

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



PROCESSED

FORM D

MAY 04 2005

THOMSON
FINANCIAL

NOTICE OF SALE OF SECURITIES
PURSUANT TO REGULATION D,
SECTION 4(6), AND/OR
UNIFORM LIMITED OFFERING EXEMPTION

SEC USE ONLY	
Prefix	Serial
DATE RECEIVED	

Name of Offering (check if this is an amendment and name has changed, and indicate change.)
Series B Preferred Stock Financing

Filing Under (Check box(es) that apply):
 Rule 504 Rule 505 Rule 506 Section 4(6) ULOE
 Type of Filing: New Filing Amendment

A. BASIC IDENTIFICATION DATA

1. Enter the information requested about the issuer

Name of Issuer (check if this is an amendment and name has changed, and indicate change.)
InfraRedX, Inc.

Address of Executive Offices (Number and Street, City, State, Zip Code) | Telephone Number (Including Area Code)
125 Cambridge Park Drive, Cambridge, MA 02140 | (617) 354-5100

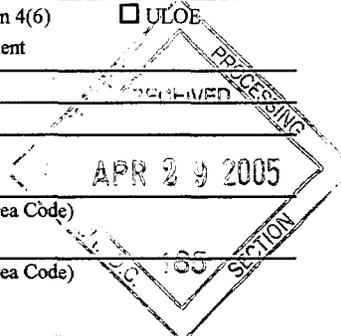
Address of Principal Business Operations (Number and Street, City, State, Zip Code) | Telephone Number (Including Area Code)
(if different from Executive Offices)

Brief Description of Business
Development of a fiber-optic, catheter-based near infrared system

Type of Business Organization
 corporation limited partnership, already formed other (please specify):
 business trust limited partnership, to be formed

Actual or Estimated Date of Incorporation or Organization: Month Year
November 1999 Actual Estimated

Jurisdiction of Incorporation or Organization: (Enter two-letter U.S. Postal Service abbreviation for State:
CN for Canada; FN for other foreign jurisdiction) DE



GENERAL INSTRUCTIONS

Federal:
Who Must File: All issuers making an offering of securities in reliance on an exemption under Regulation D or Section 4(6), 17 CFR 230.501 et seq. or 15 U.S.C. 77d(6).
When to File: A notice must be filed no later than 15 days after the first sale of securities in the offering. A notice is deemed filed with the U.S. Securities and Exchange Commission (SEC) on the earlier of the date it is received by the SEC at the address given below or, if received at that address after the date on which it is due, on the date it was mailed by United States-registered or certified mail to that address.
Where to File: U.S. Securities and Exchange Commission, 450 Fifth Street, N.W., Washington, D.C. 20549.
Copies Required: Five (5) copies of this notice must be filed with the SEC, one of which must be manually signed. Any copies not manually signed must be photocopies of the manually signed copy or bear typed or printed signatures.
Information Required: A new filing must contain all information requested. Amendments need only report the name of the issuer and offering, any changes thereto, the information requested in Part C, and any material changes from the information previously supplied in Parts A and B. Part E and the Appendix need not be filed with the SEC.
Filing Fee: There is no federal filing fee.

State:
 This notice shall be used to indicate reliance on the Uniform Limited Offering Exemption (ULOE) for sales of securities in those states that have adopted ULOE and that have adopted this form. Issuers relying on ULOE must file a separate notice with the Securities Administrator in each state where sales are to be, or have been made. If a state requires the payment of a fee as a precondition to the claim for the exemption, a fee in the proper amount shall accompany this form. This notice shall be filed in the appropriate states in accordance with state law. The Appendix to the notice constitutes a part of this notice and must be completed.

ATTENTION

Failure to file notice in the appropriate states will not result in a loss of the federal exemption. Conversely, failure to file the appropriate federal notice will not result in a loss of an available state exemption unless such exemption is predicated on the filing of a federal notice.

A. BASIC IDENTIFICATION DATA

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer;
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers; and
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) McNeil, Robert					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o Middleton, McNeil & Mills Assoc. V. LLC, 400 South El Camino Real, Suite 1200, San Mateo, CA 94402					
Check Box(es) that Apply:	<input type="checkbox"/> Promoter	<input checked="" type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Marquard, William					
Business or Residence Address (Number and Street, City, State, Zip Code) 2199 Maysville Road, Carlisle, KY 40311					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Mills, Timothy					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o Middleton, McNeil & Mills Assoc. V. LLC, 400 South El Camino Real, Suite 1200, San Mateo, CA 94402					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input checked="" type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Muller, James E.					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o InfraReDx, Inc. 125 Cambridge Park Drive, Cambridge, MA 02140					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Priest, William W.					
Business or Residence Address (Number and Street, City, State, Zip Code) 2 East 70th Street, New York, NY 10021					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Zakon, Alan J.					
Business or Residence Address (Number and Street, City, State, Zip Code) 23 Bay Tree Lane, Grantham, NH 03763					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input checked="" type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Sanderling Venture Partners V, L.P.					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o Middleton, McNeil & Mills Assoc. V. LLC, 400 South El Camino Real, Suite 1200, San Mateo, CA 94402					
Check Box(es) that Apply:	<input type="checkbox"/> Promoter	<input checked="" type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Sanderling Ventures Management V					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o Middleton, McNeil & Mills Assoc. V. LLC, 400 South El Camino Real, Suite 1200, San Mateo, CA 94402					
Check Boxes that Apply:	<input type="checkbox"/> Promoter	<input type="checkbox"/> Beneficial Owner	<input type="checkbox"/> Executive Officer	<input checked="" type="checkbox"/> Director	<input type="checkbox"/> General and/or Managing Partner
Full Name (Last name first, if individual) Acharya, Abhi					
Business or Residence Address (Number and Street, City, State, Zip Code) 13773 Lexington Ct., Saratoga, CA 95070					

B. INFORMATION ABOUT OFFERING

- 1. Has the issuer sold, or does the issuer intend to sell, to non-accredited investors in this offering? Yes ___ No X
Answer also in Appendix, Column 2, if filing under ULOE.
2. What is the minimum investment that will be accepted from any individual? \$ no minimum
3. Does the offering permit joint ownership of a single unit? Yes X No ___
4. Enter the information requested for each person who has been or will be paid or given, directly or indirectly, any commission or similar remuneration for solicitation of purchasers in connection with sales of securities in the offering. If a person to be listed is an associated person or agent of a broker or dealer registered with the SEC and/or with a state or states, list the name of the broker or dealer. If more than five (5) persons to be listed are associated persons of such a broker or dealer, you may set forth the information for that broker or dealer only.

N/A

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) ___ All States

Table with 13 columns representing US states: [AL], [AK], [AZ], [AR], [CA], [CO], [CT], [DE], [DC], [FL], [GA], [HI], [ID], [IL], [IN], [IA], [KS], [KY], [LA], [ME], [MD], [MA], [MI], [MN], [MS], [MO], [MT], [NE], [NV], [NH], [NJ], [NM], [NY], [NC], [ND], [OH], [OK], [OR], [PA], [RI], [SC], [SD], [TN], [TX], [UT], [VT], [VA], [VA], [WV], [WI], [WY], [PR]

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) ___ All States

Table with 13 columns representing US states: [AL], [AK], [AZ], [AR], [CA], [CO], [CT], [DE], [DC], [FL], [GA], [HI], [ID], [IL], [IN], [IA], [KS], [KY], [LA], [ME], [MD], [MA], [MI], [MN], [MS], [MO], [MT], [NE], [NV], [NH], [NJ], [NM], [NY], [NC], [ND], [OH], [OK], [OR], [PA], [RI], [SC], [SD], [TN], [TX], [UT], [VT], [VA], [VA], [WV], [WI], [WY], [PR]

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States) ___ All States

Table with 13 columns representing US states: [AL], [AK], [AZ], [AR], [CA], [CO], [CT], [DE], [DC], [FL], [GA], [HI], [ID], [IL], [IN], [IA], [KS], [KY], [LA], [ME], [MD], [MA], [MI], [MN], [MS], [MO], [MT], [NE], [NV], [NH], [NJ], [NM], [NY], [NC], [ND], [OH], [OK], [OR], [PA], [RI], [SC], [SD], [TN], [TX], [UT], [VT], [VA], [VA], [WV], [WI], [WY], [PR]

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

1. Enter the aggregate offering price of securities included in this offering and the total amount already sold. Enter "0" if answer is "none" or "zero." If the transaction is an exchange offering, check this box and indicate in the columns below the amounts of the securities offered for exchange and already exchanged.

Type of Security	Aggregate Offering Price	Amount Already Sold
Debt.....	\$ _____	\$ _____
Equity.....	\$ <u>10,000,000</u>	\$ <u>2,803,287</u>
	<input type="checkbox"/> Common <input checked="" type="checkbox"/> Preferred	
Convertible Securities (including warrants).....	\$ _____	\$ _____
Partnership Interests.....	\$ _____	\$ _____
Other (Specify _____)	\$ _____	\$ _____
Total.....	\$ <u>10,000,000</u>	\$ <u>2,803,827</u>

Answer also in Appendix, Column 3, if filing under ULOE.

2. Enter the number of accredited and non-accredited investors who have purchased securities in this offering and the aggregate dollar amounts of their purchases. For offerings under Rule 504, indicate the number of persons who have purchased securities and the aggregate dollar amount of their purchases on the total lines. Enter "0" if answer is "none" or "zero."

	Number Investors	Aggregate Dollar Amount of Purchases
Accredited Investors.....	<u>40</u>	\$ <u>2,803,827</u>
Non-accredited Investors.....	<u>0</u>	\$ <u>0</u>
Total (for filings under Rule 504 only).....	_____	\$ _____

Answer also in Appendix, Column 4, if filing under ULOE.

3. If this filing is for an offering under Rule 504 or 505, enter the information requested for all securities sold by the issuer, to date, in offerings of the types indicated, in the twelve (12) months prior to the first sale of securities in this offering. Classify securities by type listed in Part C - Question 1.

Type of Offering	Type of Security	Dollar Amount Sold
Rule 505.....	_____	\$ _____
Regulation A.....	_____	\$ _____
Rule 504.....	_____	\$ _____
Total.....	_____	\$ _____

4. a. Furnish a statement of all expenses in connection with the issuance and distribution of the securities in this offering. Exclude amounts relating solely to organization expenses of the issuer. The information may be given as subject to future contingencies. If the amount of an expenditure is not known, furnish an estimate and check the box to the left of the estimate.

Transfer Agent's Fees.....	<input type="checkbox"/>	\$ _____
Printing and Engraving Costs.....	<input type="checkbox"/>	\$ _____
Legal Fees.....	<input checked="" type="checkbox"/>	\$ <u>20,000</u>
Accounting Fees.....	<input type="checkbox"/>	\$ _____
Engineering Fees.....	<input type="checkbox"/>	\$ _____
Sales Commissions (specify finders' fees separately).....	<input type="checkbox"/>	\$ _____
Other Expenses (Identify) <u>Blue Sky Filing Fees</u>	<input checked="" type="checkbox"/>	\$ <u>300</u>
Total.....	<input checked="" type="checkbox"/>	\$ <u>20,300</u>

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

b. Enter the difference between the aggregate offering price given in response to Part C - Question 1 and total expenses furnished in response to Part C - Question 4.a. This difference is the "adjusted gross proceeds to the issuer" \$9,979,700

5. Indicate below the amount of the adjusted gross proceeds to the issuer used or proposed to be used for each of the purposes shown. If the amount for any purpose is not known, furnish an estimate and check the box to the left of the estimate. The total of the payments listed must equal the adjusted gross proceeds to the issuer set forth in response to Part C - Question 4.b above.

	Payment to Officers, Directors, & Affiliates	Payment To Others
Salaries and fees.....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase of real estate.....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase, rental or leasing and installation of machinery and equipment.....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Construction or leasing of plant buildings and facilities.....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Acquisition of other businesses (including the value of securities involved in this offering that may be used in exchange for the assets or securities of another issuer pursuant to a merger).....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Repayment of indebtedness.....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Working capital.....	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ 9,979,700
Other (specify): _____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
_____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Column Totals.....	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ 9,979,700
Total Payments Listed (column totals added).....	<input checked="" type="checkbox"/> \$ _____	9,979,700

D. FEDERAL SIGNATURE

The issuer had duly caused this notice to be signed by the undersigned duly authorized person. If this notice is filed under Rule 505, the following signature constitutes an undertaking by the issuer to furnish to the U.S. Securities and Exchange Commission, upon written request of its staff, the information furnished by the issuer to any non-accredited investor pursuant to paragraph (b)(2) of Rule 502.

Issuer (Print or Type) InfraReDx, Inc.	Signature 	Date 4/27/05
Name of Signer (Print or Type) Amy K. Crawford	Title of Signer (Print or Type) Corporate Secretary	

ATTENTION

Intentional misstatements or omissions of fact constitute federal criminal violations. (See 18 U.S.C. 1001.)