SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE TO (Amendment No. 2)

Tender Offer Statement under Section 14(d)(1) or 13(e)(1) of the Securities Exchange Act of 1934

Inhale Therapeutic Systems, Inc.

(Name of Subject Company—Issuer and Filing Person—Offeror)

OPTIONS TO PURCHASE COMMON STOCK,

par value \$0.0001 per share

(Title of Class of Securities)

457191-10-4

(CUSIP Number of Class of Securities)

Ajit S. Gill
Chief Executive Officer and President
INHALE THERAPEUTIC SYSTEMS, INC.
150 Industrial Road
San Carlos, California 94070
Telephone: (650) 631-3100

(Name, address and telephone number of person authorized to receive notices and communications on behalf of Filing Person)

Copies to:

Mark P. Tanoury
Thomas Z. Reicher
John M. Geschke
COOLEY GODWARD LLP
3175 Hanover Street
Palo Alto, California 94304-1130
Telephone: (650) 843-5000

CALCULATION OF FILING FEE

 Transaction Valuation*
 Amount of Filing Fee**

 \$33,906,010.70
 \$3,119.35

- * Calculated solely for purposes of determining the filing fee. This amount assumes that options to purchase 3,653,680 shares of Common Stock of Inhale Therapeutic Systems, Inc. having an aggregate value of \$33,906,010.70 will be exchanged pursuant to this offer. The aggregate value of such options was calculated based on the Black-Scholes option pricing model as of January 23, 2002.
- \$92 per \$1,000,000 of the aggregate offering amount (or .000092 of the aggregate transaction valuation), pursuant to Rule 0-11 of the Securities Exchange Act of 1934, as amended by Fee Advisory #8, effective January 16, 2002. The filing fee was previously paid with the Schedule TO filing made with the Securities and Exchange Commission on January 25, 2002.

// Check box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid:Not applicable.Filing Party:Not applicable.Form or Registration No.:Not applicable.Date Filed:Not applicable.

// Check the box if the filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- // Third-party tender offer subject to Rule 14d-1.
- /x/ Issuer tender offer subject to Rule 13e-4.
- // Going-private transaction subject to Rule 13e-3.
- // Amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer: /x/

CUSIP NO. 457191-10-4

SCHEDULE TO

INTRODUCTORY STATEMENT

This Amendment No. 2 to Schedule TO amends and supplements the Tender Offer Statement on Schedule TO, as amended, initially filed with the Securities and Exchange Commission (the "Commission") on January 25, 2002, in connection with our offer to exchange certain options granted prior to July 24, 2001 with exercise prices per share greater than or equal to \$25.00 per share currently outstanding under the Company's 2000 Non-Officer Equity Incentive Plan, as amended (the "Option Plan"), to purchase shares of the Company's Common Stock, par value \$0.0001 per share (the "Common Stock"), held by optionholders as of January 25, 2002 for replacement options to purchase shares of Common Stock to be granted under the Option Plan, upon the terms and subject to the conditions set forth in the Offer to Exchange. This Amendment's sole purpose is to report the results of the tender offer.

ITEM 4. TERMS OF THE TRANSACTION.

Item 4 of the Schedule TO, as amended, is hereby further amended and supplemented to add the following:

The Offer to Exchange expired at midnight, Pacific Standard Time, on February 25, 2002. Pursuant to the Offer to Exchange, we accepted for cancellation Eligible Options to purchase 1,217,500 shares of Common Stock and Mandatory Exchange Options to purchase 78,170 shares of Common Stock for an aggregate total of 1,295,670 options to purchase shares of our Common Stock. A total of 90 employees elected to exchange such Eligible Options on a one-for-two (1:2) basis and will receive options to purchase an aggregate of 608,750 Replacement Options to purchase shares of Common Stock in exchange for the cancellation of such Eligible Options. Participating employees electing to exchange Eligible Options also exchanged Mandatory Exchange Options on a one-for-one (1:1) basis and will receive options to purchase an aggregate of 78,170 Replacement Options to purchase shares of Common Stock in exchange for the cancellation of such Mandatory Exchange Options. Accordingly, subject to the terms and conditions of the Offer to Exchange, we will grant Replacement Options to purchase an aggregate total of 686,920 shares of our Common Stock in exchange for such cancelled Eligible Options and Mandatory Exchange Options. We will promptly send each participating employee whose options have been accepted for cancellation a Notice of Confirmation of Participation in the Offer to Exchange, substantially in the form of Exhibit 99.(a)(1)(H) as filed with the Commission on January 25, 2002.

ITEM 12. EXHIBITS.

Exhibit Number	Description
99.(a)(1)(A)*	Offer to Exchange, dated January 25, 2002.
99.(a)(1)(B)*	Form of Electronic Letter of Transmittal.
99.(a)(1)(C)*	Form of Summary of Terms.
99.(a)(1)(D)*	Form of Election Form.
99.(a)(1)(E)*	Form of Notice of Change in Election from Accept to Reject.
99.(a)(1)(F)*	Form of Notice of Change in Election from Reject to Accept.
99.(a)(1)(G)*	Powerpoint slide presentation to holders of Eligible Options.
99.(a)(1)(H)*	Form of Confirmation of Participation in the Offer to Exchange.
99.(a)(1)(I)	Inhale Therapeutic Systems, Inc. Annual Report on Form 10-K, as amended, for its fiscal year ended December 31, 2000, filed
	with the Securities and Exchange Commission on March 1, 2001 and incorporated herein by reference.
99.(a)(1)(J)	Inhale Therapeutic Systems, Inc. Current Report on Form 8-K/A, filed with the Securities and Exchange Commission on
	August 10, 2001, as amended, and incorporated herein by reference.
99.(a)(1)(K)	Inhale Therapeutic Systems, Inc. Current Report on Form 8-K/A, filed with the Securities and Exchange Commission on
	October 4, 2001 and incorporated herein by reference.
99.(a)(1)(L)**	Form of Electronic Communication—Notice to Employees of Amendments to the Offer to Exchange (including Exhibit 1).
99.(a)(1)(M)**	Form of Electronic Communication—Reminder to Employees of Cancellation Date.
99.(b)	Not applicable.
99.(d)(1)	Inhale Therapeutic Systems, Inc.'s 2000 Non-Officer Equity Incentive Plan, as amended, (incorporated herein by reference to the
	indicated exhibit in Inhale's Registration Statement on Form S-8/A (No. 333-71936), filed on January 15, 2002.
99.(g)	Not applicable.

^{*} Previously filed as an exhibit to the Schedule TO filed with the Securities and Exchange Commission on January 25, 2002.

^{**} Previously filed as an exhibit to the Amendment No. 1 to Schedule TO filed with the Securities and Exchange Commission on February 8, 2002.

SCHEDULE TO

SIGNATURE

After due inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: March 18, 2002

INHALE THERAPEUTIC SYSTEMS, INC.

By: /s/ Ajit S. Gill

Name: Ajit S. Gill

Title: Chief Executive Officer and President

CUSIP NO. 457191-10-4

SCHEDULE TO

INDEX OF EXHIBITS

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QuickLinks

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SIGNATURE
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