excluded Securities (as defined in the Indenture).

(n) Letter of Credit.

(i) On or prior to the Business Day immediately following the Closing Date, the Company shall obtain an irrevocable letter of credit (the **Letter of Credit**), in the amount of \$7,000,000 (the **Letter of Credit Amount**) issued in favor of Portside Growth and Opportunity Fund, in its capacity as letter of credit agent for the holders of the Notes (the **LC Agent**) by a bank acceptable to such LC Agent (the **Letter of Credit Bank**) and in form and substance acceptable to such LC Agent. The Letter of Credit, including any renewals, extensions or replacements referred to below, shall expire not earlier than 91 days after the Stated Maturity (as defined in the Indenture) of the Notes (the **LC Expiration Date**). Upon (i) the occurrence and during the continuance of an Event of Default (as defined in the Indenture) under any of the Notes or (ii) the Stated Maturity of the Notes, the LC Agent shall be entitled to draw under the Letter of Credit, including any renewals, extensions or replacements referred to below, for the full Letter of Credit Amount then available thereunder, it being understood that the LC Agent shall act for the benefit of the Buyers on a pro rata basis based on the principal amount of the Notes initially issued to each of the Buyers and hold such amount as collateral security for the obligations under the Notes for the benefit of the Buyers. The Company shall obtain such renewals, extensions or replacements of the Letter of Credit as necessary to ensure that the Letter of Credit shall not expire prior to the LC Expiration Date (unless the Letter of Credit shall have been reduced to zero in accordance with the terms contained in this Section 4(n) prior to such date). If, at any time, the Company cannot obtain a renewal, extension or replacement of the Letter of Credit such that the Letter of Credit will expire prior to the LC Expiration Date (a **Withdrawal Event**), the Company and the Letter of Credit Bank shall each give the LC Agent written notice of the occurrence of a Withdrawal Event at least forty-five (45) days prior to the then current expiration date of the Letter of Credit. Following a Withdrawal Event, the LC Agent shall be entitled to draw down the Letter of Credit Amount in its entirety (whether or not an Event of Default shall have occurred or be continuing under any of the Notes) and hold such amount as collateral security for the obligations under the Notes for the benefit of the Buyers. With respect to each Buyer that has delivered an Event of Default Redemption Notice pursuant to the Indenture (with a copy to the LC Agent), no later than the later of (i) the Event of Default Redemption Date with respect to such holder of Notes and (ii) the second (2nd) Business Day following the date that the LC Agent received all or any portion of the Letter of Credit Amount from the Letter of Credit Bank, the LC Agent shall distribute to such Buyer an amount in cash equal to the lesser of (i) such Buyer's Event of Default Redemption Price and (ii) an amount calculated by multiplying the Letter of Credit Amount by the quotient determined by dividing (A) the principal

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amount of Notes issued to such Buyer on the Closing Date by (B) the aggregate principal amount of all Notes issued to all Buyers on the Closing Date (the **Letter of Credit Allocation**); provided, that in no event shall the LC Agent be required to deliver to the Buyers more than the total amount drawn under the Letter of Credit. In the event that any Buyer shall sell or otherwise transfer any of such Buyer's Notes, the transferee shall be allocated a pro rata portion of such Buyer's Letter of Credit Allocation, and the rights of the applicable transferor contained in the prior sentence shall apply to the applicable transferee with respect to the portion of the Letter of Credit Allocation allocated to such transferee. In the event that any Buyer of Notes shall convert all or a portion of such Buyer's Notes, which leaves such Buyer with an aggregate principal amount of Notes that is less than such Buyer's Letter of Credit Allocation, then such Buyer's Letter of Credit Allocation shall be reduced to the outstanding principal of Notes held by such Buyer and the difference between such Buyer's Letter of Credit Allocation and the outstanding principal amount of Notes held by such Buyer shall be allocated to the respective Letter of Credit Allocations of the remaining Buyers of Notes on a pro rata basis in proportion to the outstanding principal amount of Notes then held by each such Buyer.

(ii) If at any time during any thirty (30) consecutive Trading Day period (the **Measuring Period**) after the Closing Date (A) the Equity Conditions (as defined in the Indenture) have been satisfied and (B) the Closing Sale Price (as defined in the Indenture) of the Common Stock equals or exceeds 120% of the initial Conversion Price (as defined in the Indenture) for twenty (20) Trading Days during the Measuring Period, the Company shall promptly deliver a notice to the LC Agent (the **LC Termination Notice**), certifying as to the occurrence of such events. Within 10 days of the receipt of an LC Termination Notice, the LC Agent shall issue a written instruction to the Letter of Credit Bank to request the termination of the Letter of Credit and the release and return of the Letter of Credit to the Company (the date of such termination, the **LC Termination Date**).

(iii) Portside Growth and Opportunity Fund is hereby appointed as the LC Agent for the Buyers hereunder, and each Buyer hereby authorizes the LC Agent (and its officers, directors, employees and agents) to take any and all such actions on behalf of the Buyers with respect to the Letter of Credit in accordance with the terms of this Agreement. The LC Agent shall not have, by reason hereof or any of the other Transaction Documents, a fiduciary relationship in respect of any Buyer. To the extent that the LC Agent, in such capacity, receives any funds pursuant to the terms of this Section 4(n), except as contemplated above, if the LC Agent is to distribute any of such funds to any Buyer (including Portside Growth and Opportunity Fund, in its capacity as a Buyer), it shall distribute such funds to all of the Buyers on a pro rata basis based on the principal amount of the Notes held by each of the Buyers. Neither the LC Agent nor any of its officers, directors, employees and agents shall have any liability to the Buyer for any action taken or omitted to be taken in connection hereof, and any Buyer agrees to defend, protect, indemnify and hold harmless the LC Agent and all of its officers, directors, employees and agents (collectively, the **LC Indemnitees**) from and against any losses, damages, liabilities, obligations, penalties, actions, judgments, suits, fees, costs and expenses (including, without limitation, reasonable attorneys' fees, costs and expenses) incurred by such LC Indemnitee, whether direct, indirect or consequential, arising from or in connection with the performance by such LC Indemnitee of the duties and obligations of the LC Agent pursuant hereto. In the event that Portside Growth and Opportunity Fund no longer holds any Notes, a majority of the holders of the Notes shall appoint a new LC Agent. At any time, upon two (2) Business Days advance notice to the Company, the Letter of Credit Bank and the Buyers, the LC Agent may resign as LC Agent, and a majority of the holders of the Notes shall appoint a new LC Agent. After any LC Agent's resignation hereunder, the provisions of this Section 4(n) shall inure to its benefit. If a successor LC Agent shall not have been so appointed within said two (2) Business Day period, the retiring LC Agent shall then appoint a successor LC Agent who shall serve until such time, if any, as the holders of a majority of the Notes appoint a successor LC Agent as provided above.

(o) **Stockholder Approval**. The Company shall provide each stockholder entitled to vote at the next annual meeting of stockholders of the Company (the **Stockholder Meeting**), which shall be promptly

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called and held not later than June 30, 2008 (the **Stockholder Meeting Deadline**), a proxy statement, substantially in the form which has been previously reviewed by the Buyers and a counsel of their choice, at the expense of the Company, not to exceed \$10,000, soliciting each such stockholder's affirmative vote at the Stockholder Meeting for approval of resolutions (the **Stockholder Resolutions**) providing for the Company's issuance of all of the Securities as described in the Transaction Documents in accordance with applicable law and the rules and regulations of the Principal Market (such affirmative approval being referred to herein as the **Stockholder Approval**), and the Company shall use its best efforts to solicit its stockholders' approval of such resolutions and to cause the Board of Directors of the Company to recommend to the stockholders that they approve such resolutions. The Company shall be obligated to seek to obtain the Stockholder Approval by the Stockholder Meeting Deadline.

5. REGISTER; TRANSFER AGENT INSTRUCTIONS.

(a) **Register.** The Company shall maintain at its principal executive offices (or such other office or agency of the Company as it may designate by notice to each holder of Securities), a register for the Notes and the Warrants in which the Company shall record the name and address of the Person in whose name the Notes and the Warrants have been issued (including the name and address of each transferee), the principal amount of Notes held by such Person, the number of Conversion Shares issued and issuable upon conversion of the Notes, the number of Interest Shares issued and issuable as payment of interest on the Notes and the number of Warrant Shares issued and issuable upon exercise of the Warrants held by such Person. The Company shall keep the register open and available at all times during business hours for inspection of any Buyer or its legal representatives.

(b) **Transfer Agent Instructions.** The Company shall issue irrevocable instructions to the Transfer Agent, and any subsequent transfer agent, in the form of **Exhibit C** attached hereto (the **Irrevocable Transfer Agent Instructions**). The Company represents and warrants that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5 will be given by the Company to the Transfer Agent, and any subsequent transfer agent with respect to the Securities, and that the Securities shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement and the other Transaction Documents. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to a Buyer. Accordingly, the Company acknowledges that the remedy at law for a breach of its obligations under this Section 5 will be inadequate and agrees, in the event of a breach or threatened breach by the Company of the provisions of this Section 5, that a Buyer shall be entitled, in addition to all other available remedies, to an order and/or injunction restraining any breach and requiring immediate issuance and transfer, without the necessity of showing economic loss and without any bond or other security being required.

6. CONDITIONS TO THE COMPANY'S OBLIGATION TO SELL.

The obligation of the Company hereunder to issue and sell the Notes and the related Warrants to each Buyer at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for the Company's sole benefit and may be waived by the Company at any time in its sole discretion by providing each Buyer with prior written notice thereof:

(i) Each Buyer and the Trustee shall have executed each of the Transaction Documents to which it is a party and delivered the same to the Company.

(ii) Such Buyer and each other Buyer shall have delivered to the Company the Purchase Price (less, in the case of Portside Growth and Opportunity Fund, the amounts withheld pursuant to Section 4(f)) for the Notes and the related Warrants being purchased by such Buyer at the Closing by wire transfer of immediately available funds pursuant to the wire instructions provided by the Company.

(iii) The representations and warranties of such Buyer shall be true and correct in all material respects (except for those representations and warranties that are qualified by materiality or Material

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Adverse Effect, which shall be true and correct in all respects) as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date), and such Buyer shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by this Agreement to be performed, satisfied or complied with by such Buyer at or prior to the Closing Date.

7. CONDITIONS TO EACH BUYER'S OBLIGATION TO PURCHASE.

The obligation of each Buyer hereunder to purchase the Notes and the related Warrants at the Closing is subject to the satisfaction, at or before the Closing Date, of each of the following conditions, provided that these conditions are for each Buyer's sole benefit and may be waived by such Buyer at any time in its sole discretion by providing the Company with prior written notice thereof:

(i) The Company shall have duly executed and delivered to such Buyer (i) each of the Transaction Documents and (ii) the Notes (allocated in such principal amounts as such Buyer shall request), being purchased by such Buyer at the Closing pursuant to this Agreement and (iii) the related Warrants (allocated in such amounts as such Buyer shall request) being purchased by such Buyer at the Closing pursuant to this Agreement. The Trustee shall have executed and delivered the Indenture to the Company.

(ii) Such Buyer shall have received the opinion of Morgan, Lewis & Bockius LLP, the Company's counsel, dated as of the Closing Date, in substantially the form of Exhibit D attached hereto.

(iii) The Company shall have delivered to such Buyer a copy of the Irrevocable Transfer Agent Instructions, in the form of Exhibit C attached hereto, which instructions shall have been delivered to and acknowledged in writing by the Company's transfer agent.

(iv) The Company shall have delivered to such Buyer a certificate (or a fax or pdf copy of such certificate) evidencing the formation and good standing of the Company and each of its Subsidiaries in such entity's jurisdiction of formation issued by the Secretary of State (or comparable office) of such jurisdiction, as of a date within 10 days of the Closing Date.

(v) The Company shall have delivered to such Buyer a certificate (or a fax or pdf copy of such certificate) evidencing the Company's qualification as a foreign corporation and good standing issued by the Secretary of State of California, which is the only jurisdiction in which the Company conducts business and is required to so qualify, as of a date within 10 days of the Closing Date.

(vi) The Company shall have delivered to such Buyer a certified copy of the Certificate of Incorporation as certified by the Secretary of State of the State of Delaware (or a fax or pdf copy of such certificate) within ten (10) days of the Closing Date.

(vii) The Company shall have delivered to such Buyer a certificate, executed by the Secretary of the Company and dated as of the Closing Date, as to (i) the resolutions consistent with Section 3(b) as adopted by the Company's Board of Directors in a form reasonably acceptable to such Buyer, (ii) the Certificate of Incorporation and (iii) the Bylaws, each as in effect at the Closing, in the form attached hereto as Exhibit E.

(viii) The representations and warranties of the Company shall be true and correct in all material respects (except for those representations and warranties that are qualified by materiality or Material Adverse Effect, which shall be true and correct in all respects) as of the date when made and as of the Closing Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such specified date) and the Company shall have performed, satisfied and complied in all material respects with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Closing Date. Such Buyer shall have received a certificate, executed by the

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Chief Executive Officer or Chief Financial Officer of the Company, dated as of the Closing Date, to the foregoing effect in the form attached hereto as Exhibit F.

(ix) The Company shall have delivered to such Buyer a letter from the Company's transfer agent certifying the number of shares of Common Stock outstanding as of a date within five days of the Closing Date.

(x) The Common Stock (I) shall be designated for quotation or listed on the Principal Market and (II) shall not have been suspended, as of the Closing Date, by the SEC or the Principal Market from trading on the Principal Market nor shall suspension by the SEC or the Principal Market have been threatened, as of the Closing Date, either (A) in writing by the SEC or the Principal Market or (B) by falling below the minimum listing maintenance requirements of the Principal Market.

(xi) The Registration Statement shall be effective and available for the issuance and sale of the Securities hereunder and the Company shall have delivered to such Buyer the Prospectus and the Prospectus Supplement as required thereunder.

(xii) The Company shall have delivered to such Buyer such other documents relating to the transactions contemplated by this Agreement as such Buyer or its counsel may reasonably request.

8. **TERMINATION**. In the event that the Closing shall not have occurred with respect to a Buyer on or before five (5) Business Days from the date hereof due to the Company's or such Buyer's failure to satisfy the conditions set forth in Sections 6 and 7 above (and the nonbreaching party's failure to waive such unsatisfied condition(s)), the nonbreaching party shall have the option to terminate this Agreement with respect to such breaching party at the close of business on such date without liability of any party to any other party; provided, however, that if this Agreement is terminated pursuant to this Section 8, the Company shall remain obligated to reimburse the non-breaching Buyers for the expenses described in Section 4(g) above.

9. **MISCELLANEOUS**.

(a) **Governing Law; Jurisdiction; Jury Trial**. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(b) **Counterparts**. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party; provided that a facsimile signature shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original, not a facsimile signature.

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(c) Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

(d) Severability. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

(e) Entire Agreement; Amendments. This Agreement and the other Transaction Documents supersede all other prior oral or written agreements between the Buyers, the Company, their affiliates and Persons acting on their behalf with respect to the matters discussed herein, and this Agreement, the other Transaction Documents and the instruments referenced herein and therein contain the entire understanding of the parties with respect to the matters covered herein and therein and, except as specifically set forth herein or therein, neither the Company nor any Buyer makes any representation, warranty, covenant or undertaking with respect to such matters. No provision of this Agreement may be amended other than by an instrument in writing signed by the Company and the holders of at least a majority of the aggregate number of Registrable Securities issued and issuable hereunder and under the Notes, and any amendment to this Agreement made in conformity with the provisions of this Section 9(e) shall be binding on all Buyers and holders of Securities as applicable. No provision hereof may be waived other than by an instrument in writing signed by the party against whom enforcement is sought. No such amendment shall be effective to the extent that it applies to less than all of the holders of the applicable Securities then outstanding. No consideration shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of any of the Transaction Documents unless the same consideration also is offered to all of the parties to the Transaction Documents, holders of Notes or holders of the Warrants, as the case may be. The Company has not, directly or indirectly, made any agreements with any Buyers relating to the terms or conditions of the transactions contemplated by the Transaction Documents except as set forth in the Transaction Documents. Without limiting the foregoing, the Company confirms that, except as set forth in this Agreement, no Buyer has made any commitment or promise or has any other obligation to provide any financing to the Company or otherwise.

(f) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one Business Day after deposit with an overnight courier service, in each case properly addressed to the party to receive the same. The addresses and facsimile numbers for such communications shall be:

If to the Company:

Nanogen Inc.

10398 Pacific Center Court

San Diego, California 92121

Telephone: (858) 410-4600

Facsimile: (858) 410-4949

Attention: Robert Saltmarsh

with a copy (for informational purposes only) to:

Morgan, Lewis & Bockius LLP

One Market, Spear Street Tower

San Francisco, CA 94605

Telephone: (415) 442-1091

Facsimile: (415) 442-1001

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Attention: Scott D. Karchmer, Esq.

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If to the Transfer Agent:

Computershare Investor Services

250 Royall Street

Canton, MA 02021

Telephone: (877) 282-1168

Facsimile: (781) 575-3606

Attention: Jeff Seiders

If to a Buyer, to its address and facsimile number set forth on the Schedule of Buyers, with copies to such Buyer's representatives as set forth on the Schedule of Buyers,

with a copy (for informational purposes only) to:

Schulte Roth & Zabel LLP

919 Third Avenue

New York, New York 10022

Telephone: (212) 756-2000

Facsimile: (212) 593-5955

Attention: Eleazer N. Klein, Esq.

or to such other address and/or facsimile number and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party five (5) days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) mechanically or electronically generated by the sender's facsimile machine containing the time, date, recipient facsimile number and an image of the first page of such transmission or (C) provided by an overnight courier service shall be rebuttable evidence of personal service, receipt by facsimile or receipt from an overnight courier service in accordance with clause (i), (ii) or (iii) above, respectively.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns, including any purchasers of the Notes or the Warrants. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the holders of at least a majority of the aggregate number of Registrable Securities issued and issuable hereunder, including by way of a Fundamental Transaction (unless the Company is in compliance with the applicable provisions governing Fundamental Transactions set forth in the Indenture and the Warrants). A Buyer may assign some or all of its rights hereunder without the consent of the Company, in which event such assignee shall be deemed to be a Buyer hereunder with respect to such assigned rights.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

(i) Survival. Unless this Agreement is terminated under Section 8, the representations and warranties of the Company and the Buyers contained in Sections 2 and 3, and the agreements and covenants set forth in Sections 4, 5 and 9 shall survive the Closing. Each Buyer shall be responsible only for its own representations, warranties, agreements and covenants hereunder.

(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as are reasonably necessary in order to carry out the intent and

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accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) Indemnification. (i) In consideration of each Buyer's execution and delivery of the Transaction Documents and acquiring the Securities thereunder and in addition to all of the Company's other obligations

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under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless each Buyer and each other holder of the Securities and all of their stockholders, partners, members, officers, directors, employees and direct or indirect investors and any of the foregoing Persons agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the **Indemnitees**) from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnitee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys fees and disbursements (the **Indemnified Liabilities**), incurred by any Indemnitee as a result of, or arising out of, or relating to (a) any misrepresentation or breach of any representation or warranty made by the Company in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (b) any breach of any covenant, agreement or obligation of the Company contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby or (c) any cause of action, suit or claim brought or made against such Indemnitee by a third party that is not an Affiliate of such Indemnitee (including for these purposes a derivative action brought on behalf of the Company) and arising out of or resulting from (i) the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (ii) any transaction financed or to be financed in whole or in part, directly or indirectly, with the proceeds of the issuance of the Securities, or (iii) the status of such Buyer or holder of the Securities as an investor in the Company. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law.

(ii) Promptly after receipt by an Indemnitee under this Section 9(k) of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving an Indemnified Liability, such Indemnitee shall, if a claim for indemnification in respect thereof is to be made against any indemnifying party under this Section 9(k), deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying party and the Indemnitee; provided, however, that an Indemnitee shall have the right to retain its own counsel with the fees and expenses of not more than one counsel for such Indemnitee to be paid by the indemnifying party, if, in the reasonable opinion of the Indemnitee, the representation by such counsel of the Indemnitee and the indemnifying party would be inappropriate due to actual or potential differing interests between such Indemnitee and any other party represented by such counsel in such proceeding. Legal counsel referred to in the immediately preceding sentence shall be selected by the Investors holding at least a majority of the Purchased Shares. The Indemnitee shall cooperate fully with the indemnifying party in connection with any negotiation or defense of any such action or Indemnified Liabilities by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnitee that relates to such action or Indemnified Liabilities. The indemnifying party shall keep the Indemnitee fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall be liable for any settlement of any action, claim or proceeding effected without its prior written consent, provided, however, that the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the prior written consent of the Indemnitee, which consent shall not be unreasonably withheld conditioned or delayed, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnitee of a release from all liability in respect to such Indemnified Liabilities or litigation. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnitee with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. The failure to deliver written notice to the indemnifying party within a reasonable time of

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the commencement of any such action shall not relieve such indemnifying party of any liability to the Indemnitee under this Section 9(k), except to the extent that the indemnifying party is prejudiced in its ability to defend such action.

(iii) The indemnification required by this Section 9(k) shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Liabilities are incurred.

(iv) The indemnity agreements contained herein shall be in addition to (x) any cause of action or similar right of the Indemnitee against the indemnifying party or others, and (y) any liabilities the indemnifying party may be subject to pursuant to the law.

(l) No Strict Construction. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

(m) Remedies. Each Buyer and each holder of the Securities shall have all rights and remedies set forth in the Transaction Documents and all rights and remedies which such holders have been granted at any time under any other agreement or contract and all of the rights which such holders have under any law. Any Person having any rights under any provision of this Agreement shall be entitled to enforce such rights specifically (without posting a bond or other security), to recover damages by reason of any breach of any provision of this Agreement and to exercise all other rights granted by law. Furthermore, the Company recognizes that in the event that it fails to perform, observe, or discharge any or all of its obligations under the Transaction Documents, any remedy at law may prove to be inadequate relief to the Buyers. The Company therefore agrees that the Buyers shall be entitled to seek temporary and permanent injunctive relief in any such case without the necessity of proving actual damages and without posting a bond or other security.

(n) Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Buyer exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Buyer may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

(o) Payment Set Aside. To the extent that the Company makes a payment or payments to the Buyers hereunder or pursuant to any of the other Transaction Documents or the Buyers enforce or exercise their rights hereunder or thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, foreign, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

(p) Independent Nature of Buyers Obligations and Rights. The obligations of each Buyer under any Transaction Document are several and not joint with the obligations of any other Buyer, and no Buyer shall be responsible in any way for the performance of the obligations of any other Buyer under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Buyer pursuant hereto or thereto, shall be deemed to constitute the Buyers as, and the Company acknowledges, and each Buyer confirms, that the Buyers do not so constitute, a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Buyers are in any way acting in concert or as a group, and the Company will not assert any such claim with respect to such obligations or the transactions contemplated by the Transaction Documents and the Company acknowledges, and each Buyer confirms, that the Buyers are not acting in concert or as a group with respect to such obligations or the

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transactions contemplated by the Transaction Documents. The Company acknowledges and each Buyer confirms that it has independently participated in the negotiation of the transaction contemplated hereby with the advice of its own counsel and advisors. Each Buyer shall be entitled to independently protect and enforce its rights, including, without limitation, the rights arising out of this Agreement or out of any other Transaction Documents, and it shall not be necessary for any other Buyer to be joined as an additional party in any proceeding for such purpose.

[Signature Page Follows]

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IN WITNESS WHEREOF, each Buyer and the Company have caused their respective signature page to this Securities Purchase Agreement to be duly executed as of the date first written above.

COMPANY:

NANOGEN INC.

By: /s/ ROBERT SALTMARSH
Name: Robert Saltmarsh
Title: Chief Financial Officer

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Nanogen, Inc., Issuer

and

The Bank of New York Trust Company, N.A., Trustee

Indenture

Dated as of August 27, 2007

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Nanogen, Inc.

Debt Securities

Cross Reference Sheet¹

This Cross Reference Sheet shows the location in the
 Indenture of the provisions inserted pursuant
 to Sections 310 - 318(a), inclusive, of the
 Trust Indenture Act of 1939, as amended.

Trust Indenture Act	Sections of Indenture
§310(a)(1)	9.08
(a)(2)	9.08
(a)(3)	Inapplicable
(a)(4)	Inapplicable
(a)(5)	9.08
(b)	9.07 and 9.09
(c)	Inapplicable
§311(a)	9.12
(b)	9.12
(c)	Inapplicable
§312(a)	7.01 and 7.02
(b)	7.02
(c)	7.02
§313(a)	7.03
(b)	7.03
(c)	7.03
(d)	7.03
§314(a)	7.04
(a)(4)	1.01 and 6.07
(b)	Inapplicable
(c)(1)	13.05
(c)(2)	13.05
(c)(3)	Inapplicable
(d)	Inapplicable
(e)	13.05
(f)	Inapplicable
§315(a)	9.01
(b)	8.08
(c)	9.01
(d)	9.01
(e)	8.07
§316(a)	1.01
(a)(1)(A)	8.01 and 8.06
(a)(1)(B)	8.01
(a)(2)	Inapplicable
(b)	8.09
(c)	13.11
§317(a)(1)	8.02
(a)(2)	8.02

(b)
§318(a)

6.03
13.08

¹ The Cross Reference Sheet is not part of the Indenture.

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Indenture, dated as of August 27, 2007 between Nanogen, Inc., a corporation duly organized and existing under the laws of the state of Delaware (the Company), and The Bank of New York Trust Company, N.A., a national banking association (herein called the Trustee).

Recitals

A. The Company has duly authorized the execution and delivery of this Indenture to provide for the issuance from time to time of its unsecured debentures, notes, and other evidences of indebtedness (the Securities), to be issued in one or more series as in this Indenture provided.

B. The Securities of each series will be in substantially the form set forth below, or in such other form as may be established by or pursuant to a Board Resolution or in one or more indentures supplemental hereto, in each case with such appropriate insertions, omissions, substitutions, and other variations as are required or permitted by this Indenture, and may have such letters, numbers, or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or as may, consistently herewith, be determined by the officers executing such Securities, as evidenced by their execution of the Securities.

[Form of Face of Security]

[Insert any legend required by the Internal

Revenue Code and the regulations thereunder.]

CUSIP No.

No. R - \$

Nanogen, Inc., a corporation duly organized and existing under the laws of the [state] of Delaware (hereinafter called the Company), which term includes any successor Person under the Indenture hereinafter referred to), for value received, hereby promises to pay to _____, or registered assigns, the principal sum of \$ _____ on _____ [if the Security is to bear interest prior to Maturity, insert: _____], and to pay interest thereon from or from the most recent Interest Payment Date to which interest has been paid or duly provided for, on _____ and _____ in each year, commencing on _____, at the rate of _____ % per annum, until the principal hereof is paid or made available for payment [if applicable, insert: _____], and at the rate of _____ % per annum on any overdue principal and premium and on any overdue installment of interest]. The interest so payable, and punctually paid or duly provided for, on any Interest Payment Date will, as provided in such Indenture, be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest, which will be the _____ or _____ (whether or not a Business Day), as the case may be, next preceding such Interest Payment Date. Any such interest not so punctually paid or duly provided for will forthwith cease to be payable to the Holder on such Regular Record Date and may either be paid to the Person in whose name this Security (or one or more Predecessor Securities) is registered at the close of business on a Special Record Date for the payment of such Defaulted Interest to be fixed by the Trustee, notice whereof will be given to Holders of Securities of this series not less than 10 calendar days prior to such Special Record Date, or be paid at any time in any other lawful manner not inconsistent with the requirements of any securities exchange on which the Securities of this series may be listed, and upon such notice as may be required by such exchange, all as more fully provided in said Indenture].

[If the Security is not to bear interest prior to Maturity, insert: _____] The principal of this Security will not bear interest except in the case of a default in payment of principal upon acceleration, upon redemption, or at Stated Maturity, and in such case the overdue principal of this Security will bear interest at the rate of _____ % per annum which will accrue from the date of such default in payment to the date payment of such principal has been made

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or duly provided for. Interest on any overdue principal will be payable on demand. Any such interest on any overdue principal that is not so paid on demand will bear interest at the rate of % per annum which will accrue from the date of such demand for payment to the date payment of such interest has been made or duly provided for, and such interest will also be payable on demand.]

Payment of the principal of (and premium, if any) and if applicable, insert: any such interest on this Security will be made at the office or agency of the Company maintained for the purpose in , in such coin or currency of the United States of America as at the time of payment is legal tender for payment of public and private debts if applicable, insert: ; provided, however, that at the option of the Company payment of interest may be made by check mailed to the address of the Person entitled thereto as such address appears in the Security Register].

REFERENCE IS HEREBY MADE TO THE FURTHER PROVISIONS SET FORTH ON THE REVERSE HEREOF. SUCH PROVISIONS WILL FOR ALL PURPOSES HAVE THE SAME EFFECT AS THOUGH FULLY SET FORTH IN THIS PLACE.

This Security will not be valid or become obligatory for any purpose until the certificate of authentication herein has been signed manually by the Trustee under the Indenture referred to on the reverse side hereof.

IN WITNESS WHEREOF, this instrument has been duly executed in accordance with the Indenture.

By:

Attest:

By:

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[Form of Reverse of Security]

This Security is one of a duly authorized issue of securities of the Company (herein called the Securities) and is to be issued in one or more series under an Indenture, dated as of , 20 (herein called the Indenture), between the Company and The Bank of New York Trust Company, N.A., as Trustee (herein called the Trustee , which term includes any successor trustee under the Indenture), to which Indenture and all indentures supplemental thereto reference is hereby made for a statement of the respective rights, limitations of rights, duties, and immunities thereunder of the Company, the Trustee, and the Holders of the Securities and of the terms upon which the Securities are, and are to be, authenticated and delivered. This Security is one of the series designated on the face hereof if applicable, insert: , limited in aggregate principal amount to \$].

If applicable, insert: The Securities of this series are subject to redemption upon not less than 30 calendar days notice by mail. If applicable, insert: (a) on in each year commencing with the year and ending with the year through operation of the sinking fund for this series at a Redemption Price equal to 100% of the principal amount, and (b)] at any time if applicable, insert: on or after ,], as a whole or in part, at the election of the Company, at the following Redemption Prices (expressed as percentages of the principal amount): If redeemed if applicable, insert: on or before , %, and if redeemed during the 12-month period beginning of the years indicated,

Year	Redemption Price	Year	Redemption Price
------	------------------	------	------------------

and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption if applicable, insert: (whether through operation of the sinking fund or otherwise)] with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

If applicable, insert: The Securities of this series are subject to redemption upon not less than 30 calendar days notice by mail. if applicable, insert: (a) on in each year commencing with the year and ending with the year through operation of the sinking fund for this series at the following Redemption Prices (expressed as percentages of the principal amount) applicable to redemption through operation of the sinking fund and (b)] at any time if applicable, insert: on or after ,] as a whole or in part, at the election of the Company, at the following Redemption Prices (expressed as percentages of the principal amount) applicable to redemption otherwise than through operation of the sinking fund: If redeemed if applicable, insert: on or before , %, and if redeemed] during the 12-month period beginning of the years indicated,

Year	Redemption Price For Redemption Through Operation of the Sinking Fund	Redemption Price For Redemption Otherwise Than Through Operation of the Sinking Fund
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and thereafter at a Redemption Price equal to % of the principal amount, together in the case of any such redemption (whether through operation of the sinking fund or otherwise) with accrued interest to the Redemption Date, but interest installments whose Stated Maturity is on or prior to such Redemption Date will be payable to the Holders of such Securities, or one or more Predecessor Securities, of record at the close of business on the relevant Record Dates referred to on the face hereof, all as provided in the Indenture.]

If applicable, insert: Notwithstanding the foregoing, the Company may not, prior to , redeem any Securities of this series as contemplated by if applicable, insert: Clause (b) of] the preceding paragraph as

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a part of, or in anticipation of, any refunding operation by the application, directly or indirectly, of moneys borrowed having an interest cost to the Company (calculated in accordance with generally accepted financial practice) of less than % per annum.]

[If applicable, insert: The sinking fund for this series provides for the redemption on in each year beginning with the year and ending with the year of [if applicable, insert: not less than \$ (mandatory sinking fund) and not more than]\$ aggregate principal amount of Securities of this series. Securities of this series acquired or redeemed by the Company otherwise than through [if applicable, insert: mandatory] sinking fund payments may be credited against subsequent [if applicable, insert: mandatory] sinking fund payments otherwise required to be made [if applicable, insert: in the inverse order in which they become due].]

[If the Security is subject to redemption of any kind, insert: In the event of redemption of this Security in part only, a new Security or Securities of this series and of like tenor for the unredeemed portion hereof will be issued in the name of the Holder hereof upon the cancellation hereof.]

[If applicable, insert: The Indenture contains provisions for defeasance at any time of (a) the entire indebtedness evidenced by this Security or (b) certain restrictive covenants and Events of Default with respect to this Security, in each case upon compliance with certain conditions set forth in the Indenture.]

[If the Security is not an Original Issue Discount Security, insert: If an Event of Default with respect to Securities of this series shall occur and be continuing, the principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture.]

[If the Security is an Original Issue Discount Security, insert: If an Event of Default with respect to Securities of this series shall occur and be continuing, an amount of principal of the Securities of this series may be declared due and payable in the manner and with the effect provided in the Indenture. Such amount will be equal to [insert formula for determining the amount]. Upon payment (a) of the amount of principal so declared due and payable and (b) of interest on any overdue principal and overdue interest, all of the Company's obligations in respect of the payment of the principal of and interest, if any, on the Securities of this series will terminate.]

The Indenture permits, with certain exceptions as therein provided, the amendment thereof and the modification of the rights and obligations of the Company and the rights of the Holders of the Securities of each series to be affected under the Indenture at any time by the Company and the Trustee with the consent of the Holders of a majority in principal amount of the Securities at the time Outstanding of each series to be affected. The Indenture also contains provisions permitting the Holders of specified percentages in principal amount of the Securities of each series at the time Outstanding, on behalf of the Holders of all Securities of such series, to waive compliance by the Company with certain provisions of the Indenture and certain past defaults under the Indenture and their consequences. Any such consent or waiver by the Holder of this Security will be conclusive and binding upon such Holder and upon all future Holders of this Security and of any Security issued upon the registration of transfer hereof or in exchange hereof or in lieu hereof, whether or not notation of such consent or waiver is made upon this Security.

As provided in and subject to the provisions of the Indenture, the Holder of this Security will not have the right to institute any proceeding with respect to the Indenture or for the appointment of a receiver or trustee or for any other remedy thereunder, unless such Holder shall have previously given the Trustee written notice of a continuing Event of Default with respect to the Securities of this series, the Holders of not less than 51% in principal amount of the Securities of this series at the time Outstanding shall have made written request to the Trustee to institute proceedings in respect of such Event of Default as Trustee and offered the Trustee indemnity satisfactory to it, and the Trustee shall not have received from the Holders of a majority in principal amount of Securities of this series at the time Outstanding a direction inconsistent with such request and shall have failed to

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institute such proceeding for 60 calendar days after receipt of such notice, request, and offer of indemnity. The foregoing will apply to any suit instituted by the Holder of this Security for the enforcement of any payment of principal hereof or any premium or interest hereon on or after the respective due dates expressed herein.

No reference herein to the Indenture and no provision of this Security or of the Indenture will alter or impair the obligation of the Company, which is absolute and unconditional, to pay the principal of and any premium and interest on this Security at the times, place, and rate, and in the coin or currency, herein prescribed.

As provided in the Indenture and subject to certain limitations therein set forth, the transfer of this Security is registerable in the Security Register, upon surrender of this Security for registration of transfer at the office or agency of the Company in any place where the principal of and any premium and interest on this Security are payable, duly endorsed by, or accompanied by a written instrument of transfer in form satisfactory to the Company and the Security Registrar duly executed by, the Holder hereof or his attorney duly authorized in writing, and thereupon one or more new Securities of this series and of like tenor, of authorized denominations and for the same aggregate principal amount, will be issued to the designated transferee or transferees.

The Securities of this series are issuable only in registered form without coupons in denominations of \$1,000 and integral multiples thereof. As provided in the Indenture and subject to certain limitations therein set forth, Securities of this series are exchangeable for a like aggregate principal amount of Securities of this series and of like tenor of a different authorized denomination, as requested by the Holder surrendering the same.

No service charge will be made for any such registration of transfer or exchange, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge payable in connection therewith.

Prior to due presentment of this Security for registration of transfer, the Company, the Trustee, and any agent of the Company or the Trustee may treat the Person in whose name this Security is registered as the owner hereof for all purposes, whether or not this Security shall be overdue, and neither the Company, the Trustee, nor any such agent will be affected by notice to the contrary.

All terms used in this Security that are defined in the Indenture will have the respective meanings assigned to them in the Indenture.

This Security shall be governed by, and construed in accordance with, the laws of the State of New York, without regard to conflicts of laws principles thereof.

C. The Trustee's certificate of authentication will be in substantially the following form:

[Form of Trustee's Certificate Of
Authentication for Securities]
Trustee's Certificate of Authentication

This is one of the Securities of the series designated therein referred to in the within-mentioned Indenture.

The Bank of New York
Trust Company, N.A.,
as Trustee

Dated:

By:
Authorized Signatory

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D. Every Global Security authenticated and delivered hereunder will bear a legend in substantially the following form:

Form of Legend for Global Securities

THIS SECURITY IS A GLOBAL SECURITY WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITARY OR A NOMINEE THEREOF. THIS SECURITY MAY NOT BE TRANSFERRED TO, OR REGISTERED OR EXCHANGED FOR SECURITIES REGISTERED IN THE NAME OF, ANY PERSON OTHER THAN THE DEPOSITARY OR A NOMINEE THEREOF, AND NO SUCH TRANSFER MAY BE REGISTERED, EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE. EVERY SECURITY AUTHENTICATED AND DELIVERED UPON REGISTRATION OF TRANSFER OF, OR IN EXCHANGE FOR, OR IN LIEU OF, THIS SECURITY WILL BE A GLOBAL SECURITY SUBJECT TO THE FOREGOING, EXCEPT IN SUCH LIMITED CIRCUMSTANCES.

E. All acts and things necessary to make the Securities, when the Securities have been executed by the Company and authenticated by the Trustee and delivered as provided in this Indenture, the valid, binding, and legal obligations of the Company and to constitute these presents a valid indenture and agreement according to its terms, have been done and performed, and the execution and delivery by the Company of this Indenture and the issue hereunder of the Securities have in all respects been duly authorized; and the Company, in the exercise of legal right and power in it vested, is executing and delivering this Indenture and proposes to make, execute, issue, and deliver the Securities.

NOW, THEREFORE, THIS INDENTURE WITNESSETH:

In order to declare the terms and conditions upon which the Securities are authenticated, issued, and delivered, and in consideration of the premises and of the purchase and acceptance of the Securities by the Holders thereof, it is mutually agreed, for the equal and proportionate benefit of the respective Holders from time to time of the Securities or of a series thereof, as follows:

Article I.

DEFINITIONS

Section 1.01. Certain Terms Defined.

(a) The terms defined in this Section 1.01 (except as herein otherwise expressly provided or unless the context of this Indenture otherwise requires) for all purposes of this Indenture and of any indenture supplemental hereto have the respective meanings specified in this Section 1.01. All other terms used in this Indenture that are defined in the Trust Indenture Act, either directly or by reference therein (except as herein otherwise expressly provided or unless the context of this Indenture otherwise requires), have the respective meanings assigned to such terms in the Trust Indenture Act as in force at the date of this Indenture as originally executed.

Act:

The term Act, when used with respect to any Holder, has the meaning set forth in Section 14.11.

Affiliate:

The term Affiliate means, with respect to a particular Person, any Person that, directly or indirectly, is in control of, is controlled by, or is under common control with, such Person. For purposes of this definition, control of a Person means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms controlling and controlled have meanings correlative of the foregoing.

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Authenticating Agent:

The term **Authenticating Agent** means any Person authorized by the Trustee pursuant to Section 9.13 to act on behalf of the Trustee to authenticate Securities of one or more series.

Board of Directors:

The term **Board of Directors** means the Board of Directors of the Company or a duly authorized committee of such Board.

Board Resolution:

The term **Board Resolution** means a copy of a resolution certified by the Secretary or an Assistant Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of such certification, and delivered to the Trustee.

Business Day:

The term **Business Day**, when used with respect to any Place of Payment, means each Monday, Tuesday, Wednesday, Thursday, and Friday which is not a day on which banking institutions in that Place of Payment are authorized or required by law or executive order to close.

Capital Lease:

The term **Capital Lease** means, with respect to any Person, any lease of property (whether real, personal, or mixed) by such Person or its Subsidiaries as lessee that would be capitalized on a balance sheet of such Person or its Subsidiaries prepared in conformity with GAAP, other than, in the case of such Person or its Subsidiaries, any such lease under which such Person or any of its Subsidiaries is the lessor.

Capital Lease Obligations:

The term **Capital Lease Obligations** means, with respect to any Person, the capitalized amount of all obligations of such Person and its Subsidiaries under Capital Leases, as determined on a consolidated basis in conformity with GAAP.

Commission:

The term **Commission** means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body performing such duties at such time.

Common Stock:

The term **Common Stock** means the common stock of the Company.

Company:

The term **Company** means Nanogen, Inc., a Delaware corporation, until a successor Person shall have become such pursuant to the applicable provisions of this Indenture, and thereafter **Company** will mean such successor Person.

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Company Request or Company Order:

The term **Company Request** or **Company Order** means a written request or order signed in the name of the Company by the Chairman of the Board of Directors, the Vice Chairman of the Board of Directors, the President, a Vice President, the Treasurer, an Assistant Treasurer, the Secretary, or an Assistant Secretary of the Company, and delivered to the Trustee.

Corporate Trust Office:

Corporate Trust Office means the designated office of the Trustee at which at any time its corporate trust business shall be administered, which office at the date hereof is located at 700 South Flower Street, Suite 500, Los Angeles, California 90017, Attention: Corporate Trust Administration, or such other address as the Trustee may designate from time to time by notice to the Holders and the Company, or the principal corporate trust office of any successor Trustee (or such other address as such successor Trustee may designate from time to time by notice to the Holders and the Company).

Covenant Defeasance:

The term **Covenant Defeasance** has the meaning set forth in Section 5.03.

Default:

The term **Default** means any event which, with notice or passage of time or both, would constitute an Event of Default.

Defaulted Interest:

The term **Defaulted Interest** has the meaning set forth in Section 2.09.

Defeasance:

The term **Defeasance** has the meaning set forth in Section 5.02.

Defeasible Series:

The term **Defeasible Series** has the meaning set forth in Section 5.01.

Depository:

The term **Depository** means, with respect to Securities of any series issuable in whole or in part in the form of one or more Global Securities, a clearing agency registered under the Exchange Act that is designated to act as Depository for such Securities as contemplated by Section 2.01.

Event of Default:

The term **Event of Default** has the meaning set forth in Section 8.01(a).

Exchange Act:

The term **Exchange Act** means the Securities Exchange Act of 1934, as amended, or any similar Federal statute, and the rules and regulations of the Commission thereunder, as the same may be in effect from time to time.

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GAAP:

The term **GAAP** means generally accepted accounting principles in the United States of America as in effect from time to time set forth in the opinions and pronouncements of the Accounting Principles Board and The American Institute of Certified Public Accountants and the statements and pronouncements of the Financial Accounting Standards Board, or in such other statements by any successor entity as may be in general use by significant segments of the accounting profession, which are applicable to the circumstances as of the date of determination.

Global Security:

The term **Global Security** means a Security that evidences all or part of the Securities of any series and is authenticated and delivered to, and registered in the name of, the Depository for such Securities or a nominee thereof.

Holder:

The term **Holder** means a person in whose name a particular Security is registered in the Security Register.

Indebtedness:

The term **Indebtedness** means, as applied to any Person, without duplication: (a) all obligations of such Person for borrowed money; (b) all obligations of such Person for the deferred purchase price of property or services (other than property and services purchased, and expense accruals and deferred compensation items arising, in the ordinary course of business); (c) all obligations of such Person evidenced by notes, bonds, debentures, mandatorily redeemable preferred stock, or other similar instruments (other than performance, surety, and appeals bonds arising in the ordinary course of business); (d) all payment obligations created or arising under any conditional sale, deferred price, or other title retention agreement with respect to property acquired by such Person (unless the rights and remedies of the seller or lender under such agreement in the event of default are limited to repossession or sale of such property); (e) any Capital Lease Obligation of such Person; (f) all reimbursement, payment, or similar obligations, contingent or otherwise, of such Person under acceptance, letter of credit, or similar facilities (other than letters of credit in support of trade obligations or incurred in connection with public liability insurance, workers compensation, unemployment insurance, old-age pensions, and other social security benefits other than in respect of employee benefit plans subject to ERISA); (g) all obligations of such Person, contingent or otherwise, under any guarantee by such Person of the obligations of another Person of the type referred to in clauses (a) through (f) above; and (h) all obligations referred to in clauses (a) through (f) above secured by (or for which the holder of such Indebtedness has an existing right, contingent or otherwise, to be secured by) any mortgage or security interest in property (including without limitation accounts, contract rights, and general intangibles) owned by such Person and as to which such Person has not assumed or become liable for the payment of such obligations other than to the extent of the property subject to such mortgage or security interest; provided, however, that Indebtedness of the type referred to in clauses (g) and (h) above shall be included within the definition of **Indebtedness** only to the extent of the least of: (i) the amount of the underlying Indebtedness referred to in the applicable clause (a) through (f) above; (ii) in the case of clause (g), the limit on recoveries, if any, from such Person under obligations of the type referred to in clause (g) above; and (iii) in the case of clause (h), the aggregate value (as determined in good faith by the Board of Directors) of the security for such Indebtedness.

Indenture:

The term **Indenture** means this Indenture, as this Indenture may be amended, supplemented, or otherwise modified from time to time, including, for all purposes of this Indenture and any such supplemental indenture, the provisions of the Trust Indenture Act that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively. The term **Indenture** will also include the terms of particular series of Securities established as contemplated by Section 2.01.

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Interest:

The term **interest** (i) when used with respect to an Original Issue Discount Security which by its terms bears interest only after Maturity, means interest which accrues from and after and is payable after Maturity and (ii) when used with respect to any Security, means the amount of all interest accruing on such Security, including any default interest and any interest accruing after any Event of Default that would have accrued but for the occurrence of such Event of Default, whether or not a claim for such interest would be otherwise allowable under applicable law.

Interest Payment Date:

The term **Interest Payment Date** when used with respect to any Security means the Stated Maturity of an installment of interest on such Security.

Material Adverse Effect:

The term **Material Adverse Effect** means a material adverse effect on the business, assets, financial condition or results of operations of the Company (taken together with its Subsidiaries as a whole). The Trustee shall be entitled to conclusively rely upon an Opinion of Counsel as to the existence of a Material Adverse Effect.

Maturity:

The term **Maturity** when used with respect to any Security means the date on which the principal of that Security or an installment of principal becomes due and payable as therein or herein provided, whether at the Stated Maturity or by declaration of acceleration, call for redemption, or otherwise.

Notice of Default:

The term **Notice of Default** means a written notice of the kind set forth in Section 8.01(a)(iv).

Officer's Certificate:

The term **Officer's Certificate** means a certificate executed on behalf of the Company by a responsible officer and delivered to the Trustee.

Opinion of Counsel:

The term **Opinion of Counsel** means an opinion in writing signed by legal counsel, who, subject to any express provisions hereof, may be an employee of or counsel for the Company or any Subsidiary, reasonably acceptable to the Trustee.

Original Issue Discount Security:

The term **Original Issue Discount Security** means any Security which provides for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 8.01(b).

Outstanding:

The term **Outstanding** means, when used with reference to Securities as of a particular time, all Securities theretofore issued by the Company and authenticated and delivered by the Trustee under this Indenture, except (a) Securities theretofore cancelled by the Trustee or delivered to the Trustee for cancellation, (b) Securities for

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the payment or redemption of which money in the necessary amount has been theretofore deposited with the Trustee or any Paying Agent (other than the Company) in trust or set aside and segregated in trust by the Company (if the Company is acting as its own Paying Agent) for the Holders of such Securities; provided that, if such Securities are to be redeemed, notice of such redemption has been duly given pursuant to this Indenture or provision often not covered therefor satisfactory to the Trustee has been made, and (c) Securities paid pursuant to Section 2.07 or Securities in exchange for or in lieu of which other Securities have been authenticated and delivered pursuant to this Indenture, other than any such Securities in respect of which there shall have been presented to the Trustee proof satisfactory to it that such Securities are held by a bona fide purchaser in whose hands such Securities are valid obligations of the Company; provided, however, that in determining whether the Holders of the requisite principal amount of the Outstanding Securities have given any request, demand, authorization, direction, notice, consent, or waiver hereunder, (i) the principal amount of an Original Issue Discount Security that will be deemed to be Outstanding will be the amount of the principal thereof that would be due and payable as of the date of such determination upon acceleration of the Maturity thereof to such date pursuant to Section 8.01(b), (ii) the principal amount of a Security denominated in one or more foreign currencies or currency units will be the U.S. dollar equivalent, determined in the manner contemplated by Section 2.01 on the date of original issuance of such Security, of the principal amount (or, in the case of an Original Issue Discount Security, the U.S. dollar equivalent on the date of original issuance of such Security of the amount determined as provided in clause (i) above) of such Security, and (iii) Securities owned by the Company or any other obligor upon the Securities or any Affiliate of the Company or of such other obligor will be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee will be protected in relying upon any such request, demand, authorization, direction, notice, consent, or waiver, only Securities which a Responsible Officer of the Trustee actually knows to be so owned will be so disregarded. Securities so owned which have been pledged in good faith may be regarded as Outstanding if the pledgor establishes to the satisfaction of the Trustee the pledgee's right so to act with respect to such Securities and that the pledgee is not the Company or any other obligor upon the Securities or any Affiliate of the Company or of such other obligor.

Paying Agent:

The term **Paying Agent** means any Person authorized by the Company to pay the principal of or any premium or interest on any Securities on behalf of the Company.

Person:

The term **Person** means any individual, partnership, corporation, joint stock company, business trust, trust, unincorporated association, joint venture, or other entity, or government or political subdivision or agency thereof.

Place of Payment:

The term **Place of Payment** when used with respect to the Securities of any series means the place or places where the principal of and any premium and interest on the Securities of that series are payable as specified as contemplated by Section 2.01.

Predecessor Security:

The term **Predecessor Security** when used with respect to any particular Security means every previous Security evidencing all or a portion of the same debt as that evidenced by such Security; and, for the purposes of this definition, any Security authenticated and delivered under Section 2.07 in exchange for or in lieu of a mutilated, destroyed, lost, or stolen Security will be deemed to evidence the same debt as the mutilated, destroyed, lost, or stolen Security.

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Redemption Date:

The term **Redemption Date** when used with respect to any Security to be redeemed means the date fixed for such redemption by or pursuant to this Indenture.

Redemption Price:

The term **Redemption Price** when used with respect to any Security to be redeemed means the price (including premium, if any) at which it is to be redeemed pursuant to this Indenture.

Regular Record Date:

The term **Regular Record Date** for the interest payable on any Interest Payment Date on the Securities of any series means the date specified for that purpose as contemplated by Section 2.01.

Responsible Officer:

Responsible Officer when used with respect to the Trustee, means any vice president, any assistant vice president, any senior trust officer or assistant trust officer, any trust officer, or any other officer associated with the corporate trust department of the Trustee customarily performing functions similar to those performed by any of the above designated officers and also means, with respect to a particular corporate trust matter, any other officer to whom such matter is referred because of such person's knowledge of and familiarity with the particular subject.

Securities:

The term **Securities** has the meaning set forth in the first recital of this Indenture and more particularly means any Securities authenticated and delivered under this Indenture.

Security Register and Security Registrar:

The terms **Security Register** and **Security Registrar** have the respective meanings set forth in Section 2.05.

Special Record Date:

The term **Special Record Date** for the payment of any Defaulted Interest means a date fixed by the Trustee pursuant to Section 2.09.

Stated Maturity:

The term **Stated Maturity** when used with respect to any Security, any installment of interest thereon, or any other amount payable under this Indenture or the Securities means the date specified in this Indenture or such Security as the regularly scheduled date on which the principal of such Security, such installment of interest, or such other amount, is due and payable.

Subsidiary:

The term **Subsidiary** means, as applied with respect to any Person, any corporation, partnership, or other business entity of which, in the case of a corporation, more than 50% of the issued and outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether at the time capital stock of any other class or classes of such corporation has or might have voting power upon the occurrence of any contingency), or, in the case of any partnership or other legal entity, more than 50%

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of the ordinary equity capital interests, is at the time directly or indirectly owned or controlled by such Person, by such Person and one or more of its other Subsidiaries, or by one or more of such Person's other Subsidiaries.

Trust Indenture Act:

The term "Trust Indenture Act" means the Trust Indenture Act of 1939, as amended, as in force upon the date as of which this instrument was executed; provided, however, that in the event the Trust Indenture Act of 1939 is amended after such date, "Trust Indenture Act" means, to the extent required by any such amendment, the Trust Indenture Act of 1939 as so amended.

Trustee:

The term "Trustee" means the Person named as the "Trustee" in the first paragraph of this Indenture until a successor Trustee shall have become such pursuant to the applicable provisions of this Indenture, and thereafter "Trustee" will mean or include each Person who is then a Trustee hereunder, and if at any time there is more than one such Person, "Trustee" as used with respect to the Securities of any series will mean each Trustee with respect to Securities of that series.

U.S. Government Obligation:

The term "U.S. Government Obligation" means (a) any security that is (i) a direct obligation of the United States of America for the payment of which full faith and credit of the United States of America is pledged or (ii) an obligation of a Person controlled or supervised by and acting as an agency or instrumentality of the United States of America the payment of which is unconditionally guaranteed as a full faith and credit obligation by the United States of America, which, in either case (i) or (ii), is not callable or redeemable at the option of the issuer thereof and (b) any depositary receipt issued by a bank (as defined in Section 3(a)(2) of the Securities Act of 1933, as amended) as custodian with respect to any U.S. Government Obligation specified in clause (a), which U.S. Government Obligation is held by such custodian for the account of the holder of such depositary receipt, or with respect to any specific payment of principal of or interest on any such U.S. Government Obligation, provided that (except as required by law) such custodian is not authorized to make any deduction from the amount payable to the holder of such depositary receipt from any amount received by the custodian in respect of the U.S. Government Obligation or the specific payment of principal or interest evidenced by such depositary receipt.

Vice President:

(a) The term "Vice President" when used with respect to the Company or the Trustee means any vice president, whether or not designated by a number or a word or words added before or after the title "vice president".

(b) The words "Article" and "Section" refer to an Article and Section, respectively, of this Indenture. The words "herein", "hereof" and "hereunder" and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section, or other subdivision. Certain terms used principally in Articles V, VI, and IX are defined in those Articles. Terms in the singular include the plural and terms in the plural include the singular.

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Article II.

THE SECURITIES

Section 2.01. Designation and Amount of Securities.

- (a) The aggregate principal amount of Securities that may be authenticated and delivered under this Indenture is unlimited.
- (b) The Securities may be issued in one or more series. There will be established in or pursuant to a Board Resolution and, subject to Section 2.04, set forth or determined in the manner provided in an Officer's Certificate, or established in one or more indentures supplemental hereto, prior to the issuance of Securities of any series: (i) the title of the Securities of the series (which will distinguish the Securities of the series from Securities of any other series); (ii) any limit upon the aggregate principal amount of the Securities of the series which may be authenticated and delivered under this Indenture (except for Securities authenticated and delivered upon registration of transfer of, or in the exchange for, or in lieu of, other Securities of the series pursuant to Section 2.05, 2.06, 2.07, 3.05, or 10.06 and except for any Securities which, pursuant to Section 2.04, are deemed never to have been authenticated and delivered hereunder); (iii) the Person to whom any interest on a Security of the series will be payable, if other than the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest; (iv) the date or dates on which the principal of the Securities of the series is payable; (v) the rate or rates at which the Securities of the series will bear interest, if any, the date or dates from which such interest will accrue, the Interest Payment Dates on which any such interest will be payable, and the Regular Record Date for any interest payable on any Interest Payment Date; (vi) the place or places where the principal of and any premium and interest on Securities of the series will be payable; (vii) the period or periods within which, the price or prices at which, and the terms and conditions upon which Securities of the series may be redeemed, in whole or in part, at the option of the Company; (viii) the obligation, if any, of the Company to redeem or purchase Securities of the series pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which, and the terms and conditions upon which Securities of the series will be redeemed or purchased, in whole or in part, pursuant to such obligation; (ix) if other than denominations of \$1,000 and integral multiples thereof, the denominations in which Securities of the series will be issuable; (x) the currency, currencies, or currency units in which payment of the principal of and any premium and interest on any Securities of the series will be payable if other than the currency of the United States of America and the manner of determining the equivalent thereof in the currency of the United States of America for purposes of the definition of "Outstanding" in Section 1.01; (xi) if the amount of payments of principal of or any premium or interest on any Securities of the series may be determined with reference to an index, based upon a formula, or in some other manner, the manner in which such amounts will be determined; (xii) if the principal of or any premium or interest on any Securities of the series is to be payable, at the election of the Company or a Holder thereof, in one or more currencies or currency units other than that or those in which the Securities are stated to be payable, the currency, currencies, or currency units in which payment of the principal of and any premium and interest on Securities of such series as to which such election is made will be payable, and the periods within which and the terms and conditions upon which such election is to be made; (xiii) if other than the principal amount thereof, the portion of the principal amount of Securities of the series which will be payable upon declaration of acceleration of the Maturity thereof pursuant to Section 8.01(b); (xiv) if applicable, that the Securities of the series will be subject to either or both of Defeasance or Covenant Defeasance as provided in Article V, provided that no series of Securities that is convertible into Common Stock pursuant to Section 2.01(b)(xvi) or convertible into or exchangeable for any other securities pursuant to Section 2.01(b)(xvii) will be subject to Defeasance pursuant to Section 5.02; (xv) if and as applicable, that the Securities of the series will be issuable in whole or in part in the form of one or more Global Securities and, in such case, the Depositary or Depositaries for such Global Security or Global Securities and any circumstances other than those set forth in Section 2.05 in which any such Global Security may be transferred to, and registered and exchanged for Securities

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registered in the name of, a Person other than the Depositary for such Global Security or a nominee thereof and in which any such transfer may be registered; (xvi) the terms and conditions, if any, pursuant to which the Securities are convertible into Common Stock; (xvii) the terms and conditions, if any, pursuant to which the Securities are convertible into or exchangeable for any other securities, including (without limitation) securities of Persons other than the Company; and (xviii) any other terms of, or provisions, covenants, rights or other matters applicable to, the series (which terms, provisions, covenants, rights or other matters will not be inconsistent with the provisions of this Indenture, except as permitted by Section 10.01(e)).

(c) All Securities of any one series will be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to the Board Resolution referred to below and (subject to Section 2.04) set forth or determined in the manner provided in the Officer's Certificate referred to above or in any such indenture supplemental hereto.

(d) If any of the terms of the series are established by action taken pursuant to a Board Resolution, a copy of an appropriate record of such action will be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee concurrently with or prior to the delivery of the Officer's Certificate setting forth the terms of the series.

Section 2.02. Form of Securities and Trustee's Certificate of Authentication.

(a) The Securities of each series will be in substantially the form set forth in or otherwise contemplated by the recitals to this Indenture, with appropriate variations to reflect the specific terms of such series. If the form of Securities of any series is established by action taken pursuant to a Board Resolution, a copy of an appropriate record of such action will be certified by the Secretary or an Assistant Secretary of the Company and delivered to the Trustee concurrently with or prior to the delivery of the Company Order contemplated by Section 2.04 for the authentication and delivery of such Securities.

(b) The definitive Securities will be printed, lithographed, or engraved on steel engraved borders or may be produced in any other manner permitted by the rules of any securities exchange on which the Securities may be listed, all as determined by the officers executing such Securities, as evidenced by their execution of such Securities.

(c) The Trustee's certificate of authentication will be in substantially the form set forth in the recitals to this Indenture.

(d) Every Global Security authenticated and delivered hereunder will bear a legend in substantially the form set forth in the recitals to this Indenture.

Section 2.03. Date and Denominations.

Each Security will be dated the date of its authentication. The Securities of each series will be issuable only in registered form without coupons in such denominations as may be specified as contemplated by Section 2.01. In the absence of any such specified denomination with respect to the Securities of any series, the Securities of such series will be issuable in denominations of \$1,000 and integral multiples thereof.

Section 2.04. Execution, Authentication and Delivery of Securities.

(a) The Securities will be executed on behalf of the Company by the Chairman or any Vice Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President of the Company and attested by the Treasurer, the Secretary, any Assistant Treasurer, or any Assistant Secretary of the Company under its corporate seal. The signature of any of these officers on the Securities may be manual or facsimile. The seal of the Company may be in the form of a facsimile thereof and may be impressed, affixed, imprinted, or otherwise reproduced on the Securities.

(b) Only such Securities bearing the Trustee's certificate of authentication, signed manually by the Trustee, will be entitled to the benefits of this Indenture or be valid or obligatory for any purpose. Such

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execution of the certificate of authentication by the Trustee upon any Securities executed by the Company will be conclusive evidence that the Securities so authenticated have been duly authenticated and delivered hereunder. Notwithstanding the foregoing, if any Security shall have been authenticated and delivered hereunder but never issued and sold by the Company, and the Company shall deliver such Security to the Trustee for cancellation as provided in Section 2.08, for all purposes of this Indenture such Security will be deemed never to have been authenticated and delivered hereunder and will never be entitled to the benefits of this Indenture.

(c) Securities bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company will bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Securities or did not hold such offices at the date of such Securities.

(d) At any time and from time to time after the execution and delivery of this Indenture, the Company may deliver Securities of any series executed by the Company to the Trustee for authentication, together with a Company Order for the authentication and delivery of such Securities, and the Trustee in accordance with the Company Order will authenticate and deliver such Securities. If the form or terms of the Securities of the series have been established in or pursuant to one or more Board Resolutions as permitted by Sections 2.01 and 2.02, in authenticating such Securities, and accepting the additional responsibilities under this Indenture in relation to such Securities, the Trustee shall receive, and (subject to Section 9.01) will be fully protected in relying upon, an Opinion of Counsel stating:

(i) if the form of such Securities has been established by or pursuant to a Board Resolution as permitted by Section 2.02, that such form has been established in conformity with the provisions of this Indenture,

(ii) if the terms of such Securities have been established by or pursuant to a Board Resolution as permitted by Section 2.01, that such terms have been established in conformity with the provisions of this Indenture,

(iii) that such Securities, when authenticated and delivered by the Trustee and issued by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will constitute valid and binding obligations of the Company enforceable in accordance with their terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium, or other laws relating to or affecting creditors' rights and by general principles of equity; and

(iv) that all conditions precedent set forth in the Indenture to the execution and delivery by the Company of such Securities have been satisfied.

The Trustee shall have the right to decline to authenticate and deliver any Securities under this Section if the Trustee, being advised by counsel, determines that such action may not lawfully be taken or if the Trustee in good faith shall determine that such action would expose the Trustee to personal liability to existing Holders.

(e) Notwithstanding the provisions of Sections 2.01 and 2.04(d), if all Securities of a series are not to be originally issued at one time, it will not be necessary to deliver the Officer's Certificate otherwise required pursuant to Section 2.01 or the Company Order and Opinion of Counsel otherwise required pursuant to Section 2.04(d) at or prior to the time of authentication of each Security of such series if such documents are delivered at or prior to the authentication upon original issuance of the first Security of such series to be issued.

Section 2.05. Registration of Transfer and Exchange.

(a) The Company will cause to be kept at the Corporate Trust Office a register (the register maintained in such office and in any other office or agency of the Company in a Place of Payment being herein sometimes collectively referred to as the Security Register) in which, subject to such reasonable

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regulations as it may prescribe, the Company will provide for the registration of Securities and of transfers of Securities. The Trustee is hereby appointed Security Registrar for the purpose of registering Securities and transfers of Securities as herein provided.

(b) Upon surrender for registration of transfer of any Security of any series at the office or agency in a Place of Payment for that series, the Company will execute, and the Trustee will authenticate and deliver in the name of the designated transferee or transferees, one or more new Securities of the same series, of any authorized denominations and of a like aggregate principal amount and tenor.

(c) At the option of the Holder, Securities of any series may be exchanged for other Securities of the same series, of any authorized denominations and of a like aggregate principal amount and tenor, upon surrender of the Securities to be exchanged at such office or agency. Whenever any Securities are so surrendered for exchange, the Company will execute, and the Trustee will authenticate and deliver the Securities which the Holder making the exchange is entitled to receive.

(d) Every Security presented or surrendered for registration of transfer or exchange will (if so required by the Company or the Trustee) be duly endorsed, or be accompanied by a written instrument or instruments of transfer, in form reasonably satisfactory to the Company and the Security Registrar duly executed, by the Holder thereof or his attorney duly authorized in writing. No service charge will be made for any registration of transfer or exchange of Securities, but the Company may require payment of a sum sufficient to cover any tax, assessment, fee or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Securities, other than exchanges pursuant to Section 2.06, 3.05, or 10.06 not involving any transfer. The Company will not be required (i) to issue, register the transfer of, or exchange Securities of any series during a period beginning at the opening of business 15 calendar days before the mailing of a notice of redemption of Securities of that series selected for redemption under Section 3.02(c) and ending at the close of business on the day of such mailing or (ii) to register the transfer of or exchange any Security so selected for redemption in whole or in part, except, in the case of any Securities to be redeemed in part, the portion thereof not being redeemed.

(e) All Securities issued upon any registration of transfer or exchange of Securities will be valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Securities surrendered upon such registration of transfer or exchange.

(f) Notwithstanding any other provision in this Indenture, no Global Security may be transferred to, or registered or exchanged for Securities registered in the name of, any Person other than the Depository for such Global Security or any nominee thereof, and no such transfer may be registered, unless (i) such Depository (A) notifies the Company that it is unwilling or unable to continue as Depository for such Global Security or (B) ceases to be a clearing agency registered under the Exchange Act, (ii) the Company executes and delivers to the Trustee a Company Order that such Global Security shall be so transferable, registrable, and exchangeable, and such transfers shall be registrable, (iii) there shall have occurred and be continuing an Event of Default with respect to the Securities evidenced by such Global Security, or (iv) there shall exist such other circumstances, if any, as have been specified for this purpose as contemplated by Section 2.01. Notwithstanding any other provision in this Indenture, a Global Security to which the restriction set forth in the preceding sentence shall have ceased to apply may be transferred only to, and may be registered and exchanged for Securities registered only in the name or names of, such Person or Persons as the Depository for such Global Security shall have directed and no transfer thereof other than such a transfer may be registered. Every Security authenticated and delivered upon registration of transfer of, or in exchange for or in lieu of, a Global Security to which the restriction set forth in the first sentence of this Section 2.05(f) shall apply, whether pursuant to this Section 2.05, Section 2.06, 2.07, 3.05, or 10.06 or otherwise, will be authenticated and delivered in the form of, and will be, a Global Security.

(g) Each Holder of a Security agrees to indemnify the Company and the Trustee against any liability that may result from the transfer, exchange or assignment of such Holder's Security in violation of any provision of this Indenture and/or applicable United States Federal or state securities law.

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(h) The Trustee shall have no obligation or duty to monitor, determine or inquire as to compliance with any restrictions on transfer imposed under this Indenture or under applicable law with respect to any transfer of any interest in any Security [(including any transfers between or among Depository Participants or beneficial owners of interests in any Global Security)] other than to require delivery of such certificates and other documentation or evidence as are expressly required by, and to do so if and when expressly required by the terms of, this Indenture, and to examine the same to determine substantial compliance as to form with the express requirements hereof.

Section 2.06. Temporary Securities.

Pending the preparation of definitive Securities of any series, the Company may execute and register and upon Company Order the Trustee will authenticate and deliver temporary Securities (printed, lithographed, or typewritten) of any authorized denomination, and substantially in the form of the definitive Securities but with such omissions, insertions, and variations as may be appropriate for temporary Securities, all as may be determined by the officers executing such Securities as evidenced by their execution of such Securities; provided, however that the Company will use reasonable efforts to have definitive Securities of that series available at the times of any issuance of Securities under this Indenture. Every temporary Security will be executed and registered by the Company and be authenticated by the Trustee upon the same conditions and in substantially the same manner, and with like effect, as the definitive Securities. The Company will execute and register and furnish definitive Securities of such series as soon as practicable and thereupon any or all temporary Securities of such series may be surrendered in exchange therefor at the office or agency of the Company in the Place of Payment for that series, and the Trustee will authenticate and deliver in exchange for such temporary Securities of such series one or more definitive Securities of the same series, of any authorized denominations, and of a like aggregate principal amount and tenor. Such exchange will be made by the Company at its own expense and without any charge to the Holder therefor. Until so exchanged, the temporary Securities of any series will be entitled to the same benefits under this Indenture as definitive Securities of the same series authenticated and delivered hereunder.

Section 2.07. Mutilated, Destroyed, Lost, and Stolen Securities.

(a) If any mutilated Security is surrendered to the Trustee, the Company will execute and the Trustee will authenticate and deliver in exchange therefor a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(b) If there shall be delivered to the Company and the Trustee (i) evidence to their satisfaction of the destruction, loss, or theft of any Security and (ii) such security or indemnity as may be required by them to save each of them and any agent of either of them harmless, then, in the absence of notice to the Company or the Trustee that such Security has been acquired by a bona fide purchaser, the Company will execute and the Trustee will authenticate and deliver, in lieu of any such destroyed, lost, or stolen Security, a new Security of the same series and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(c) In case any such mutilated, destroyed, lost, or stolen Security has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Security, pay such Security.

(d) Upon the issuance of any new Security under this Section 2.07, the Company may require the payment of a sum sufficient to cover any tax, assessment, fee or other governmental charge that may be imposed in relation thereto and any other expenses (including the fees and expenses of the Trustee) connected therewith.

(e) Every new Security of any series issued pursuant to this Section 2.07 in exchange for any mutilated Security or in lieu of any destroyed, lost, or stolen Security will constitute an original additional contractual obligation of the Company, whether or not the mutilated, destroyed, lost, or stolen Security shall be at any time enforceable by anyone, and will be entitled to all the benefits of this Indenture equally and proportionately with any and all other Securities of that series duly issued hereunder.

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(f) The provisions of this Section 2.07 are exclusive and will preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost, or stolen Securities.

Section 2.08. Cancellation of Surrendered Securities.

All Securities surrendered for payment, redemption, registration of transfer or exchange, or for credit against any sinking fund payment will, if surrendered to any Person other than the Trustee, be delivered to the Trustee and will be promptly cancelled by it. The Company may at any time deliver to the Trustee for cancellation any Securities previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever, and may deliver to the Trustee (or to any other Person for delivery to the Trustee) for cancellation any Securities previously authenticated hereunder which the Company has not issued and sold, and all Securities so delivered will be promptly cancelled by the Trustee. No Securities will be authenticated in lieu of or in exchange for any Securities cancelled as provided in this Section 2.08, except as expressly permitted by this Indenture. The Trustee shall dispose of all cancelled Securities in accordance with its customary procedures.

Section 2.09. Payment of Interest; Interest Rights Preserved.

(a) Except as otherwise provided as contemplated by Section 2.01 with respect to any series of Securities, interest on any Security which is payable, and is punctually paid or duly provided for, on any Interest Payment Date will be paid to the Person in whose name that Security (or one or more Predecessor Securities) is registered at the close of business on the Regular Record Date for such interest.

(b) Any interest on any Security of any series which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (herein called Defaulted Interest) will forthwith cease to be payable to the Holder on the relevant regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company together with interest thereon (to the extent permitted by law) at the rate of interest applicable to such Security, at its election in each case, as provided in clause (i) or (ii) below:

(i) The Company may elect to make payment of any Defaulted Interest (and interest thereon, if any) to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which will be fixed in the following manner. The Company will promptly notify the Trustee in writing of the amount of Defaulted Interest (and interest thereon, if any) proposed to be paid on each Security of such series and the date of the proposed payment, and at the same time the Company will deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest (and interest thereon, if any) or will make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the persons entitled to such Defaulted Interest (and interest thereon, if any) as in this clause (i) provided. Thereupon the Trustee will fix a Special Record Date for the payment of such Defaulted Interest (and interest thereon, if any) which will be not more than 15 calendar days and not less than 10 calendar days prior to the date of the proposed payment and not less than 10 calendar days after the receipt by the Trustee of the notice of the proposed payment. The Trustee will promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, will cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first class postage prepaid, to each Holder of Securities of such series at his address as it appears in the Security Register, not less than 10 calendar days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest (and interest thereon, if any) and the Special Record Date therefor having been so mailed, such Defaulted Interest will be paid to the Persons in whose names the Securities of such series (or their respective Predecessor Securities) are registered at the close of business on such Special Record Date and will no longer be payable pursuant to the following clause (ii).

(ii) The Company may make payment of any Defaulted Interest (and interest thereon, if any) on the Securities of any series in any other lawful manner not inconsistent with the requirements of any

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securities exchange on which such Securities may be listed, and upon such notice as may be required by such exchange, if, after notice given by the Company to the Trustee of the proposed payment pursuant to this clause (ii), such manner of payment shall be deemed practicable by the Trustee.

(c) Subject to the foregoing provisions of this Section 2.09, each Security delivered under this Indenture upon registration of transfer of or in exchange for or in lieu of any other Security will carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Security.

Section 2.10. Persons Deemed Owners.

Prior to due presentment of a Security for registration of transfer, the Company, the Trustee, and any agent of the Company or the Trustee may treat the Person in whose name such Security is registered as the owner of such Security for the purpose of receiving payment of principal of and any premium and (subject to Section 2.09) any interest on such Security and for all other purposes whatsoever, whether or not such Security shall be overdue, and neither the Company, the Trustees nor any agent of the Company or the Trustee will be affected by notice to the contrary.

Section 2.11. Computation of Interest.

Except as otherwise specified as contemplated by Section 2.01 for Securities of any series, interest on the Securities of each series will be computed on the basis of a 360-day year consisting of twelve 30-day months.

Section 2.12. CUSIP Numbers.

The Company in issuing any series of the Securities may use CUSIP numbers, if then generally in use, and thereafter with respect to such series, the Trustee may use such numbers in any notice of redemption or exchange with respect to such series provided that any such notice may state that no representation is made as to the correctness of such numbers either as printed on the Securities or as contained in any notice of a redemption and that reliance may be placed only on the other identification numbers printed