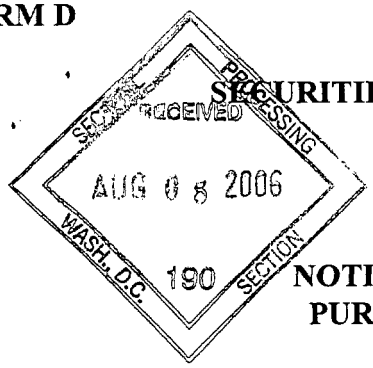
FORM D



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

06034633

FORM D

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

OMB APPROVAL
OMB Number: 3235-0076 Expires: March 30, 2008 Estimated average burden hours per form.....1

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-1 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)
34 Third Avenue, Burlington, MA, 01803

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

PROCESSED
AUG 1 1 2006
THOMSON FINANCIAL

Brief Description of Business
Development of a fiber-optic, catheter-based near infrared spectroscopic 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 11 Year 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.

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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:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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:	☐ Promoter	☐ Beneficial Owner	☒ Executive Officer	☒ Director	☐ 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, 34 Third Avenue, Burlington, MA, 01803					
Check Boxes that Apply:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☒ Director	☐ 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					
Check Box(es) that Apply:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual) Seahawk Investment Trust					
Business or Residence Address (Number and Street, City, State, Zip Code) 22495 Cabrillo Hwy, Half Moon Bay, CA, 94019					

A. BASIC IDENTIFICATION DATA

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:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual) Sandlerling Venture Partners VI CO-Investment, L.P.					
Business or Residence Address (Number and Street, City, State, Zip Code) 400 South El Camino Real, Suite 1200, San Mateo, CA, 74402					
Check Box(es) that Apply:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☐ Director	☐ 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 Boxes that Apply:	☐ Promoter	☒ Beneficial Owner	☐ Executive Officer	☐ Director	☐ 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:	☐ Promoter	☒ Beneficial Owner	☒ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual) Jordan, Andrew					
Business or Residence Address (Number and Street, City, State, Zip Code) c/o InfraReDx, 34 Third Avenue, Burlington, MA, 01803					
Check Boxes that Apply:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual)					
Business or Residence Address (Number and Street, City, State, Zip Code)					
Check Boxes that Apply:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual)					
Business or Residence Address (Number and Street, City, State, Zip Code)					
Check Box(es) that Apply:	☐ Promoter	☐ Beneficial Owner	☐ Executive Officer	☐ Director	☐ General and/or Managing Partner
Full Name (Last name first, if individual)					
Business or Residence Address (Number and Street, City, State, Zip Code)					

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

[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

[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

[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	$ 30,000,000	$ 10,459,855.20
Equity	$	$
☐ Common ☒ Preferred		
Convertible Securities (including warrants)	$	$
Partnership Interests	$	$
Other (Specify _____)	$	$
Total	$ 30,000,000	$ 10,459,855.20

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	42	$ 10,459,855.20
Non-accredited Investors	0	$ 0
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	☐	$
Printing and Engraving Costs	☐	$
Legal Fees	☒	$ 20,000
Accounting Fees	☐	$
Engineering Fees	☐	$
Sales Commissions (specify finders' fees separately)	☐	$
Other Expenses (Identify) Blue Sky Fees	☒	$ 1,550
Total	☐	$ 21,550

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" ..... $ 29,978,450

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	☐ $	☐ $
Purchase of real estate	☐ $	☐ $
Purchase, rental or leasing and installation of machinery and equipment	☐ $	☐ $
Construction or leasing of plant buildings and facilities	☐ $	☐ $
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)	☐ $	☐ $
Repayment of indebtedness	☐ $	☐ $
Working capital	☐ $	☒ $ 29,978,450
Other (specify):	☐ $	☐ $
	☐ $	☐ $
Column Totals	☐ $	☐ $
Total Payments Listed (column totals added)	☒ $ 29,978,450	

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)	Signature	Date
InfraReDx, Inc.	James E Muller	4 Aug i
Name of Signer (Print or Type)	**Title of Signer (Print or Type)**	
Dr. James E. Muller	President and CEO	

ATTENTION

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

E. STATE SIGNATURE

1. Is any party described in 17 CFR 230.262 presently subject to any of the disqualification provisions of such rule? ..... Yes ☐ No ☒

See Appendix, Column 5, for state response.

2. The undersigned issuer hereby undertakes to furnish to the state administrator of any state in which the notice is filed, a notice on Form D (17 CFR 239.500) at such times as required by state law.
3. The undersigned issuer hereby undertakes to furnish to any state administrators, upon written request, information furnished by the issuer to offerees.
4. The undersigned issuer represents that the issuer is familiar with the conditions that must be satisfied to be entitled to the Uniform limited Offering Exemption (ULOE) of the state in which this notice is filed and understands that the issuer claiming the availability of this exemption has the burden of establishing that these conditions have been satisfied.

The issuer has read this notification and knows the contents to be true and has duly caused this notice to be signed on its behalf by the undersigned duly authorized person.

Issuer (Print or Type)	Signature	Date
InfraReDx, Inc.	James E Muller	4 dec 06
Name (Print or Type)	Title (Print or Type)	
Dr. James E. Muller	President and CEO	

Instruction:
Print the name and title of the signing representative under his signature for the state portion of this form. One copy of every notice on Form D must be manually signed. Any copies not manually signed must be photocopies of the manually signed copy or bear typed or printed signatures.