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INTERNATIONAL ISOTOPES INC
Form S-3/A
July 24, 2003

As filed with the Securities and Exchange Commission on July 24, 2003

Registration No. 333-106215

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C.

AMENDMENT NO. 1
to
FORM S-3

Registration Statement
Under The
Securities Act of 1933

INTERNATIONAL ISOTOPES INC.

(Name of Small Business Issuer in its Charter)

Texas	2835	74-276837
----- (State or other Jurisdiction of Incorporation or Organization)	----- (Primary Standard Industrial Classification Code Number)	----- (I.R.S. Employer Identification Number)

4137 Commerce Circle Idaho Falls, Idaho 83401

(Address and Telephone Number of Principal Executive Offices
and Principal Place of Business)

Steve T. Laflin
4137 Commerce Circle
Idaho Falls, Idaho 83401
(208) 524-5300

(Name, Address and Telephone Number of Agent for Service)

Copy to:
Curtis R. Ashmos
Locke Liddell & Sapp LLP
100 Congress, Suite 300
Austin, Texas 78701
(512) 305-4716

Approximate Date of Proposed Sale to the Public:
From time to time after this Registration Statement becomes effective.

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

If any of the securities being registered on this form are to be

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offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. |X|

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

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

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. | |

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount Registered
Common Stock, \$.01 par value, included in the Units (1)	38,229,157	\$.03	\$1,146,875	\$
Warrants (2)	76,458,314	----	----	
Common Stock, \$.01 par value, issuable upon exercise of the warrants (3)	76,458,314	\$.045	\$3,440,625	\$2
Common Stock; \$.01 par value (4)	14,500,000	\$.03	\$ 435,000	\$
Warrants (2) (5)	29,000,000			
Common Stock; \$.01 par value, issuable upon exercise of the oversubscription warrants	29,000,000	\$.045	\$1,305,000	\$1
Subscription Rights (7)	38,229,157	----	----	

(1) The Company is offering Units; each Unit consists of one share of Common Stock and two warrants to purchase two additional shares of Common Stock at \$.04 and \$.05, respectively.

(2) The registration fee is being paid in connection with the registration of the underlying Common Stock.

(3) Includes 38,229,157 shares issuable upon exercise of warrants at \$.04 per share, and an additional 38,229,157 shares issuable upon exercise of warrants at \$.05 per share.

(4) Issuable to fill excess over-subscriptions.

(5) Includes the warrants issuable in connection with the 14,500,000 Unit over subscription option.

(6) Includes 14,500,000 shares issuable upon exercise of warrants at \$.04 per share, and an additional 14,500,000 shares issuable upon exercise of warrants at \$.05 per share.

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(7) Evidencing the Rights to subscribe for Units.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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PROSPECTUS

INTERNATIONAL ISOTOPES INC.
38,229,157 Units
Issuable Upon the Exercise of Subscription Rights

International Isotopes Inc. ("I3" or the "Company") is issuing to its shareholders of record as of the close of business on July 15, 2003 new securities called "Rights". Holders of Rights will be entitled to subscribe for an aggregate of 38,229,157 Units of I3's securities at the rate of one Unit for each 2.5 Rights held. The terms of the Rights offering are as follows:

- o You will receive one Right for each share of I3 common stock you owned on July 15, 2003.
- o You may purchase one Unit for every 2.5 Rights you receive, at the Subscription Price of \$.03 per Unit.
- o Each Unit consists of (i) one share of common stock, (ii) one warrant to purchase an additional share of common stock for \$.04 per share ("Series A Warrant"), and (iii) one warrant to purchase another share of common stock for \$.05 per share ("Series B Warrant"). The warrants are exercisable through July 31, 2007.
- o If you fully exercise your rights, you may subscribe for additional Units through an over-subscription privilege. If the over-subscriptions exceed the number of Units available, the Units will be allocated to those shareholders who over-subscribe, based upon their shareholdings on the record date as more fully described in this Prospectus.
- o The Rights are not transferable and may be exercised only by record date shareholders.
- o The offer expires on September 12, 2003. There is no minimum number of Units required to be sold as a condition to completing the Offering.

The Company's Common Stock is quoted in the over the counter market in the "pink sheets" under the symbol "INIS." On July 21, 2003, the last reported bid price for shares of the Company's Common Stock as reported in the pink sheets was \$.03.

Shareholders of I3 who do not exercise all of their Rights will own a smaller relative equity ownership and voting interest in I3 after completion of this Offering than if they were to exercise all of their Rights.

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The securities offered hereby involve a high degree of risk.
See "Risk Factors" commencing on page 9.

Neither the Securities and Exchange
Commission nor any state securities commission has approved
or disapproved these securities or determined if this
Prospectus is truthful or complete. Any representation to the
contrary is a criminal offense.

The Company has not authorized any person, agent or entity to give any
information or make any representation other than those contained in this
Prospectus (including material incorporated by reference herein). You should not
rely on any such information or representation as having been authorized by the
Company. This Prospectus is not an offer to sell the securities and it is not
soliciting an offer to buy the securities in any state where offers or sales are
not permitted.

Price to Public	Proceeds to the Company
Per Unit \$.03	\$.03
Total \$1,146,875	\$1,146,875

Expenses of the Rights Offer are estimated to be \$55,000. No underwriting
discounts or discounts will be paid.

The date of this Prospectus is July 24, 2003

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PROSPECTUS SUMMARY

The following summary explains only some of the information in this prospectus. More detailed information about International Isotopes Inc. ("I3," the "Company," or "we") and the Rights offer, and financial statements appear elsewhere in this prospectus or in the documents incorporated by reference into this prospectus.

This prospectus is part of a registration statement on Form S-3 that we have filed with the Securities and Exchange Commission. The SEC allows us to "incorporate by reference" information that we file with them. This means that we can disclose important information to you by referring you to other documents that we have filed with the SEC. The information that is incorporated by reference is considered part of this prospectus, and information that we file later will automatically update and may supersede this information. For further information about I3 and the securities being offered, you should refer to the registration statement and the documents that are incorporated by reference. See "Incorporation of Certain Information by Reference" elsewhere in this prospectus.

Statements contained in this prospectus that are not historical facts may constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those discussed. Words such as "expects," "may," "will," "anticipates," "intends," "plans," "believes," "seeks," "estimates," and similar expressions identify forward-looking statements. See "Risk Factors."

The Company

International Isotopes Inc. was established as a Texas corporation in 1995. The Company was initially formed to produce, market, and distribute a broad range of products used in diagnostic and therapeutic nuclear medicine, research and industry. In 1998 the Company acquired a subsidiary, subsequently named International Isotopes Idaho Inc., which specialized in sales of isotopes and providing hot cell services through a contract with the Department of Energy (DOE) Idaho Operations and using the Advanced Test Reactor (ATR). Because of difficulties encountered with start up of the Company's Radioisotope Production Facility and Linear Accelerator, and the high cost of conducting commercial operations in the midst of a DOE laboratory, the Company underwent a substantial change in mission and strategy during 2000 and 2001. This change resulted in the sales of the Radioisotope Production Facility and Linear Accelerator in Texas and termination of the commercial isotope production contract with the DOE's prime-operating contractor in Idaho. In June of 2001, the Company relocated its corporate headquarters to Idaho to continue the subsidiary's operations as the new, primary focus and mission of the Company.

In support of our new mission and strategy, in 2001 new contract manufacturing and processing agreements were put in place, a new operating

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facility was obtained and licensed through the Nuclear Regulatory Commission, and new contracts put in place with the DOE's prime-operating contractor for continued reactor production of high specific activity cobalt. These new agreements now fully support the Company's business products and services, which include manufacturing nuclear medicine reference and calibration standards, processing gemstones that have undergone treatment for color enhancement, and large volume production of high specific activity (HSA) cobalt. We have been able to continue steady growth in the amount of revenues generated from these business activities. We expect continued growth and the addition of new products in 2003, which management feels will produce sufficient cash to meet our operational needs. However, prospective investors are cautioned regarding the speculative nature of any forward-looking projections. For a discussion of these and other risk factors relating to the Company when considering an investment in our securities, see "Risk Factors."

Purpose of the Offer

The Board of Directors of I3 has determined that it is desirable to raise capital in order to finance an expansion of our business operations. This expansion will include construction of a building addition and acquisition of hot cells and related equipment for processing a wide range of new products. Although intended to provide a variety of processing capability, most of the planned operations expansion will be directed towards implementation and advancement of the Company's new Therapy Products business area.

This offering will allow us to raise additional capital without diluting the ownership interests of existing shareholders who exercise their Rights and without paying the higher underwriting commissions that would be required to raise capital from third parties who are not already shareholders.

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Terms of the Offer

Description of the Rights Offering

We are issuing Rights to each of our shareholders who owned shares of our common stock at the close of business on July 15, 2003. You will receive one Right for every share of common stock you own. You will be entitled to purchase one Unit of our securities (one share of common stock and two warrants to purchase two additional shares) for every 2.5 Rights you own. Holders of Rights will be entitled to subscribe for and purchase up to an aggregate of 38,229,157 Units.

Subscription Price

If you wish to exercise your Rights to purchase Units, the Subscription Price will be \$.03 per Unit. The Subscription Price is payable in cash (including check, money order and wire transfer), except with respect to certain shareholders of I3 who have loaned funds to the Company and may choose to cancel I3 debt in exchange for Units.

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Description of Units

Each Unit will consist of (i) one share of our common stock, (ii) one Series A Warrant to purchase an additional share of our common stock at a price of \$.04 per share, and (iii) one Series B Warrant to purchase another share of our common stock at a price of \$.05 per share. The warrants are exercisable at any time on or prior to July 31, 2007. The warrants are redeemable and may be repurchased by the Company for \$.001 per warrant if the average closing price of I3's common stock equals or exceeds \$.12 per share with respect to Series A Warrants and \$.15 per share with respect to Series B Warrants during any consecutive 20 business day period. The Warrants will be evidenced by Warrant Certificates and will be subject to the terms of a Warrant Agreement between the Company and American Stock Transfer Company, as Warrant Agent. See the Warrant Agreement attached hereto as Exhibit D and the form of Warrant Certificate attached hereto as Exhibit E.

Over-Subscription Privilege

Shareholders who fully exercise their Rights will be entitled to the additional privilege of subscribing for and purchasing, subject to certain limitations and subject to allocation, any Units not acquired by other holders of Rights in the primary subscription. If subscriptions for Units through the over-subscription privilege exceed the number of Units available for sale after the primary subscription, we may issue up to 14,500,000 additional Units to fill all or a portion of the excess over-subscriptions.

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How to Exercise Rights

The Rights will be evidenced by Subscription Certificates, which will be distributed to record date shareholders. See Exhibit A hereto. You may exercise your Rights by completing the Subscription Certificate and delivering it, together with payment of the Subscription Price, to the Subscription Agent, American Stock Transfer & Trust Company, 59 Maiden Lane, Plaza Entrance, New York, New York 10038. Payment may be made either by check drawn on a United States bank, wire transfer or by notice of guaranteed delivery (as explained

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under "The Rights Offer--Payment for Shares"). Certain shareholders who have loaned funds to the Company have the additional option of electing to cancel all or a portion of the I3 debt owed to them in exchange for Units. You must exercise your Rights no later than September 12, 2003. You may not rescind your purchase after exercising your Rights.

Non-Transferability of Rights

The Rights are non-transferable and may be exercised only by a record date shareholder.

When You Can Exercise Your Rights

You can exercise your Rights only during the period beginning on August 12, 2003 and ending on September 12, 2003 at 5:00 p.m., New York City time.

Common Stock Outstanding Prior to this Offering

95,572,893 shares of common stock.

Common Stock to be Outstanding After the Offering

After this Offering, assuming the sale of the 38,229,157 Units initially offered plus the 14,500,000 unit over-subscription option, 148,302,050 shares of common stock will be outstanding. There will also be outstanding warrants to purchase an additional 105,458,314 shares.

Important Dates to Remember

Record Date: July 15, 2003
Expiration Date: September 12, 2003
Last date of Guaranteed
Delivery: September 17, 2003

Amendment, Extension or Termination of the Offer

The Company may in its sole discretion: (a) terminate the Offer prior to delivery of the Units for which Rights holders have subscribed pursuant to the exercise of Rights in the primary subscription or the over-subscription privilege; (b) extend the expiration date to a later date; (c) change the record date prior to the distribution of the Rights to shareholders; or (d) amend or modify the terms of the Rights offer.

Closing bid price of the Company's common stock as reported in the over the counter market pink sheets on June 13, 2003 (the trading day prior to announcement of the Rights offering)

\$.03 per share

Closing bid price of the Company's common stock as reported in the over the counter market pink sheets on July 21, 2003

\$.03 per share

Risk Factors	An investment in the Units involves a high degree of risk. The Units should be purchased only by investors who can afford the loss of their entire investment. See "Risk Factors."
Use of Proceeds	New facilities and equipment, debt reduction and working capital. See "Use of Proceeds."
Trading Symbol	Our common shares are traded in the over the counter market and reported in the pink sheets under the symbol "INIS."
Participation of Certain Shareholders	Certain of I3's shareholders have recently loaned the Company the aggregate principal amount of \$823,500. Although there can be no assurance, we expect each of these shareholders to participate in the Rights offer by canceling all or a portion of the amount of I3 debt owed to them in exchange for Units offered hereby.

RISK FACTORS

International Isotopes has incurred and may continue to incur losses. With the exception of 2002, we have incurred net losses for most fiscal periods since our inception. From inception (November 1995) through December 31, 2002 the Company generated \$17,246,225 in revenues and had an accumulated deficit (including preferred stock dividends and returns) in the amount of \$87,390,165. However, although we cannot provide any assurance we believe the Company's continued growth in our new business areas will produce sufficient revenue to meet our 2003 cash flow and operational needs.

We may need additional financing to continue operations. As of December 31, 2002 we have an outstanding debt of \$1,046,520 on a \$1.1 million revolving line of credit account with Texas State Bank. That note matures on December 31, 2003 and is secured with 80% of our accounts receivable and 50% of our fixed assets. Seventy-five percent (75%) of the cash resulting from the sale of any remaining Linac equipment must be applied to the principal of this note. Sales of about \$460,000 of this equipment are expected in 2003. We will have to negotiate an extension of terms on this note at the end of 2003. The Company also has a ten-year note for \$909,738 at 7% interest to our former Chairman of the Board. Principal and interest payments on this note are to be paid annually based upon net profits of the Company (annual principal payment to equal 30% of net pre-tax profits). At December 31, 2002, the note holder agreed to defer the April 2003 principal payment. The Company also has notes totaling \$823,500 in principal amount with several of our principal shareholders, which mature in May 2004. We expect the holders of these notes to convert all or a portion of the outstanding amount of these notes to equity through the exercise of Rights in this offering.

Remaining Company Obligations on the Texas State Bank Loan for the Waxahachie Property. The Company and Texas State Bank have agreed to have the loan of \$345,295 assumed by an individual in consideration of our sale of our Waxahachie property. Liability for this loan would, however, revert to the Company should this individual default on the assumed note.

We will continue to be dependent upon our remaining facilities and equipment to function properly in order to provide consistent, timely shipments of products that meet our customers' specifications. If we experience equipment failures or breakdowns we may be unable to satisfy our customers, which could result in the cancellation of contracts and the loss of revenues.

There is no long-term contract in place with the DOE Contractor for continued HSA Cobalt production. The Company has put short term specific "work for non-government sponsor agreements" in place with the DOE contractor to continue sales of HSA cobalt irradiated at the Idaho reactor facility. We expect that these agreements will continue, however, there is no assurance these contracts will be equitable or continuing.

Operational hazards (i.e., spills, faults, ventilation failure, etc.) could result in the spread of contamination within our facility and require additional funding to correct. An irrevocable, automatic renewable letter of credit against a \$147,000 Certificate of Deposit at Texas State Bank has been used to provide the financial assurance required by the Nuclear Regulatory Commission for our Idaho facility license. If a contamination event resulted in greater liability to us we would have to borrow money or fund the liability from our future revenue.

Government regulation could adversely affect our business. Operations within our Idaho facility are subject to the U.S. Nuclear Regulatory Commission and Food and Drug Administration regulations. Nuclear medicine calibration and reference standards are licensed and regulated. To the extent these regulations are or become burdensome, our business development could be adversely affected.

We are dependent upon key personnel. Our ongoing operations are dependent on Steve T. Laflin, President and Chief Executive Officer. The Company is highly dependent upon this person and the loss of this individual could have a material adverse effect on us. We have a \$2 million dollar key man life insurance policy on Mr. Laflin and a 5-year employment agreement with him extending through February 2007. The Company has revised our employee stock options to assist with offering incentives and retaining key personnel. In addition, there is no assurance the Company will be able to retain our existing personnel or attract additional qualified employees. Loss of any of these relationships would result in a significant decline in revenue.

We are dependent on various third parties in connection with our business operations. The production of HSA Cobalt is dependent upon the Department of Energy, and its prime-operating contractor, who controls the Idaho reactor and laboratory operations. Our gemstone production is tied to an exclusive agreement with Quali Tech Inc. Nuclear medicine calibration and reference standard manufacturing is conducted under an exclusive contract with RadQual, LLC who in turn has agreements in place with several companies for marketing and sales.

We are subject to competition from other companies. Each of the business areas of the Company has direct competition from other businesses. HSA cobalt is supplied by other reactor facilities around the world. Nuclear medicine calibration and reference standards are being produced by several other manufacturers in the U.S. and overseas, and there is at least one other gemstone processor in Europe. Each of our competitors has significantly greater financial resources than us and that could create a competitive advantage for them over us.

Regulation of Radioisotope Production and Radioactive Waste. The manufacture of

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radioisotopes, nuclear medicine calibration and reference standards, and processing gemstones are subject to extensive federal regulation. Prior to commencing operations in our newly leased Idaho facility, the Company obtained approval from the Nuclear Regulatory Commission. The nuclear medicine calibration and reference standards are licensed as Sealed Sources through the State of Texas Department of Health. The Company's production facility does not handle "special nuclear materials" (i.e. nuclear fuels and weapons grade uranium, thorium and plutonium) and, therefore, is not designated as a "nuclear" facility.

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Pursuant to the Low Level Radioactive Waste Policy Act of 1980, states are required to assure the safe disposal of mildly radioactive materials. The Nuclear Regulatory Commission, Region IV, regulates the disposal of radioactive waste for facilities operating in Idaho. The radioactive waste we produce falls into the category of low-level radioactive waste.

Other Regulations. In the event we enter into agreements with suppliers to acquire neutron-produced research and therapeutic radioisotopes we could be subject to additional regulations of the Nuclear Regulatory Commission or the Food and Drug Administration.

Our shares are not currently listed on a securities exchange or traded on Nasdaq. As a result, our shares are thinly traded and there can be no assurance that an active trading market will develop for our stock. Accordingly, owners of our shares may have a difficult time selling large blocks of shares at market prices.

No Trading market is expected to develop for the Warrants. Although the Series A Warrants and Series B Warrants are being registered and will be freely tradeable (including through the Depository Trust Company), the Company does not expect an active trading market to develop for the Warrants.

Shareholders of I3 who do not exercise all of their Rights will own a smaller relative percentage of I3 after the Offering and could experience dilution in the value of their stock. The Rights Offer is being made to all I3 shareholders and if all shareholders exercise all of their rights, each shareholder's pro rata ownership interest will remain the same. However, if a shareholder does not exercise his Rights or exercises less than all his Rights, his percentage ownership interest could be reduced significantly. A non-participating shareholder's interest will be reduced even more to the extent other shareholders exercise their oversubscription privilege. To the extent the offered Unit price is less than the then market price of I3's stock, non-participating shareholders could also experience dilution in the value of their shares. The same is true for non-participating shareholders if participating shareholders later exercise their Warrants when the Warrant Exercise Price is less than the then market price of I3's stock.

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THE COMPANY

General

I3 was established as a Texas corporation in 1995. The Company was initially formed to produce, market, and distribute a broad range of products used in

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diagnostic and therapeutic nuclear medicine, research and industry. In 1998 the Company acquired a subsidiary, subsequently named International Isotopes Idaho Inc., which specialized in sales of isotopes and providing hot cell services through a contract with the Department Of Energy (DOE) Idaho Operations and using the Advanced Test Reactor (ATR). Because of difficulties encountered with start up of the Company's Radioisotope Production Facility and Linear Accelerator, and the high cost of conducting commercial operations in the midst of a DOE laboratory, the Company underwent a substantial change in mission and strategy during 2000 and 2001. This change resulted in the sales of the Radioisotope Production Facility and Linear Accelerator in Texas and termination of the commercial isotope production contract with the DOE's prime-operating contractor in Idaho. In June of 2001, the Company relocated its corporate headquarters to Idaho to continue the subsidiary's operations as the new, primary focus and mission of the Company.

In support of our new mission and strategy, in 2001 new contract manufacturing and processing agreements were put in place, a new operating facility was obtained and licensed through the Nuclear Regulatory Commission, and new contracts put in place with the DOE's prime-operating contractor for continued reactor production of high specific activity cobalt. These new agreements now fully support the Company's business products and services, which include manufacturing nuclear medicine reference and calibration standards, processing gemstones that have undergone treatment for color enhancement, and large volume production of high specific activity (HSA) cobalt. We have been able to continue steady growth in the amount of revenues generated from these business activities. We expect continued growth and the addition of new products in 2003, which management feels will produce sufficient cash to meet our operational needs. However, prospective investors are cautioned regarding the speculative nature of any forward-looking projections. For a discussion of these and other risk factors relating to the Company when considering an investment in our securities, see "Risk Factors."

Company Licensing, Capabilities, and Qualifications

We have a fully implemented Quality Assurance program which meets the requirements of ANSI/ASME NQA-1 and 10 CFR 830.120. In order to support the production of Nuclear Medicine calibration and reference standards the Company is also a participating member of the National Institute of Standards and Technology/ Nuclear Energy Institute's (NIST/NEI) Measurement Assurance Program (MAP) for the radiopharmaceutical industry. This program participation ensures that we can provide analytical methods and standards necessary for accurate radioactivity measurement. The Company is also a registered Food and Drug Administration (FDA) medical device manufacturer for Class I medical devices, including Nuclear Sealed Calibration Sources (892.1400) and Nuclear Flood Source Phantoms (892.1380).

Industry Overview and Target Markets

The industries and markets that require or involve the use of radioactive material are diverse. Our current operations involve products that are used in a wide variety of applications and in various markets. First, our HSA cobalt is supplied as bulk material, which is subsequently assembled into medical devices by our customer. Second, we are a contract manufacturer of several nuclear medicine reference and calibrations standards used for operational checks of various imaging and measurement systems for nuclear medicine. And third, we support the special packaging and measurement of gemstones that have undergone irradiation for color enhancement.

We conduct our operations in Idaho Falls, Idaho. Although the cobalt, nuclear medicine calibration and reference standards, and gemstone products appear diverse, they share the common links of being radioactive materials requiring extensive process quality control. Therefore, the Company is required to have an

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operating license from the Nuclear Regulatory Commission and specially trained staff with rigorously employed quality standards to produce and process these materials.

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Products

HSA Cobalt - The Company is one of a very few sources of this material worldwide. High Specific Activity (HSA) cobalt is used primarily in external beam radiation medical devices such as Elekta's Leksell Gamma Knife. This device is used for non-surgical radiation treatment of vascular deformities and non-malignant tumors in the brain. The HSA cobalt requires three to five years of irradiation to reach the necessary level of activity for this medical application. We manage an inventory of approximately 800,000 curies of this material in various stages of production, thus ensuring a long and continuous supply of material. After irradiation the material is shipped by us directly from the DOE reactor laboratory to the customer's facilities, thus eliminating the need for any on site processing of the material following irradiation.

Other Reactor Produced Radioisotopes - The Company's facility and NRC license permits processing of a wide variety of radioisotopes. We are evaluating establishing additional radioisotope transport and processing capabilities that would permit production and sale of various new radioisotopes using the DOE laboratory test reactor for production and our Idaho Falls facility for processing.

Nuclear medicine calibration and reference standards manufacturing - The Company is an exclusive contract manufacturer to RadQual LLC for several of these types of standards. There are approximately 6,000 nuclear medicine centers around the U.S. and the number of these centers is expected to grow at an annual rate of about 5%. Each of these centers has a variety of measurement and imaging systems that require frequent use of calibration and reference standards to ensure their proper operation. Because of the relatively short lived nature of the radioactivity used in these standards, the customers are required to replace them approximately once every 12 to 18 months.

Gemstone Processing - The Company has an exclusive contract with Quali-Tech Inc. for processing gemstones. The processing involves special packaging of the gemstones in containers, which allow them to undergo irradiation for color enhancement. The processing we perform entails initial receipt of the gemstones, packaging the gemstones for irradiation, managing the transport of the stones to and from the reactor facility, and then completing post irradiation processing of the stones before return shipment to the customer. In 2001 the production volume of the gemstones was limited by the availability of irradiation containers due to the difficulty involved with repairing and constructing these containers. However, in January 2002 we had solved container construction problems and implemented a new technology to repair containers. As a result we have been able to double the number of containers available for irradiation of the gemstones. During 2002, however, the general slowdown of the economy impacted the market demand for gemstones and thus the Company's revenue resulting from processing did not meet expectations.

Competition

HSA cobalt is produced in some other reactors, but we do not believe any in the U.S. are capable of producing the high activity level and volume required for meaningful commercial production. The two domestic reactor sources are the University of Missouri Research Reactor and the High Flux Isotope Reactor located in Oak Ridge Tennessee. There are, however, numerous foreign reactors

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actively producing high and low specific activity cobalt. While the logistics of international transport of cobalt presents some competitive barriers, the Company must always consider the potential threat these other suppliers pose to our HSA cobalt business.

Nuclear medicine calibration and reference standards - The Company is the smallest of three major producers of these sources within the U.S. The Company's customer (RadQual, LLC) has increased the number of authorized distributors and plans to make further expansion into the market in 2003. However, there can be no assurance of increased sales.

Gemstone processing - there is no other commercial company or reactor in the U.S. processing irradiated gemstones. We believe there are one or two other reactors in the world that support this business with other companies overseas.

Government Regulation

The Company has obtained a license from the Nuclear Regulatory Commission, Region IV that permits use and possession of by-product material. The scope of this license includes calibration and reference standard manufacturing and distribution, radioactive gemstone processing, environmental sample analysis, and various research and development activities. The scope and activities permitted by this license are broad enough that it is not expected to restrict any anticipated business activities in the coming year. The Company is also registered as a medical device manufacturer through the U.S. Food and Drug Administration (FDA).

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THE RIGHTS OFFER

Issuance of Rights

We are issuing Rights to subscribe for Units of the Company's securities. Each Unit consists of (i) one share of common stock, (ii) one Series A Warrant to purchase an additional share of common stock at an exercise price of \$.04, and (iii) one Series B Warrant to purchase another share of common stock at \$.05 per share. The warrants are exercisable anytime prior to and including July 31, 2007. Each shareholder as of the record date will be issued one nontransferable Right for each share of common stock owned. No fractional Rights will be issued. The Rights entitle the holder to acquire at the Subscription Price one Unit for each 2.5 Rights held. The Rights will be evidenced by Subscription Certificates (see Appendix A) which will be mailed to shareholders.

The Rights are not transferable and will not be quoted for trading in the over the counter market nor on any stock exchange. Shareholders who, after exercising their Rights, are left with fewer than 2.5 Rights, will be unable to exercise those remaining Rights and will not be entitled to receive any cash from the Company in lieu of those remaining Rights.

Purpose of Offer

The Board of Directors of I3 has determined that it is desirable to raise capital in order to finance an expansion of our business operations. This expansion will include construction of a building addition and acquisition of hot cells and related equipment for processing a wide range of new products. Although intended to provide a variety of processing capability, most of the planned operations expansion will be directed towards implementation and

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advancement of the Company's new Therapy Products business area.

This Offering will allow us to raise additional capital without diluting the ownership interests of existing shareholders who exercise their Rights and without paying the higher underwriting commissions that would be required to raise capital from third parties who are not already shareholders.

The Subscription Price

The Subscription Price for the Units to be issued pursuant to the Rights is \$.03 per Unit. We announced the offer on June 13, 2003. The last reported bid prices of the common stock in the over the counter market pink sheets on June 13, 2003, and July 21, 2003, were \$.03 and \$.03, respectively. The Subscription Price is payable in cash (by check, money order or wire transfer), except with respect to certain shareholders of I3 who have loaned funds to the Company and may elect to cancel I3 debt in exchange for Units.

Expiration of the Offer

The Offer will expire at 5:00 p.m. New York City time on September 12, 2003 (the "Expiration Date"). Rights will expire on the Expiration Date and may not be exercised after that date.

Exercise of Rights

In order to exercise your Rights you must do all of the following:

- o Fill in and sign the reverse side of the Subscription Certificate which accompanies this prospectus;
- o Deliver the completed and signed Subscription Certificate to the Subscription Agent with your payment in full for the Units you wish to purchase. You may use the enclosed envelope to mail the Subscription Certificate and payment to the Subscription Agent, or you may arrange for one of the alternative methods of delivery described below. Shareholders choosing to cancel I3 debt owed to them in exchange for Units should so indicate on their Subscription Certificate.

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- o The method of making payment for your Units is described below under "Payment for Shares."
- o Properly completed and executed Subscription Certificates must be received by the Subscription Agent at the offices of the Subscription Agent at the address set forth below prior to 5:00 pm, New York City time, on the Expiration Date, unless payment is effected by means of a notice of guaranteed delivery as described below under "Payment for Shares."
- o Rights may also be exercised through a broker, who may charge you a servicing fee.

Signed Subscription Certificates, accompanied by payment of the Subscription Price, should be sent to American Stock Transfer & Trust Company, the Subscription Agent, by one of the methods described below:

1. By mail or by hand:
American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance

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New York, NY 10038

2. By express mail or overnight courier:
American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, NY 10038
3. By facsimile (telecopier):
718/234-5001

with a copy of the original Subscription Certificate to be sent by one of the methods described above. Confirm facsimile by telephone to 800/937-5449.

Do Not Send Subscription Certificates to the Company.

A subscription will be deemed accepted by the Subscription Agent when payment (which may take the form of an election to cancel I3 debt owed to the shareholder), together with a properly completed and executed Subscription Certificate, and is received by the Subscription Agent.

If you are issued fewer than 2.5 Rights, you may subscribe for one full Unit. Fractional Units will not be issued, and if after exercising your Rights you are left with fewer than 2.5 Rights, you will not be able to exercise your remaining Rights.

If you do not indicate the number of Rights you are exercising, or if you do not deliver full payment of the Subscription Price for the number of Units that you indicate you are subscribing for (which payment may take the form of an election to cancel I3 debt owed to you), then you will be deemed to have exercised Rights to purchase the maximum number of Units determined by dividing the total Subscription Price you paid by the Subscription Price per Unit.

If you submit payment for more Units than may be purchased through the regular exercise of your Rights, your excess payment will be deemed to be a Subscription Payment for additional Units through the Over-Subscription Privilege. The number of additional Units that you will be deemed to have subscribed for in the Over-Subscription Privilege will be determined by dividing the amount of the excess payment by the Subscription Price per Unit.

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All questions concerning the time limits, validity, form and eligibility of any exercise of Rights for subscriptions pursuant to the Over-Subscription Privilege will be determined by I3, whose determination will be final and binding. I3 in its sole discretion may waive any defect or irregularity, or may permit any defect or irregularity to be corrected, within such time as the Company may determine, or I3 may reject, in whole or in part, the purported exercise of any Right in the primary subscription or any subscription pursuant to the Over-Subscription Privilege. Neither I3 nor the Subscription Agent will be under any duty or obligation to give any notification or permit the cure of any defect or irregularity in connection with the submission of any Subscription Certificate, the exercise or attempt to exercise any Right or the Over-Subscription Privilege, or the payment of the Subscription Price. Subscriptions through the exercise of Rights or the Over-Subscription Privilege will not be deemed to have been received or accepted by I3 until all irregularities or defects have been waived by I3 or cured to the satisfaction of, and within the time allocated by, I3 in its sole discretion.

Over-Subscription Privilege

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The Over-Subscription Privilege may allow you to acquire more Units than the number issuable upon the exercise of the Rights initially issued to you. By exercising the Over-Subscription Privilege, you may purchase any Units that are left over by shareholders who fail to exercise their Rights.

The Over-Subscription Privilege may only be exercised by Rights holders who were shareholders on the record date and who exercise all of the rights they received from I3. Shareholders such as broker-dealers, banks, and other professional intermediaries who hold I3 securities on behalf of clients, may participate in the Over-Subscription Privilege for the client if the client fully exercises all Rights attributable to him.

If you are eligible to exercise the Over-Subscription Privilege and you wish to do so, you should indicate on your Subscription Certificate how many Units you are willing to acquire through the Over-Subscription Privilege. If sufficient common shares remain unsold, all over-subscriptions will be honored in full.

If you were a shareholder on the record date and you wish to exercise the Over-Subscription Privilege through The Depository Trust Corporation, you must properly execute and deliver to the Subscription Agent a DTC Participant Over-Subscription Form, together with payment of the Subscription Price for the number of Units that you wish to purchase through the Over-Subscription Privilege. Copies of the DTC Participant Over-Subscription Form and payment must be received by the Subscription Agent at or prior to 5:00 p.m. New York City time on the Expiration Date.

If you are eligible to exercise the Over-Subscription Privilege but do not deliver full payment of the Subscription Price for the number of Units that you indicate you are subscribing for through the Over-Subscription Privilege, then you will be deemed to have exercised the Over-Subscription Privilege to purchase the maximum number of Units determined by dividing the total Subscription Price paid (in excess of the Subscription Price for the number of Units you purchased through the full exercise of your Rights) by the Subscription Price per Unit.

If subscriptions for Units through the Over-Subscription Privilege exceed the initial 38,229,157 Units being offered by I3 through the exercise of the Rights, I3 may issue up to 14,500,000 additional Units to fill all or a portion of the over-subscriptions. The issuance of additional Units to fill over-subscriptions may dilute the percentage ownership interests of other shareholders.

I3 will not be obligated to issue any Units to fill over-subscriptions, but we may do so in our sole and absolute discretion. We reserve the right to limit the number of Units issued to fill an over-subscription from any single shareholder or from shareholders that are known or believed by us to be under common control or acting as a group for the purpose of acquiring Units.

Subject to the right of I3 to limit the number of Units issuable to any shareholder, if the Rights offer is over-subscribed so that over-subscriptions cannot be filled in full, the available Units will be allocated among those who over-subscribe based on the number of Rights originally issued to them, so that the number of Units issued to shareholders who subscribe pursuant to the Over-Subscription Privilege will generally be in proportion to the number of shares of common stock owned by them on the record date. The percentage of available Units each over-subscribing shareholder may acquire may be rounded up

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or down to result in delivery of whole Units. The allocation process may involve a series of allocations in order to assure that the total number of Units available for over-subscriptions is distributed on a prorata basis. If you are not allocated the full amount of Units that you subscribe for pursuant to the Over-Subscription Privilege, you will receive a refund of the Subscription Price you paid for Units that are not allocated to and purchased by you. The refund will be made by a check mailed by the Subscription Agent.

Payment for Units

If you wish to exercise your Rights or to acquire Units pursuant to the Over-Subscription Privilege, you may choose between the following methods of payment:

1. You may send the Subscription Certificate together with payment (which may take the form of a written election on the Subscription Certificate indicating your desire to cancel I3 debt owed to you in exchange for the issuance of Units) for the Units acquired on primary subscription and any additional Units that the you desire to acquire through the Over Subscription Privilege to the Subscription Agent. A subscription will be deemed accepted when payment, together with a properly completed and executed Subscription Certificate, is received by the Subscription Agent. Such payment and properly executed Subscription Certificate must be received by the Subscription Agent no later than 5:00 p.m., New York City time on the Expiration Date. The Subscription Agent will deposit all checks received by it for the purchase of Units into a segregated interest bearing account of I3 (the interest of which will belong to I3) pending pro ration and distribution of the Units. To be accepted, a payment pursuant to this method must be in U.S. dollars by money order or check drawn on a bank located in the United States, must be payable to International Isotopes Inc., and must accompany a properly completed and executed Subscription Certificate.

2. Alternatively, a subscription will be accepted by the Subscription Agent if, prior to 5:00 p.m., New York City time, on the Expiration Date, the Subscription Agent has received a Notice of Guaranteed Delivery by facsimile (teletype) or otherwise from a bank, trust company, or a New York Stock Exchange member guaranteeing delivery of (i) payment of the full Subscription Price for the Units subscribed for in the primary subscription and any additional Units subscribed for pursuant to the Over Subscription Privilege (which may take the form of a written election on the Subscription Certificate indicating your desire to cancel I3 debt owed to you in exchange for the issuance of Units), and (ii) a properly completed and executed Subscription Certificate. The Subscription Agent will not honor a Notice of Guaranteed Delivery unless a properly completed and executed Subscription Certificate and full payment for the Units is received by the Subscription Agent by the close of business on the third business day after the Expiration Date.

You will not be allowed to rescind a purchase after the Subscription Agent has received your payment either by means of a notice of guaranteed delivery or a check.

Nominees who hold common stock for the account of others, such as brokers, trustees or depositories for securities, should notify the respective beneficial owners of such common stock as soon as possible to ascertain such beneficial owners and to obtain instructions with respect to the Rights. If the beneficial owner so instructs, the nominee should complete the Subscription Certificate and submit it to the Subscription Agent with the proper payment. In addition, beneficial owners of common stock held through such a nominee should contact the nominee and request the nominee to effect the transactions in accordance with the beneficial owner's instructions.

No Transferability of Rights

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The Rights evidenced by a Subscription Certificate may not be transferred and will not be listed for trading in the over the counter market or on any securities exchange.

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Amendment, Extension or Termination of the Offer

The Company reserves the right, in its sole discretion to:

(a) terminate the Rights offer prior to delivery of the Units for which Rights holders have subscribed pursuant to the exercise of Rights in the primary subscription or the Over Subscription Privilege;

(b) extend the Expiration Date to a later date;

(c) change the record date prior to distribution of the Rights to shareholders; or

(d) amend or modify the terms of the Rights offer. If the Company amends the terms of the Rights offer, an amended Prospectus will be distributed to holders of record of Rights and to holders of Rights who have previously exercised Rights. All holders of Rights who exercise their Rights prior to such amendment or within four business days after the mailing of the amended Prospectus will be given the opportunity to confirm the exercise of their Rights by executing and delivering a consent form.

Any Rights holder who exercised Rights before or within four days after mailing of an amended Prospectus relating to an amendment of the Rights offer and fails to deliver, in a proper and timely manner, a properly executed consent form will be deemed to have rejected the amended terms of the Rights offer and have elected to revoke in full his exercise of the Rights and the Over Subscription Privilege. If a Rights holder's exercise of Rights is so revoked the full amount of the Subscription Price paid by such Right's holder will be returned to the Right's holder.

A Rights holder whose executed Subscription Certificate is received by the Subscription Agent more than four days after the mailing of an amended Prospectus will be deemed to have accepted any amended terms of the Rights offering in connection with the exercise of his Rights and the Over Subscription Privilege.

If the Company elects to terminate the Rights offer before delivering the Units for which Rights holders have subscribed, the Subscription Price paid will be returned by mail. Except for the obligation to return the Subscription Price paid by Right's holders who attempted to exercise their Rights, neither the Company or the Subscription Agent will have any obligation or liability to a Rights holder or purchaser of Rights in the event of an amendment or termination of the Rights offer.

Delivery of Share Certificates and Warrants

Certificates representing common stock and the warrants purchased pursuant to the primary subscription will be delivered to the purchasers as soon as practicable after the corresponding Rights have been validly exercised and full payment for such common stock and warrants represented by the Units has been received and cleared. Certificates representing common stock and the warrants purchased pursuant to the Over Subscription Privilege will be delivered to the purchaser as soon as practicable after the Expiration Date and after all

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allocations have been affected. It is expected that such stock certificates and warrant certificates will be available for delivery three business days following the Expiration Date.

Subscription Agent

The Subscription Agent is American Stock Transfer & Trust Company, which will receive for its administrative, processing, invoice and other services as subscription agent, a fee estimated at \$15,000, and reimbursement for all out-of-pocket expenses related to the Rights offer. The Subscription Agent is also the Company's transfer agent and registrar and will serve as the Warrant Agent for the warrants. Questions regarding the Subscription Certificates should be directed to the American Stock Transfer & Trust Company, 59 Maiden Lane, Plaza Entrance, New York, New York 10038 (telephone: (800) 937-5449). Shareholders may consult their brokers or nominees.

What Happens to Unsubscribed Units

To the extent that any unsubscribed Units remain as of the Expiration Date, they will expire.

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Certain Federal Income Tax Considerations Regarding the Rights Offering

The following is a summary of certain income tax consequences to I3 and shareholders of I3 residing in the United States resulting from the Rights Offering. The discussion set forth below is based upon the Internal Revenue Code of 1986, as amended, the Treasury Regulations promulgated thereunder, judicial authority and current administrative rulings and pronouncements, as currently in effect. I3 has not requested a ruling from the Internal Revenue Service (the "IRS") with respect to the federal income tax consequences of the Rights Offering. Accordingly, no assurance can be given that the tax consequences will be as described below. Further, the federal income tax consequences to any particular shareholder may be affected by matters not discussed below. For example, certain types of investors (including individuals who are not United States citizens or residents, foreign corporations, life insurance companies and tax exempt organizations) may be subject to special rules not addressed herein. There also may be state, local or foreign tax considerations applicable to each shareholder. THE DISCUSSION SET FORTH BELOW IS INCLUDED FOR GENERAL INFORMATION ONLY. EACH SHAREHOLDER IS URGED TO CONSULT HIS OWN TAX ADVISOR AS TO THE CONSEQUENCES OF THE RIGHTS OFFERING TO HIM UNDER FEDERAL AND APPLICABLE STATE, LOCAL AND FOREIGN TAX LAWS.

Consequences of Rights Offering. The discussion of federal income tax consequences of the Rights Offering set forth below assumes that the shares of common stock owned by a shareholder and the shares issued pursuant to the Rights Offering constitute capital assets in the hands of such shareholder.

Subject to the assumptions and qualifications above, for federal income tax purposes:

1. A shareholder should not recognize any gain or loss upon his receipt of a Right.

2. If a shareholder exercises a Right, the tax basis of such Right in the hands of the shareholder will be determined by allocating the shareholder's existing tax basis for his shares with respect to which the Right was distributed ("Old Shares") between his Old Shares and the Right, in

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proportion to their relative fair market values on the date of distribution. If, however, the fair market value of the Rights distributed to the shareholder (on the date of distribution) is less than 15% of the fair market value of his Old Shares, the tax basis of each Right will be deemed to be zero unless the shareholder affirmatively elects, by attaching an election statement to his federal income tax return for the year in which he receives his Rights, to compute the tax basis of his Rights in accordance with the preceding sentence. Once made, such an election is irrevocable. A Right will not be treated as having any tax basis if it lapses and, therefore, the holder of an expired Right will not recognize a loss for tax purposes.

3. If a shareholder sells a Right, the shareholder will generally recognize capital gain or loss in an amount equal to the difference between the proceeds of the sale and the shareholder's tax basis for such Right. Such gain or loss will be long-term capital gain or loss if the shareholder's holding period for such Right (which will include the shareholder's holding period for his or her Old Shares) is more than one year on the date of sale. However, since the Rights are non-transferable, this provision of the tax law is inapplicable to the Rights.

4. No gain or loss will generally be recognized by a shareholder upon the purchase of a share pursuant to the exercise of a Right (or the Over-Subscription Privilege). The tax basis of the shares purchased pursuant to the exercise of Rights (or the Over-Subscription Privilege) will be equal to the sum of (a) the holder's tax basis for the Rights exercised, and (b) the Subscription Price paid for such shares. The holding period of the shares purchased pursuant to the exercise of Rights (or the Over-Subscription Privilege) will commence on the date of exercise. Upon the subsequent sale of such shares, the shareholder will generally recognize capital gain or loss in an amount equal to the difference between the proceeds of the sale and the shareholder's tax basis for such shares. Such gain or loss will be long-term capital gain or loss if the shareholder's holding period for such shares is more than one year on the date of sale.

5. I3 will generally not recognize any gain or loss upon (a) the issuance of Rights, (b) the receipt of payment for shares pursuant to the exercise of Rights (or the Over-Subscription Privilege) or (c) the lapse of Rights.

Participation of Certain Shareholders

Certain shareholders of I3, whom together own more than 50% of the Company's outstanding capital stock, have recently loaned I3 an aggregate of \$823,500. Although there can be no assurance, the Company expects each of these shareholders to exercise his or her Rights to purchase shares of I3 common stock by canceling all or a portion of the principal amount of I3 debt owed to him or her in payment for Units.

USE OF PROCEEDS

The net proceeds to the Company from the sale of 38,229,157 Units offered hereby through the primary Rights offering are estimated to be approximately \$1,146,875, assuming an offering price of \$.03 per Unit, before deducting estimated offering expenses. With the balance of the funds, we will invest in new equipment and facilities and reduce short-term debt and current payables related to production equipment and supplies. Additional capital equipment for new product production lines is required for 2003 revenues. The balance of funds

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will be used for operations and general corporate purposes.

Facilities and Equipment.....	\$ 800,000
Debt Reduction.....	\$ 115,000
Legal and Fees.....	\$ 55,000
Working Capital.....	\$ 176,875
Total.....	\$1,146,875

The amounts and timing of the Company's actual expenditures will depend on several factors, including the completion of equipment modifications and the amount of cash generated by the Company's operations. Pending such uses, the Company will invest the funds in short-term interest bearing accounts with a financial institution.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

The Company's Common Stock was quoted on the Nasdaq SmallCap Market under the symbol "INIS" from August 19, 1997, to April 2, 2001, at which time I3's stock was delisted from Nasdaq for failure to maintain a per share price of at least \$1.00. Since that time, I3's common stock has been traded in the over the counter market in the "pink sheets." The table below sets forth, for the fiscal quarters indicated, the high and low sale prices for the Common Stock as reported by the Nasdaq SmallCap Market or the high and low closing bid prices as reported in the pink sheets, as the case may be.

	High	Low
	-----	-----
Fiscal Year Ended December 31, 2001		
First Quarter	\$0.35	\$0.09
Second Quarter	\$0.13	\$0.04
Third Quarter	\$0.09	\$0.03
Fourth Quarter	\$0.05	\$0.02
 Fiscal Year Ended December 31, 2002		
First Quarter	\$0.15	\$0.02
Second Quarter	\$0.13	\$0.05
Third Quarter	\$0.09	\$0.05
Fourth Quarter	\$0.06	\$0.03
 Fiscal Year Ending December 31, 2003		
First Quarter	\$0.06	\$0.04
Second Quarter (through 7/21/03)	\$0.06	\$0.03

On July 21, 2003, the last reported bid price for the Company's Common Stock as reported in the pink sheets was \$.03. As of such date, there were approximately 320 holders of record of the Company's Common Stock (although the Company believes that the number of beneficial owners of its Common Stock is substantially higher).

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We intend to retain any future earnings for use in the business and do not intend to pay cash dividends in the foreseeable future. The payment of future dividends, if any, will be at the discretion of the Company's Board of Directors and will depend, among other things, upon future earnings, operations, capital requirements, restrictions in future financing agreements, the general financial condition of the Company and general business conditions.

DESCRIPTION OF CAPITAL STOCK

The authorized capital stock of the Company consists of 250,000,000 shares of Common Stock, \$.01 par value per share, and 5,000,000 shares of preferred Stock, \$.01 par value per share ("Preferred Stock"). As of the date of this Prospectus, there are 95,572,893 shares of Common Stock issued and outstanding and held of record by approximately 320 stockholders and 850 issued and outstanding shares of Series B Preferred Stock.

Common Stock

The shares of Common Stock currently outstanding are, and the shares of Common Stock that will be outstanding upon the consummation of this Rights offering will be, validly issued, fully paid and non-assessable. Each holder of Common Stock is entitled to one vote for each share owned of record on all matters voted upon by the stockholders. In the event of a liquidation, dissolution or winding up of the Company, the holders of Common Stock are entitled to share equally and ratably in the assets of the Company, if any, remaining after the payment of all debts and liabilities of the Company and the liquidation preference of any outstanding Preferred Stock. The holders of the Common Stock have no preemptive rights or cumulative voting rights and there are no redemption, sinking fund or conversion provisions applicable to the Common Stock.

Holders of Common Stock are entitled to receive dividends if, as and when declared by the Board of Directors, out of funds legally available for such purpose, subject to the dividend and liquidation rights of any Preferred Stock that may be issued.

Preferred Stock

Pursuant to the Company's Restated Articles of Incorporation, the Board of Directors is authorized, without further action by the stockholders, to issue up to 5,000,000 shares of Preferred Stock in one or more series and to establish the designations, preferences, qualifications, privileges, limitations, restrictions, options, conversion rights and other special or relative rights of any series of Preferred Stock so issued. The issuance of shares of Preferred Stock could materially adversely affect the voting power and other rights of holders of Common Stock. Because the terms of the Preferred Stock may be fixed by the Board of Directors without stockholder action, the Preferred Stock could be issued quickly with terms designated to defeat a proposed takeover of the Company, or to make the removal of management or the directors of the Company more difficult. The authority to issue Preferred Stock or rights to purchase such stock could be used to discourage a change in control of the Company. Management of the Company is not aware of any threatened transactions to obtain control of the Company, and the Board has no current plans to issue any additional shares of Preferred Stock.

Series B Preferred Stock

The Series B Preferred Stock is redeemable at \$1,000 per share in March 2022. The Series B Preferred Stock does not accrue a dividend and has no voting rights except in the case of certain major corporate actions.

Indemnification

As permitted by the Texas Business Corporation Act ("TBCA"), the Company's Restated Articles of Incorporation provide that the Company will indemnify its officers, directors, employees and agents to the fullest extent permitted by the TBCA against actions that may arise against them in such capacities and to advance expenses in connection with any such actions. The TBCA provides that a corporation may indemnify a person who was, is, or is threatened to be made a named defendant in a proceeding because such person is or was a director if it is determined in accordance with the provisions of the TBCA that the person (i) conducted himself in good faith, (ii) reasonably believed, in the case of conduct in his official capacity as director, that his conduct was in the corporation's best interests or, in other cases, that his conduct at least was not opposed to the corporation's interests and (iii) in the case of any criminal proceeding, had no reasonable cause to believe his conduct was unlawful. A director may not be indemnified with respect to a proceeding in which the person is found liable on the basis that personal benefit was improperly received by him, whether or not the benefit resulted from an action taken in the person's official capacity, or in which the person is found liable to the corporation. Officers, employees and agents of a corporation are entitled to be indemnified by the corporation as, and to the same extent provided for, directors of the corporation. The Company carries directors' and officers' liability insurance with an aggregate policy limit of \$2,000,000.

Warrants

The warrants to be issued as part of the Units will entitle the holder thereof to purchase two additional shares of Common Stock for each Unit held. Each Unit includes one Series A Warrant with an exercise price of \$.04 per share and one Series B Warrant exercisable at \$.05 per share. The warrants are only exercisable on or prior to July 31, 2007. The warrants confer no voting rights until exercised for Common Stock. The Company has the right to redeem the warrants and repurchase them for \$.001 per Warrant Share (the "Redemption Price") if the average closing price of I3's common stock equals or exceeds \$.12 per share with respect to Series A Warrants and \$.15 per share with respect to Series B Warrants for any 20 consecutive business day period. Warrant holders will be given a minimum of 30 days written notice of the date on which the Warrants will be redeemed. Holders of Warrants may exercise their Warrants up to the day before the Redemption Date, but thereafter their Warrant Certificates will only be exchangeable for the Redemption Price. The warrants are evidenced by Warrant Certificates that contain certain of the terms applicable to the warrants, but are also subject to the terms and conditions of a Warrant Agreement between the Company and the Warrant Agent. A copy of the Series A Warrant Agreement appears as Exhibit D to this Prospectus and a copy of the form of Series A Warrant Certificate is included as Exhibit E. The Series B Warrant Agreement and Series B Warrant Certificate are identical except for the amount of the Warrant Exercise Price and the Company Call Price.

Trading Market, Transfer Agent and Registrar

The Common Stock is traded in the over the counter market in the pink sheets under the symbol "INIS." American Stock Transfer & Trust Company, New York, New York is the transfer agent and registrar for the Common Stock.

Anti-Takeover Measures

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As a Texas corporation, the Company is subject to the provisions of the TBCA that became effective on September 1, 1997. In general, the TBCA prohibits a Texas "issuing public corporation" (such as the Company) from engaging in a "business combination" with any shareholder who is a beneficial owner of 20% or more of the corporation's outstanding stock for a period of three years after such shareholder's acquisition of a 20% ownership interest, unless: (i) the board of directors of the corporation approves the transaction or the shareholder's acquisition of shares prior to the acquisition or (ii) two-thirds of the unaffiliated shareholders of the corporation approve the transaction at a shareholders' meeting. The TBCA may have the effect of inhibiting a non-negotiated merger or other business combination involving the Company. The Company is subject to the terms of the TBCA, unless its shareholders or directors take action electing not to be governed by its terms (which action is not currently contemplated).

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LEGAL MATTERS

The validity of the shares of Common Stock and Warrants comprising the Units offered by the Company hereby will be passed upon for the Company by Locke Liddell & Sapp LLP.

EXPERTS

The consolidated balance sheets of International Isotopes Inc. and subsidiaries as of December 31, 2002, and 2001, and the consolidated statements of operations, stockholder deficit, and cash flows for the years then ended incorporated by reference in this prospectus, have been included in reliance upon the report of Hansen, Barnett & Maxwell, independent certified public accountants, given on the authority of that firm as experts in accounting and auditing.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

I3's Form 10-KSB for the fiscal year ended December 31, 2002, Form 10-QSB for the three months ended March 31, 2003, and all other reports filed by I3 pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, since the end of the fiscal year covered by such Form 10-KSB are incorporated into this prospectus by reference. I3 will provide without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request, a copy of any and all of the information that has been incorporated by reference but not delivered with this prospectus. Such requests may be addressed to the Secretary of I3 at 4137 Commerce Circle, Idaho Falls, Idaho 83401; Telephone: (208) 524-5300.

I3 is subject to the informational requirements of the Securities Exchange Act of 1934, as amended, and in accordance therewith files quarterly, annual, and current reports and proxy statements and other information with the Securities and Exchange Commission. The public may read and copy any materials I3 files with the Securities and Exchange Commission at the Commission's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the Commission at 1-800-SEC-0330. The Commission maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the Commission. The address of such site is <http://www.sec.gov>.

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ADDITIONAL INFORMATION

The Company has filed with the Securities and Exchange Commission, Washington, D.C. 20549, a Registration Statement on Form S-3 under the Securities Act with respect to the Common Stock and Warrants offered hereby. This Prospectus does not contain all of the information set forth in the Registration Statement and exhibits and schedules thereto, certain parts of which having been omitted in accordance with the rules and regulations of the Commission. For further information with respect to the Company and the Common Stock, reference is made to the Registration Statement and the exhibits and schedules thereto which may be inspected and copied at the public reference facilities of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549. Copies of such material can be obtained from the Commission's Public Reference Section at prescribed rates. The Commission maintains a Web site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission pursuant to its Electronic Data Gathering Analysis and Retrieval ("EDGAR") system. The address of the Commission's Web site is <http://www.sec.gov>. The Registration Statement including all exhibits thereto and amendments thereof, has been filed with the Commission through EDGAR. Descriptions contained in this prospectus as to the contents of any contract or other documents filed as an exhibit to the Registration Statement are not necessarily complete and each such description is qualified by reference to such contract or document.

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EXHIBIT A

Form of Subscription Certificate

A-1

CERTIFICATE NUMBER

INTERNATIONAL ISOTOPES INC.

SUBSCRIPTION CERTIFICATE FOR RIGHTS

SUBSCRIPTION CERTIFICATE FOR UNITS VOID IF NOT EXERCISED AT OR BEFORE 5:00 P.M. (NEW YORK TIME) ON SEPTEMBER 12, 2003, THE EXPIRATION DATE. THIS SUBSCRIPTION CERTIFICATE IS NOT TRANSFERABLE.

SUBSCR

EXPIRATION DATE: September 12, 2003

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THIS SUBSCRIPTION CERTIFICATE MAY BE USED TO SUBSCRIBE FOR UNITS. FULL INSTRUCTIONS APPEAR ON THE BACK OF THIS SUBSCRIPTION CERTIFICATE.

REGISTERED OWNER:

The registered owner of this Subscription Certificate, named above is entitled to the number of Rights to subscribe for Units (each Unit consisting of (i) one share of common stock, par value \$.01 per share, (ii) one Series A Warrant to purchase an additional share at \$.04 per share, and (iii) one Series B Warrant to purchase another share at \$.05 per share) of International Isotopes Inc. shown above, in the ratio of one Unit for each 2.5 Rights held, and upon the terms and conditions and at the price for each Unit specified in the Prospectus dated July 24, 2003.

Date: _____, 2003

IMPORTANT: Comp

INTERNATIONAL ISOTOPES INC.

SECRETARY

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Expiration Date: September

PLEASE COMPLETE ALL APPLICABLE INFORMATION

By Mail:
To: American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Hand:
To: American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Overnight Courier:
To: American Stock Tran
& Trust Company
59 Maiden Lane, Plaza En
New York, New York 1003

TO SUBSCRIBE: I hereby irrevocably subscribe for the dollar amount of Units indicated as the to

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of A and B below upon the terms and conditions specified in the Prospectus related hereto, receipt of which is acknowledged.

Please check below:

A. Subscription:

_____	/ 2.5 =	_____	x	\$.03	=	\$ _____
(Rights Exercised)		(Units Requested)		(Subscription Price)		(Amount Required)

B. Over-Subscription Privilege:*

_____	x	\$.03	=	\$ _____
(Units Requested)		(Subscription Price)		(Amount Required)

C. Total Subscription Price: (A + B) = \$ _____

D. Method of Payment (Check and Complete Appropriate Box(es)):

- Check in the amount of \$_____ payable to Subscription Agent.
- Certified Check, bank draft or money order in the amount of \$_____ payable to Subscription Agent.
- Wire transfer in the amount of \$_____ directed to American Stock Transfer & Trust Company, Subscription Agent, JP Morgan Chase Bank WIRE CLEARING ACCOUNT ABA #021000021, Account #323890121, Attention: Reorg. Dept.
- Cancellation of Debt in the principal amount of \$_____ owed by I3 to the undersigned.

E. Notice of Guaranteed Delivery:

CHECK HERE IF RIGHTS ARE BEING EXERCISED PURSUANT TO A NOTICE OF GUARANTEED DELIVERY TO SUBSCRIPTION AGENT PRIOR TO THE EXPIRATION DATE AND COMPLETE THE FOLLOWING:

Name(s) of Registered Owner(s) _____
 Window Ticket Number (if any) _____
 Date of Execution of Notice of Guaranteed Delivery _____
 Name of Eligible Institution which Guaranteed Delivery _____
 Registered Owner(s) Telephone Number _____

SPECIAL DELIVERY INSTRUCTIONS

Unless otherwise indicated below, the Subscription Agent is hereby authorized to issue and deliver stock certificates and warrants to the undersigned at the address appearing on the face of the Subscription Certificate.

Check this box if stock certificates and warrants are to be issued in a name other than that of the Rights Holder.

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NOTICE OF GUARANTEED DELIVERY OF
SUBSCRIPTION RIGHTS AND THE
SUBSCRIPTION PRICE FOR UNITS OF
INTERNATIONAL ISOTOPES INC.
SUBSCRIBED FOR IN THE RIGHTS OFFER

As set forth in the Prospectus under "The Rights Offer - Payment for Units," this form or one substantially equivalent may be used as a means of effecting subscription and payment for all Units of International Isotopes Inc. ("I(3)") subscribed for in the Rights offer. Such form may be delivered by hand or sent by facsimile transmission, overnight courier or mail to the Subscription Agent.

The Subscription Agent is:
American Stock Transfer & Trust Company

General Information
(800) 937-5449

By Mail:
American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Facsimile:
(718) 234-5001
Confirm by Telephone
(800) 937-5449

By Hand:
American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Overnight Courier:
American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

DELIVERY OF THIS INSTRUMENT TO AN ADDRESS,
OR TRANSMISSION OF INSTRUCTIONS VIA
A TELECOPY OR FACSIMILE NUMBER, OTHER THAN AS
SET FORTH ABOVE, DOES NOT CONSTITUTE A VALID DELIVERY

The New York Stock Exchange member firm or bank or trust company which completes this form must communicate the guarantee and the number of Units subscribed for to the Subscription Agent and must deliver this Notice of Guaranteed Delivery guaranteeing delivery of (i) payment in full for all subscribed Units (including any Units subscribed for through the over-subscription privilege) and (ii) a properly completed and executed Subscription Certificate (which certificate and full payment must then be delivered by the close of business on the third business day after the expiration date) to the Subscription Agent prior to 5:00 p.m., New York time, on the expiration date (September 12, 2003, unless extended). Failure to do so will result in a forfeiture of the Rights.

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GUARANTEE

The undersigned, a member firm of the New York Stock Exchange or a bank or trust company, guarantees delivery to the Subscription Agent by the close of business (5:00 p.m., New York time) on the third business day after the expiration date (September 17, 2003, unless extended) of (A) a properly completed and executed Subscription Certificate and (B) payment of the full subscription price of Units subscribed for in the Rights offer (including the over-subscription privilege, if applicable) as subscription for such Units as indicated herein or in the Subscription Certificate.

Number of Units subscribed for
(excluding the over-subscription privilege)
for which you are guaranteeing delivery
of Rights and payment

Number of Units subscribed for
pursuant to the over-subscription
privilege for which you are
guaranteeing delivery of Rights
and payment

Number of Rights to be delivered: _____

Total subscription price payment
to be delivered: _____

\$ _____

Method of delivery [circle one]

- A. Through DTC
- B. Direct to Corporation

Please note that if you are guaranteeing for over-subscription Units, and are a DTC participant, you must also execute and forward to American Stock Transfer & Trust Company a Nominee Holder Over-Subscription Exercise Form.

Name of Firm

Authorized Signature

Address

Title

Zip Code

(Type or Print)

Name of Registered Holder (If Applicable)

Telephone Number

Date

IF THE RIGHTS ARE TO BE DELIVERED THROUGH DTC, A REPRESENTATIVE OF THE SUBSCRIPTION AGENT WILL PHONE YOU WITH A PROTECT IDENTIFICATION NUMBER, WHICH NEEDS TO BE COMMUNICATED BY YOU TO DTC.

PLEASE NOTE THAT IF YOU ARE GUARANTEEING FOR OVER-SUBSCRIPTION UNITS AND ARE A DTC PARTICIPANT YOU MUST ALSO EXECUTE AND FORWARD TO THE SUBSCRIPTION AGENT A NOMINEE HOLDER OVER-SUBSCRIPTION EXERCISE FORM.

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EXHIBIT C

Form of Nominee Holder Over Subscription Exercise Form

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INTERNATIONAL ISOTOPES INC.
RIGHTS OFFER
NOMINEE HOLDER OVER-SUBSCRIPTION EXERCISE FORM
PLEASE COMPLETE ALL APPLICABLE INFORMATION

By Mail:
To: American Stock Transfer
& Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Hand:
To: American Stock Transfer
& Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

By Overnight Courier:
To: American Stock Transfer
& Trust Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038

THIS FORM IS TO BE USED BY NOMINEE HOLDERS TO EXERCISE THE OVER-SUBSCRIPTION PRIVILEGE IN RESPECT OF RIGHTS THAT WERE EXERCISED AND DELIVERED THROUGH THE FACILITIES OF A COMMON DEPOSITORY. ALL OTHER EXERCISES OF OVER-SUBSCRIPTION PRIVILEGES MUST BE EFFECTED BY THE DELIVERY OF THE SUBSCRIPTION CERTIFICATES.

THE TERMS AND CONDITIONS OF THE RIGHTS OFFER ARE SET FORTH IN INTERNATIONAL ISOTOPES' PROSPECTUS DATED: JULY 24, 2003 (THE "PROSPECTUS") AND ARE INCORPORATED HEREIN BY REFERENCE. COPIES OF THE PROSPECTUS ARE AVAILABLE UPON REQUEST FROM INTERNATIONAL ISOTOPES.

VOID UNLESS RECEIVED BY THE SUBSCRIPTION AGENT WITH PAYMENT IN FULL BY 5:00 P.M., NEW YORK TIME, ON SEPTEMBER 12, 2003, UNLESS EXTENDED BY INTERNATIONAL ISOTOPES (THE "EXPIRATION DATE").

1. The undersigned hereby certifies to the Subscription Agent that it is a participant in _____ [Name of Depository] (the "Depository") and that it has either (i) exercised all of the Rights and delivered such exercised Rights to the Subscription Agent by means of transfer to the Depository Account of International Isotopes Inc., or (ii) delivered to the Subscription Agent a Notice of Guaranteed Delivery in respect of the exercise of the Rights and will deliver the

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Rights called for in such Notice of Guaranteed Delivery to the Subscription Agent by means of transfer to such Depository Account of International Isotopes Inc.

2. The undersigned hereby exercises the over-subscription privilege to purchase, to the extent available, Units and certifies to the Subscription Agent that such over-subscription privilege is being exercised for the account or accounts of persons (which may include the undersigned) on whose behalf all Rights have been exercised. (*)

3. The undersigned understands that payment of the subscription price of \$.03 per Unit for each Unit (each Unit consists of one share of common stock and two warrants to purchase an additional two shares) subscribed for pursuant to the over-subscription privilege must be received by the Subscription Agent at or before 5:00 p.m., New York time, on the Expiration Date, and represents that such payment, in the aggregate amount of \$_____ either (check appropriate box):

- | has been or is being delivered to the Subscription Agent pursuant to the Notice of Guaranteed Delivery referred to above or;

- | is being delivered to the Subscription Agent herewith; or

- | has been delivered separately to the Subscription Agent;

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and, in the case of funds not delivered pursuant to a Notice of Guaranteed Delivery, is or was delivered in the manner set forth below (check appropriate box and complete information relating thereto):

- | uncertified check

- | certified check

- | bank draft

- | money order

- | cancellation of debt

 Depository Subscription Confirmation
 Number

 Name of Nominee Holder

 Depository Participant Number

 Address

Contact Name _____

 City State Zip Code

Phone Number _____

By: _____

Dated: _____, 2003

Name: _____

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Title: _____

* PLEASE COMPLETE THE BENEFICIAL OWNER CERTIFICATION ON THE BACK HEREOF CONTAINING THE RECORD DATE POSITION OF RIGHTS OWNED, THE NUMBER OF UNITS SUBSCRIBED FOR (OTHER THAN OVER-SUBSCRIPTIONS) AND THE NUMBER OF OVER-SUBSCRIPTION UNITS, IF APPLICABLE, REQUESTED BY EACH SUCH OWNER.

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INTERNATIONAL ISOTOPES INC.
BENEFICIAL OWNER CERTIFICATION

The undersigned, a bank, broker or other nominee holder of Rights ("Rights") to purchase Units (one share of common stock plus one warrant to purchase an additional share) ("Units") of International Isotopes Inc. ("I(3)") pursuant to the Rights offer described and provided for in I(3)'s Prospectus dated July 24, 2003 (the "Prospectus") hereby certifies to I(3) and to American Stock Transfer & Trust Company, as Subscription Agent for such Rights offer, that for each numbered line filled in below the undersigned has exercised, on behalf of the beneficial owner thereof (which may be the undersigned), the number of Rights specified on such line, and such beneficial owner wishes to subscribe for the purchase of additional Units pursuant to the over-subscription privilege (as defined in the Prospectus), in the amount set forth in the third column of such line:

	Record Date Shares	Number of Rights Exercised	Number of Units Requested Pursuant to the Over-Subscription Privilege
1.	-----	-----	-----
2.	-----	-----	-----
3.	-----	-----	-----
4.	-----	-----	-----
5.	-----	-----	-----
6.	-----	-----	-----
7.	-----	-----	-----
8.	-----	-----	-----
9.	-----	-----	-----
10.	-----	-----	-----

Name of Nominee Holder

Depository Participant Number

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Name:
Title:

Depository Primary Subscription
Confirmation Number(s)

Dated: _____, 2003

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EXHIBIT D

Form of Warrant Agreement

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SERIES A WARRANT AGREEMENT

AGREEMENT, dated as of this 15th day of July, 2003, by and between INTERNATIONAL ISOTOPES INC., a Texas corporation (the "Company") and AMERICAN STOCK TRANSFER & TRUST COMPANY, as warrant agent (the "Warrant Agent").

WHEREAS, in connection with a Rights Offering by the Company to its existing shareholders the Company is offering Rights to purchase Units of its securities consisting of (i) one share of Common Stock at \$.03 per share, (ii) one warrant to purchase an additional share of Common Stock at \$.04 per share (the "Series A Warrants"), and (iii) one warrant to purchase another share of Common Stock for \$.05 per share (the "Series B Warrants");

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in connection with the issuance, registration, transfer, and exchange of the Series A Warrants, the issuance of certificates representing the Series A Warrants, the exercise of the Series A Warrants, and the rights of the Registered Holders thereof;

NOW THEREFORE, in consideration of the premises and the mutual agreements hereinafter set forth and for the purpose of defining the terms and provisions of the Series A Warrants and the certificates representing the Series A Warrants and the respective rights and obligations thereunder of the Company, the Registered Holders of certificates representing the Series A Warrants and the Warrant Agent, the parties hereto agree as follows:

1. Definitions. As used herein, the following terms shall have the following meanings, unless the context shall otherwise require:

(a) "Common Stock" shall mean the Common Stock of the Company,

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par value of \$.01 per share.

(b) "Corporate Office" shall mean the office of the Warrant Agent (or its successor) at which at any particular time its principal business shall be administered, which office is located as of the date hereof at 59 Maiden Lane, Plaza Entrance, New York, New York 10038.

(c) "Depository" shall mean the Depository Trust Company or other securities depository serving the purpose of a book-entry registration and transfer system.

(d) "Exercise Price" shall mean the purchase price to be paid upon exercise of each Warrant in accordance with the terms hereof, which price shall be \$.04 per share, subject to adjustment from time to time pursuant to the provisions of Section 6 hereof.

(e) "Registered Holder" shall mean the person in whose name any certificate representing Warrants shall be registered on the books maintained by the Warrant Agent pursuant to Section 7.

(f) "Redemption Price" shall mean \$.001 per Warrant Share.

(g) "Transfer Agent" shall mean American Stock Transfer & Trust Company, as the Company's transfer agent, or its authorized successor, as such.

(h) "Warrant Shares" shall mean shares of Common Stock issuable upon exercise of Warrants.

(i) "Warrants" or "Series A Warrants" shall mean the Series A Warrants issued to Registered Holders pursuant to the terms of this Series A Warrant Agreement.

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2. Warrants and Issuance of Warrant Certificates.

(a) A Warrant shall initially entitle the Registered Holder of the Warrant Certificate representing such Warrant to purchase one share of Common Stock upon the exercise thereof, in accordance with the terms hereof, subject to modification and adjustment as provided in Section 6.

(b) From time to time, up to the Warrant Expiration Date, the Transfer Agent shall execute and deliver stock certificates in required whole number denominations representing up to an aggregate of 38,229,157 shares of Common Stock, subject to adjustment as described herein, upon the exercise of Warrants in accordance with this Agreement.

(c) From time to time, up to the Warrant Expiration Date, the Warrant Agent shall execute and deliver Warrant Certificates in required whole number denominations to the persons entitled thereto in connection with any transfer or exchange permitted under this Agreement; provided that no Warrant Certificates shall be issued except (i) those initially issued hereunder, (ii) those issued upon the exercise of fewer than all Warrants represented by any Warrant Certificate, to evidence any unexercised Warrants held by the exercising Registered Holder, (iii) those issued upon any transfer or exchange pursuant to Section 7; (iv) those issued in replacement of

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lost, stolen, destroyed or mutilated Warrant Certificates pursuant to Section 8; and (v) at the option of the Company, in such form as may be approved by its Board of Directors, to reflect (a) any adjustment or change in the Exercise Price or the number of shares of Common Stock purchasable upon exercise of the Warrants, made pursuant to Section 6 hereof and (b) other modifications approved by Warrantholders in accordance with Section 13.4 hereof.

3. Form and Execution of Warrant Certificates.

(a) The Warrant Certificates shall be substantially in the form annexed hereto as Exhibit A (the provisions of which are hereby incorporated herein) and may have such letters, numbers or other marks of identification or designation and such legends, summaries or endorsements printed, lithographed, engraved or typed thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Agreement, or as may be required to comply with any law or with any rule or regulation made pursuant thereto or with any rule or regulation of any stock exchange on which the Warrants may be listed, or to conform to usage. The Warrant Certificates shall be dated the date of issuance thereof (whether upon initial issuance, transfer, exchange or in lieu of mutilated, lost, stolen, or destroyed Warrant Certificates) and issued in registered form. Warrants shall be numbered serially with the letters AW.

(b) Warrant Certificates shall be executed on behalf of the Company by its Chairman of the Board, President or any Vice President and by its Secretary or an Assistant Secretary, by manual signatures or by facsimile signatures printed thereon. In case any officer of the Company who shall have signed any of the Warrant Certificates shall cease to be such officer of the Company before the date of issuance of the Warrant Certificates and issue and delivery thereof, such Warrant Certificates may nevertheless be issued and delivered with the same force and effect as though the person who signed such Warrant Certificates had not ceased to be such officer of the Company. After execution by the Company, Warrant Certificates shall be delivered by the Warrant Agent to the Registered Holder.

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4. Cash Exercise and Redemption

4.1 Optional Exercise

Warrants may be exercised by a Registered Holder, at any time until July 31, 2007 (the "Warrant Expiration Date"), in whole or in part, by delivering to the Warrant Agent at 59 Maiden Lane, Plaza Entrance, New York, New York 10038 (or such other office or agency of the Warrant Agent as it may designate by notice in writing to the Registered Holder at the address of the Registered Holder appearing on the books of the Warrant Agent) (a) either (i) such Warrants by book-entry transfer through the facilities of the Depository or (ii) the Warrant Certificates evidencing the Warrants if Warrant Certificates have been issued to the Registered Holder, (b) a certified or cashier's check payable to the Company or a wire transfer in the amount of the Exercise Price multiplied by the number of shares for which the Warrant is being exercised (the "Purchase Price"), and (c) written notice of such election to exercise, designated "International Isotopes Inc. Warrant Exercise," by hand or by facsimile, which notice shall be in the form of an election to purchase shares of Common Stock of the Company substantially in the form set forth on the reverse side of the Warrant Certificate, properly completed and executed by the

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Registered Holder. The Warrant Agent shall forward to the Company the Purchase Price received as a result of any exercise of Warrants by wire transfer within 2 business days.

4.2 Redemption

(a) Provided that adequate provision has been made therefor, upon the resolution of its Board of Directors, the Company may, but shall not be required to, call for redemption at a redemption price of \$.001 per Warrant Share (the "Redemption Price") all of the Warrants at any time, provided: (i) it provides to each Registered Holder of Warrants to be redeemed a minimum of thirty (30) days' prior written notice, and (ii) if the average closing price or bid price of the Common Stock, as reported by the principal exchange on which the Common Stock is traded, the NASDAQ Stock Market, Inc., the OTC Bulletin Board or the Pink Sheet LLC, as the case may be, equals or exceeds \$.12 for twenty (20) consecutive trading days ending within 180 days prior to the date of issuance of the notice of redemption. In such an event, the Company shall cause to be filed with the Warrant Agent a certified copy of such resolution and a form of notice of redemption and the Warrant Agent shall mail to each of the Registered Holders of the Warrant Certificates to be redeemed, by first class mail, postage prepaid, to his last address appearing on the records of the Warrant Agent, such written notice of such redemption. Such notice shall identify the Warrants to be redeemed, state the date set for redemption (the "Redemption Date"), the Redemption Price, and the date upon which the Registered Holder's right to exercise the Warrants will terminate, and describe the manner in which Warrant Certificates are to be surrendered. Any notice mailed in the manner provided herein shall be conclusively presumed to have been duly given whether or not the Registered Holder receives such notice. Failure to mail notice to any Registered Holder, shall not affect the validity of any other redemptions for which notice had been duly provided, only redemptions of persons lacking notice.

(b) On or before the Redemption Date, each Registered Holder of Warrants to be redeemed, unless he has previously exercised or will exercise such Warrants on or before the Redemption Date, shall surrender the Warrant Certificate or Certificates representing such Warrants to the Warrant Agent. The Warrants to be redeemed shall be exercisable up to and including the date immediately preceding the Redemption Date. Upon receipt of such Warrant Certificates, the Warrant Agent, as paying agent, shall pay the Redemption Price for such Warrants to the order of the Registered Holders thereof. Any Warrants to be redeemed will be canceled by the Warrant Agent upon receipt. After the Redemption Date, all rights with respect to such Warrants shall cease, except for the right to receive the Redemption Price of the Warrants.

(c) Upon or prior to the Redemption Date, the Company shall deposit in trust with the Warrant Agent a sum equal to the Redemption Price of all Warrants called for redemption, with irrevocable instructions and authority to the Warrant Agent to pay, on and after the Redemption Date, the Redemption Price to the Registered Holders upon the surrender of the Warrant Certificates. The deposit shall constitute full payment of the Warrants to the Registered Holders, and from and after the date of the deposit, the Warrants shall be deemed to be no longer outstanding. The balance of the deposit remaining unclaimed at the end of one year from the Redemption Date shall be released to the Company, after which the holders of Warrants called for redemption shall be entitled to receive payment of the Redemption Price

only from the Company.

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5. Delivery of Stock Certificates; No Fractional Shares

5.1 Within ten (10) business days after the payment of the Purchase Price following the exercise by a Registered Holder of a Warrant (in whole or in part), the Warrant Agent, at Company expense, shall issue or cause the Company's stock transfer agent to issue in the name of and deliver to the Registered Holder (a) a certificate or certificates for the number of fully paid and nonassessable Warrant Shares to which the Registered Holder shall be entitled upon such exercise, and (b) a new Warrant of like tenor to purchase up to that number of Warrant Shares, if any, as to which such Warrant has not been exercised if such Warrant has not expired. The Registered Holder shall for all purposes be deemed to have become the holder of record of such Warrant Shares on the date such Warrant was exercised (the date the Registered Holder has fully complied with the requirements of Section 4.1), irrespective of the date of delivery of the certificate or certificates representing the Warrant Shares; provided that, if the date such exercise is made is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of record of such Warrant Shares at the close of business on the next succeeding date on which the stock transfer books are open.

5.2 No fractional shares shall be issued upon the exercise of any Warrant. In lieu of fractional shares, the Company shall pay the Registered Holder a sum in cash equal to the Daily Price (as defined below) of the fractional share on the date of exercise.

"Daily Price" of a Warrant Share shall mean:

(a) If the Company's Common Stock is listed and traded on an exchange or is quoted on the Nasdaq National Market, the closing or last sale price on such day;

(b) If the Company's Common Stock is not traded on an exchange or quoted on the Nasdaq National Market, but is traded in the over-the-counter market, the average of the closing bid and asked prices reported on such day; and

(c) If none of the above is applicable, the Daily Price shall be the fair market value of the Common Stock as determined in good faith by the Company's Board of Directors.

6. Adjustments Upon Certain Events

6.1 Effect of Reorganization

(a) Reorganization - No Change of Control

Upon a merger, consolidation, acquisition of all or substantially all of the property or stock, liquidation or other reorganization of the Company (collectively, a "Reorganization") during the Exercise Period, as a result of which the shareholders of the Company receive cash, stock or other property in exchange for their shares of Common Stock and the holders of the Company's voting equity securities immediately prior to the Reorganization together own a majority interest of the voting equity securities of the successor corporation following such Reorganization, lawful provision shall be

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made so that the holder shall thereafter be entitled to receive, upon exercise of this Warrant, the number of shares of securities of the successor corporation resulting from such Reorganization (and cash and other property), to which a holder of the Warrant Shares issuable upon exercise of a Warrant would have been entitled in such Reorganization if such Warrant had been exercised immediately prior to such Reorganization. In any such case, appropriate adjustment (as determined in good faith by the Company's Board of Directors) shall be made in the application of the provisions of the Warrants with respect to the rights and interest of the Registered Holders after the Reorganization to the end that the provisions of this Warrant Agreement (including adjustments of the Exercise Price and the number and type of securities purchasable pursuant to the terms of this Warrant Agreement) shall be applicable after that event, as near as reasonably may be, in relation to any shares deliverable after that event upon the exercise of any Warrant.

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(b) Reorganization - Change of Control; Termination of Warrant

Upon a Reorganization prior to or during the Exercise Period, as a result of which the shareholders of the Company receive cash, stock or other property in exchange for their shares of Common Stock and the holders of the Company's voting equity securities immediately prior to such Reorganization together own less than a majority interest of the voting equity securities of any successor corporation following such Reorganization, Registered Holders of Warrants shall be given notice at least ten (10) days prior to the effectiveness thereof. Notwithstanding any other provision hereof, the Warrants shall become immediately exercisable in full upon such notice to the Registered Holders, subject to the effectiveness of the Reorganization, provided, however, that such acceleration of exercisability will not occur if, in the opinion of the Company's outside accountants, such acceleration would render unavailable "pooling of interests" accounting treatment for any Reorganization for which pooling of interests accounting treatment is sought by the Company (in which event, lawful provision shall be made so that the Registered Holders shall thereafter be entitled to receive, upon exercise of their Warrants up to the Warrant Expiration Date, the number of shares of securities of the successor corporation resulting from such Reorganization (and cash and other property) to which a Registered Holder of the Warrant Stock issuable upon exercise of such Warrants would have been entitled in such Reorganization if such Warrant had been exercised immediately prior to such Reorganization). Each Registered Holder shall have five (5) days from the receipt of such notice to give notice to the Warrant Agent, on behalf of the Company, whether it intends to conditionally exercise his Warrant, in whole or in part. Notwithstanding any other provision hereof, Warrants shall become forever null and void to the extent not conditionally exercised on or before 5:00 p.m., Eastern time, on the fifth day following the receipt by the Registered Holders thereof of notice of the proposed Reorganization (unless the acceleration of exercisability is denied by the Company in order to preserve "pooling of interests" accounting treatment as set forth above).

6.2 Adjustments for Stock Splits, Dividends

If the Company shall issue any shares of the same class as the Warrant Stock as a stock dividend or subdivide the number of outstanding shares of the same class as the Warrant Shares into a greater number of shares, then, in

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either such case, the Exercise Price in effect before such dividend or subdivision shall be proportionately reduced and the number of Warrant Shares at that time issuable pursuant to the exercise of the Warrants shall be proportionately increased; and, conversely, if the Company shall contract the number of outstanding shares of the same class as the Warrant Shares by combining such shares into a smaller number of shares, then the Exercise Price in effect before such combination shall be proportionately increased and the number of Warrant Shares at that time issuable pursuant to the exercise or conversion of the Warrants shall be proportionately decreased. Each adjustment in the number of Warrant Shares issuable shall be to the nearest whole share.

6.3 Certificate as to Adjustments

In the case of any adjustment in the Exercise Price or number and type of securities issuable upon exercise of the Warrants, the Company will promptly give written notice to the Registered Holders through the Warrant Agent in the form of a certificate, certified and confirmed by an officer of the Company, setting forth the adjustment in reasonable detail.

7. Exchange and Registration of Transfer.

(a) Warrant Certificates may be exchanged for other Warrant Certificates representing an equal aggregate number of Warrants of the same class or may be transferred in whole or in part. Warrant Certificates to be exchanged shall be surrendered to the Warrant Agent at its Corporate Office, and upon satisfaction for the terms and provisions hereof, the Company shall execute, and the Warrant Agent shall countersign, issue and deliver in exchange therefor the Warrant Certificate or Certificates which the Registered Holder making the exchange shall be entitled to receive.

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(b) The Warrant Agent shall keep at its office books in which, subject to such reasonable regulations as it may prescribe, it shall register Warrant Certificates and the transfer thereof in accordance with its regular practice. Upon due presentment for registration of transfer of any Warrant Certificate at its office, the Company shall execute and the Warrant Agent shall issue and deliver to the transferee or transferees a new Warrant Certificate or Certificates representing an equal aggregate number of Warrants.

(c) With respect to all Warrant Certificates presented for registration of transfer, or for exchange or exercise, the subscription form on the reverse thereof shall be duly endorsed, or be accompanied by a written instrument or instruments of transfer and subscription, in form satisfactory to the Company, duly executed by the Registered Holder or his attorney-in-fact duly authorized in writing.

(d) The Company may require payment by such holder of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection therewith.

(e) All Warrant Certificates surrendered for exercise or for exchange in case of mutilated Warrant Certificates shall be promptly cancelled by the Warrant Agent and thereafter retained by the Warrant Agent until termination of this Agreement or resignation of the Warrant Agent.

(f) Prior to due presentment for registration of

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transfer thereof, the Company and the Warrant Agent may deem and treat the Registered Holder of any Warrant Certificate as the absolute owner thereof and of each Warrant represented thereby (notwithstanding any notations of ownership or writing thereon made by anyone other than a duly authorized officer of the Company or the Warrant Agent) for all purposes and shall not be affected by any notice to the contrary.

8. Lost or Damaged Warrant Certificate

Upon receipt by the Warrant Agent of satisfactory evidence of the loss, theft, destruction or damage of any Warrant and either (in the case of loss, theft or destruction) reasonable indemnification or (in the case of damage) the surrender of such Warrant for cancellation, the Warrant Agent will execute and deliver to the Registered Holder, without charge, a new Warrant of like denomination.

9. Covenants as to Warrant Shares

9.1 Reservation of Shares

The Company covenants that at all times during the Exercise Period there shall be reserved for issuance and delivery upon exercise of the Warrants such number of Warrant Shares as is necessary for exercise in full of all outstanding Warrants and, from time to time, it will take all steps necessary to provide sufficient reserves of Warrant Shares. All shares of Warrant Stock issued pursuant to the exercise of the Warrants will, upon their issuance, be validly issued, fully paid and nonassessable, free and clear of all liens and other encumbrances or restrictions on sale and free and clear of all preemptive rights, except restrictions arising (a) under federal and state securities law, (b) not by or through the Company, or (c) by agreement between the Company and the Registered Holders or their successors.

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9.2 Registration of Warrant Shares

The Company has registered the Warrants and the Warrant Shares under the Securities Act of 1933 and Rule 415 thereunder pursuant to a Registration Statement on Form S-3. In connection with such Registration Statement, the Company agrees to use its best efforts to:

(a) prepare and file with the Commission such amendments and supplements to the Registration Statement and the Prospectus filed as part thereof and take such other action, if any, as may be necessary to keep the Registration Statement effective until the earlier of (i) the expiration, cancellation or repurchase of the Warrants, or (ii) when all of the Warrants have been exercised by the Registered Holders;

(b) during the period when the Registration Statement is required to remain effective, will file all documents required to be filed with the Commission pursuant to Section 13, 14 or 15 of the Exchange Act within the time periods requiring by the Exchange Act and the rules and regulations promulgated thereunder; and

(c) bear all expenses in connection with the procedures in paragraphs (a) and (b) of this Section 9.2 and the continued registration of the Warrant Shares pursuant to the Registration Statement, other than any fees and expenses of counsel or other advisers to the Registered Holders.

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10. Agreement of Warrant Holders

Every holder of a Warrant, by his acceptance thereof, consents and agrees with the Company, the Warrant Agent and every other holder of a Warrant that:

(a) The Warrants are transferable only on the registry books of the Warrant Agent by the Registered Holder thereof in person or by his attorney duly authorized in writing and only if the Warrant Certificates representing such Warrants are surrendered at the office of the Warrant Agent, duly endorsed or accompanied by a proper instrument of transfer satisfactory to the Warrant Agent and the Company in their sole discretion, together with payment of any applicable transfer taxes; and

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(b) The Company may deem and treat the person in whose name the Warrant Certificate is registered as the holder and as the absolute, true and lawful owner of the Warrants represented thereby for all purposes, and the Company shall not be affected by any notice or knowledge to the contrary.

11. Cancellation of Warrant Certificates

If the Company shall purchase or acquire any Warrant or Warrants, the Warrant Certificate or Warrant Certificates evidencing the same shall thereupon be cancelled by it and retired. The Warrant Agent shall also cancel Warrant Certificates following exercise of any or all of the Warrants represented thereby or delivered to it for transfer, split-up, combination or exchange.

12. Concerning the Warrant Agent

The Warrant Agent acts hereunder as agent and in a ministerial capacity for the Company, and its duties shall be determined solely by the provisions hereof. The Warrant Agent shall not, by issuing and delivering Warrant Certificates or by any other act hereunder be deemed to make any representations as to the validity, value or authorization of the Warrant Certificates or the Warrants represented thereby or of any securities or other property delivered upon exercise of any Warrant or whether any stock issued upon exercise of any Warrant is fully paid and nonassessable.

The Warrant Agent shall account promptly to the Company with respect to Warrants exercised and concurrently pay the Company, as provided in Section 4, all moneys received by the Warrant Agent upon the exercise of such Warrants. The Warrant Agent shall, upon request of the Company from time to time, deliver to the Company such complete reports of registered ownership of the Warrants and such complete records of transactions with respect to the Warrants and the shares of Common Stock as the Company may request. The Warrant Agent shall also make available to the Company for inspection by its agents or employees, from time to time as either of them may request, such original books of accounts and records (including original Warrant Certificates surrendered to the Warrant Agent upon exercise of Warrants) as may be maintained by the Warrant Agent in connection with the issuance and exercise of Warrants hereunder, such inspections to occur at the Warrant Agent's office during normal business hours.

The Warrant Agent shall not at any time be under any duty or responsibility to any holder of Warrant Certificates to make or cause to be made any adjustment of the Exercise Price provided in this Agreement, or to determine whether any fact exists which may require any such adjustments, or with respect

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to the nature or extent of any such adjustment, when made, or with respect to the method employed in making the same. It shall not (i) be liable for any recital or statement of facts contained herein or for any action taken, suffered or omitted by it in reliance on any Warrant Certificate or other document or instrument believed by it in good faith to be genuine and to have been signed or presented by the proper party or parties, (ii) be responsible for any failure on the part of the Company to comply with any of its covenants and obligations contained in this Agreement or in any Warrant Certificate, or (iii) be liable for any act or omission in connection with this Agreement except for its own negligence or willful misconduct.

The Warrant Agent may at any time consult with counsel satisfactory to it (who may be counsel for the Company) and shall incur no liability or responsibility for any action taken, suffered or omitted by it in good faith in accordance with the opinion or advice of such counsel.

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Any notice, statement, instruction, request, direction, order or demand of the Company shall be sufficiently evidenced by an instrument signed by the Chairman of the Board, President, any Vice President, its Secretary, or Assistant Secretary, (unless other evidence in respect thereof is herein specifically prescribed). The Warrant Agent shall not be liable for any action taken, suffered or omitted by it in accordance with such notice, statement, instruction, request, direction, order or demand believed by it to be genuine.

The Company agrees to pay the Warrant Agent reasonable compensation for its services hereunder and to reimburse it for its reasonable expenses hereunder; it further agrees to indemnify the Warrant Agent and save it harmless against any and all losses, expenses and liabilities, including judgments, costs and counsel fees, for anything done or omitted by the Warrant Agent in the execution of its duties and powers hereunder except losses, expenses and liabilities arising as a result of the Warrant Agent's negligence or willful misconduct.

The Warrant Agent may resign its duties and be discharged from all further duties and liabilities hereunder (except liabilities arising as a result of the Warrant Agent's own negligence or willful misconduct), after giving 30 days' prior written notice to the Company. At least 15 days prior to the date such resignation is to become effective, the Warrant Agent shall cause a copy of such notice of resignation to be mailed to the Registered Holder of each Warrant Certificate at the Company's expense. Upon such resignation, or any inability of the Warrant Agent to act as such hereunder, the Company shall appoint a new Warrant Agent in writing. If the Company shall fail to make such appointment within a period of 15 days after it has been notified in writing of such resignation by the resigning Warrant Agent, then the Registered Holder of any Warrant Certificate may apply to any court of competent jurisdiction for the appointment of a new Warrant Agent. Any new Warrant Agent, whether appointed by the Company or by such a court shall be a bank or trust company having a capital and surplus, as shown by its last published report to its stockholders, of not less than \$10,000,000 or a stock transfer company. After acceptance in writing of such appointment by the new Warrant Agent is received by the Company, such new Warrant Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named herein as the Warrant Agent, without any further assurance, conveyance, act or deed; but if for any reason it shall be necessary or expedient to execute and deliver any further assurance, conveyance, act or deed, the same shall be done at the expense of the Company and shall be legally and validly executed and delivered by the resigning Warrant Agent. Not later than the effective date of any such appointment the Company shall file notice thereof with the resigning Warrant Agent and shall forthwith

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cause a copy of such notice to be mailed to the Registered Holder of each Warrant Certificate.

Any corporation into which the Warrant Agent or any new Warrant Agent may be converted or merged or any corporation resulting from any consolidation to which the Warrant Agent or any new Warrant Agent shall be a party or any corporation succeeding to the trust business of the Warrant Agent shall be a successor Warrant Agent under this Agreement without any further act, provided that such corporation is eligible for appointment as successor to the Warrant Agent under the provisions of the preceding paragraph. Any such successor Warrant Agent shall promptly cause notice of its succession as Warrant Agent to be mailed to the Company and to the Registered Holder of each Warrant Certificate.

The Warrant Agent, its subsidiaries and affiliates, and any of its or their officers or directors, may buy and hold or sell Warrants or other securities of the Company and otherwise deal with the Company in the same manner and to the same extent and with like effects as though it were not the Warrant Agent. Nothing herein shall preclude the Warrant Agent from acting in any other capacity for the Company or for any other legal entity.

13. Miscellaneous

13.1 Registered Holder as Owner

The Warrant Agent shall deem and treat the Registered Holder of record of any Warrant as the absolute owner for all purposes regardless of any notice to the contrary.

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13.2 No Shareholder Rights

The Warrants shall not entitle the Registered Holders to any voting rights or any other rights as a shareholder of the Company or to any other rights except the rights stated herein; and no dividend or interest shall be payable or shall accrue in respect of the Warrant or the Warrant Shares, until the Warrants are exercised.

13.3 Notices

Unless otherwise provided, any notice under this Warrant Agreement shall be given in writing and shall be deemed effectively given (a) upon personal delivery to the party to be notified, (b) upon confirmation of receipt by fax by the party to be notified, (c) two business days after deposit with a reputable overnight courier, prepaid for overnight delivery and addressed as set forth in (d), or (d) five days after deposit with the United States Post Office or any foreign postal service, postage prepaid, registered or certified with return receipt requested and addressed to the party to be notified at the address indicated below, or at such other address as such party may designate by ten (10) days' advance written notice to the other party given in the foregoing manner.

If to the Warrant Agent: American Stock Transfer Company
59 Maiden Lane, Plaza Entrance
New York, New York 10038
Attn: Wilbert Myles
Telephone: (718) 921-8247
Facsimile: (718) 921-8323

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If to the Company: International Isotopes Inc.
4132 Commerce Circle
Idaho Falls, Idaho 83401
Attn: Chief Executive Officer
Telephone: (208) 524-5300
Facsimile: (208) 524-1411

13.4 Amendments and Waivers

The Warrant Agent may by supplemental agreement make any changes or corrections in this Agreement (i) that it shall deem appropriate to cure any ambiguity or to correct any defective or inconsistent provision or manifest mistake or error herein contained; or (ii) that it may deem necessary or desirable and which shall not adversely affect the interests of the Registered Holders of Warrant Certificates; provided, however, that this Agreement shall not otherwise be modified, supplemented or altered in any respect except with the consent in writing of the Registered Holders of Warrant Certificates representing not less than 50% of the Warrants then outstanding; and provided, further, that no change in the number or nature of the securities purchasable upon the exercise of any Warrant, or the Purchase Price therefor, or the acceleration of the Warrant Expiration Date, shall be made without the consent in writing of the Registered Holder of the Warrant Certificate representing such Warrant, other than such changes as are specifically prescribed by this Agreement as originally executed.

13.5 Governing Law

This Warrant Agreement shall be governed by and construed under the laws of the State of Texas without regard to principles of conflict of laws. The parties irrevocably consent to the jurisdiction and venue of the state and federal courts located in Travis County, Texas in connection with any action relating to this Warrant Agreement.

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13.6 Successors and Assigns; Transfer

The terms and conditions of this Warrant Agreement shall inure to the benefit of and be binding on the respective successors and assigns of the parties. This Warrant Agreement may not be transferred or assigned by the Warrant Agent without the consent of the Company.

13.7 Headings

The headings of the various sections of this Warrant Agreement have been inserted for convenience of reference only and shall not be deemed to be party of this Warrant Agreement.

13.8 Entire Agreement; Counterparts

This Warrant Agreement constitutes the entire agreement between the parties about its subject and supersedes all prior agreements. This Warrant Agreement may be executed in counterparts, which together shall constitute one agreement.

IN WITNESS WHEREOF, the parties have executed this Warrant Agreement as of the date first written above.

INTERNATIONAL ISOTOPES INC.

By: _____
Steve T. Laflin, Chief Executive Officer

Warrant Agent:

AMERICAN STOCK TRANSFER COMPANY

By: _____
Name: _____
Title: _____

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EXHIBIT E

Form of Warrant Certificate

E-1

NUMBER

VOID AFTER JULY 31, 2007

WA _____

INTERNATIONAL ISOTOPES INC.

SERIES A WARRANT TO PURCHASE COMMON STOCK

This Series A Warrant Certificate ("Warrant Certificate") certifies that

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or its registered assigns, is the registered holder of a Warrant (the "Warrant") of International purchase the number of shares (the "Shares") of Common Stock, par value \$0.01 per share (the "C forth above. This Warrant expires on July 31, 2007 (such date, the "Expiration Date") and entit Company the number of fully paid and nonassessable Shares set forth above at the exercise price by the number of shares set forth above (the "Purchase Price"), payable to the Company by wire funds of the Purchase Price to an account of the Warrant Agent specified in writing by the Wa delivery of a certified check in immediately available funds of the Exercise Amount to the Warr The initial Exercise Price shall be \$.04 .

Subject to the terms and conditions set forth herein and in the Warrant Agreement, this Warr thereof, by:

(i) providing written notice of such election ("Warrant Exercise Notice") to exercise the address set forth in the Warrant Agreement, "Re: International Isotopes Inc. Warrant Exercise," than 5:00 p.m., New York City time, on the Expiration Date, which Warrant Exercise Notice sha purchase Shares of Common Stock of the Company substantially in the form set forth on the properly completed and executed by the Holder.

(ii) delivering, either (x) such Warrants to the Warrant Agent by book-entry transfer thro or, (y) the Warrant Certificates evidencing such Warrants to the Warrant Agent if Warrant delivered pursuant to the Warrant Agreement; and

(iii) paying the applicable Purchase Price, together with any applicable taxes and governmen The Exercise Price and the number of Shares purchasable upon exercise of this Warrant a occurrence of certain events as set forth in the Warrant Agreement.

No Warrant may be exercised after the Expiration Date. After the Expiration Date, the Warr no value.

This Warrant may be redeemed by the Company at a redemption price of \$.001 per warrant sha the Company's Common Stock exceeds \$.12 for twenty consecutive business days.

REFERENCE IS HERBY MADE TO THE FURTHER PROVISIONS OF THIS WARRANT CERTIFICATE SET FORTH ON PROVISIONS SHALL FOR ALL PURPOSES HAVE THE SAME EFFECT AS THOUGH FULLY SET FORTH AT THIS PLACE.

This Warrant Certificate shall not be valid unless countersigned by the Warrant Agent.

IN WITNESS WHEREOF, the Company has caused this Warrant Certificate to be executed by its du

Dated:

By: _____

Secretary

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INTERNATIONAL ISOTOPES INC.

This Warrant evidenced by this Warrant Certificate is a part of a duly authorized issue of Warrants to purchase a maximum of 38,229,157 shares of Common Stock issued pursuant to that certain Series A Warrant Agreement, dated as of July 15, 2003 (the "Warrant Agreement"), duly executed and delivered by the Company and American Stock Transfer & Trust Company, as Warrant Agent (the "Warrant Agent"). The Warrant Agreement hereby is incorporated by reference in and made a part of this instrument and is hereby referred to for a description of the rights, limitation of rights, obligations, duties and immunities thereunder of the Warrant Agent, the Company and the holders (the words "holders" or "holder" meaning the registered holders or registered holder) of the Warrants. A copy of the Warrant Agreement may be inspected at the Warrant Agent's corporate office and is available upon written request addressed to the Company. All capitalized terms used herein but not defined that are defined in the Warrant Agreement shall have the meanings assigned to them therein.

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Warrants may be exercised to purchase Shares from the Company through 5:00 p.m. New York City time on the Expiration Date, at the Expiration Price set forth on the face hereof, subject to adjustment as described in the Warrant Agreement. Subject to the terms and conditions set forth herein and in the Warrant Agreement, the Holder of the Warrant evidenced by this Warrant Certificate may exercise such Warrant by:

(i) providing a Warrant Exercise Notice to the Warrant Agent at the address set forth in the Warrant Agreement, "Re: International Isotopes Inc. Warrant Exercise," by hand or by facsimile, no later than 5:00 p.m., New York City time, on the Expiration Date, which Warrant Exercise Notice shall be in the form of an election to purchase Shares of Common Stock of the Company substantially in the form set forth on the reverse side of this certificate, properly completed and executed by the Holder.

(ii) delivering, either (x) such Warrants to the Warrant Agent by book-entry transfer through the facilities of the Depository or (y) the Warrant Certificates evidencing such Warrants to the Warrant Agent if Warrant Certificates have been issued and delivered pursuant to the Warrant Agreement; and

(iii) paying the applicable Purchase Price, together with any applicable taxes and governmental charges.

The Exercise Amount shall be payable by wire transfer in immediately available funds of the Purchase Price to an account of the Warrant Agent specified in writing by the Warrant Agent for such purpose or by delivery of a certified check in immediately available funds of the Exercise Amount to the Warrant Agent at its corporate office. The initial Exercise Price shall be \$.04.

In the event that upon any exercise of the Warrant evidenced hereby the number of Shares actually purchased shall be less than the total number of Shares purchasable upon exercise of the Warrant evidenced hereby, there shall be issued to the holder hereof, or such holder's assignee, a new Warrant Certificate evidencing a Warrant to purchase the Shares not so purchased. No adjustment shall be made for any cash dividends on any Shares issuable upon exercise of this Warrant. After the Expiration Date, unexercised Warrants shall become wholly void and of no value.

The Company shall not be required to issue fractions of Shares or any certificates that evidence fractional Shares. If any fraction of a share of Common Stock would, except for the provisions of the preceding sentence, be issuable upon exercise of any Warrant or Warrants, the Company shall, at its election, either (i) purchase such fraction for an amount in cash equal to such fraction of the Daily Price (as defined in the Warrant Agreement) of a share of Common Stock or (ii) round up the number of Shares issued upon exercise of such Warrant or Warrants to the next whole integer.

Warrant Certificates, when surrendered at the Warrant Agent Office by the registered holder thereof in person or by a legal representative or attorney duly authorized in writing, by mail or by book-entry delivery through the facilities of the Depository may be exchanged, in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Warrant Certificate or Warrant Certificates of like tenor evidencing Warrants to purchase in the aggregate a like number of Shares.

The Company and Warrant Agent may deem and treat the registered holder hereof as the absolute owner of this Warrant Certificate (notwithstanding any notation of ownership or other writing hereon made by anyone) for the purpose of any exercise hereof and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

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This Warrant may be redeemed by the Company at a repurchase price of \$.001 per Warrant (the "Redemption Price") if the average closing price of the Company's Common Stock exceeds \$.12 for twenty consecutive business days. The Company will give a minimum of 30 days notice of the Redemption Date. The holder may exercise this Warrant up to the day before the Redemption Date, but thereafter will only be entitled to receive the Redemption Price in exchange for this Warrant Certificate.

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ELECTION TO EXERCISE
(TO BE EXECUTED UPON EXERCISE OF THE WARRANT)

The undersigned hereby irrevocably elects to exercise the right, represented by this Warrant Certificate, to purchase _____ newly issued shares of Common Stock of International Isotopes Inc. (the "Company") at the Exercise Price of \$_____ per share. The undersigned represents, warrants and promises that it has the full power and authority to exercise and deliver the Warrants exercised hereby.

The undersigned represents, warrants and promises that it has delivered or will deliver in payment for such Shares \$_____ by wire transfer in immediately available funds of the Purchase Price to an account of the Warrant Agent specified in writing by the Warrant Agent for such purpose or by delivery of a certified check in immediately available funds of the Purchase Price to the Warrant Agent at its corporate office.

The undersigned requests that a certificate representing the Shares be registered and delivered as follows:

Name

Address

Delivery Address (if different)

If such number of Shares is less than the aggregate number of Shares purchasable hereunder, the undersigned requests that a new Warrant Certificate representing the balance of such Shares shall be registered and delivered as follows:

Name

Address

Delivery Address (if different)

Social Security or Other Taxpayer
Identification Number of Holder

Signature

Note: The above signature must correspond with the name as written upon

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the face of this Warrant Certificate in every particular, without alteration or enlargement or any change whatsoever. If the certificate representing the Shares or any Warrant Certificate representing Warrants not exercised is to be registered in a name other than that in which this Warrant Certificate is registered, the signature of the holder hereof must be guaranteed.

SIGNATURE GUARANTEED:

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INTERNATIONAL ISOTOPES INC.

38,229,157 Units, consisting of
38,229,157 Shares of Common Stock and
76,558,314 Warrants

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PART II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The estimated expenses of this offering, all of which will be paid by Registrant, are as follows:

SEC Registration Fee	\$ 512.00
Accounting Fees and Expenses	\$ 5,000.00
Registrant's Legal Fees and Expenses	\$45,000.00
Printing Fees	\$ 1,000.00
Transfer Agent and Registrar's Fees and Expenses	\$15,000.00
Miscellaneous Expenses	\$ 4,000.00

Total	\$70,512.00

o To be completed by amendment

(a) Item 14. Indemnification of Directors and Officers

As permitted by the Texas Business Corporation Act ("TBCA"), the Company's Restated Articles of Incorporation provide that the Company will indemnify its officers, directors, employees and agents to the fullest extent permitted by the TBCA against actions that may arise against them in such

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capacities, and to advance expenses in connection with any such actions. Registrant's Restated Articles of Incorporation provides that directors of the Company will not be personally liable to Registrant or its stockholders for monetary damages for any act or omission in his capacity as a director except as authorized under the TBCA. The TBCA provides that a corporation may indemnify a person who was, is, or is threatened to be made a named defendant in a proceeding because such person is or was a director if it is determined in accordance with the provisions of the TBCA that the person (i) conducted himself in good faith, (ii) reasonably believed, in the case of conduct in his official capacity as director, that his conduct was in the corporation's best interests or, in other cases, that his conduct at least was not opposed to the corporation's interests and (iii) in the case of any criminal proceeding, had no reasonable cause to believe his conduct was unlawful. A director may not be indemnified with respect to a proceeding in which the person is found liable on the basis that personal benefit was improperly received by him, whether or not the benefit resulted from an action taken in the person's official capacity, or in which the person is found liable to the corporation. Officers, employees and agents of a corporation are entitled to be indemnified by the corporation as, and to the same extent provided for, directors of the corporation.

Registrant carries directors' and officers' liability insurance with an aggregate policy limit of \$2,000,000.

Recent Sales of Unregistered Securities

In May 2003 eleven of the Company's current shareholders loaned the Company an aggregate of \$823,500. The loans bear interest at 5% per annum and are due in May 2004. Each of the eleven shareholders is an accredited investor and the private placement of the debt securities was exempt pursuant to Section 4(2) of the Securities Act of 1933.

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Item 16. Exhibits.

(a) Exhibits

- 3.1 Restated Articles of Incorporation of the Company (incorporated by reference to Exhibit 3.1 to the Company's Registration Statement on form SB-2 (Registration No. 333-26269)).
- 3.2 Bylaws of the Company (incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form SB-2 (Registration No. 333-26269)).
- 4.1 Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form SB-2 (Registration No. 333-26269)).
- 5.1 Authorizing legal opinion of Locke Liddell & Sapp LLP with respect to the issuance of the securities.
- 10.1 Copy of Company's 2002 Long Term Incentive Plan, including forms of nonqualified Stock Option Agreement, Incentive Stock Option Agreement and Restrictive Stock Option Agreement (incorporated by reference to Exhibit 10.1 to

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the Company's Annual Report on form 10-KSB for the year ended December 31 2002).

- 23.1 Consent of Hansen, Barnett & Maxwell.
- 23.2 Consent of Locke Liddell & Sapp LLP (included in Exhibit 5.1).
- 24 Power of Attorney (included as part of Signature page).

*To be filed by amendment.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under Securities Act of 1933, as amended (the "Act") may be permitted to directors, officers and controlling persons of Registrant pursuant to the provisions of its Restated Articles of Incorporation, its By-Laws, the Texas Business Corporation Act or otherwise, Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against liabilities (other than the payment by Registrant for expenses incurred or paid by an officer, director or controlling person of Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes:

- (1) For purposes of determining any liability under the Securities Act, to treat the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by Registrant under Rule 424(b)(1), or (4), or 497(h) under the Securities Act as part of this Registration Statement as of the time the Commission declared it effective.
- (2) For determining any liability under the Securities Act, to treat each post-effective amendment that contains a form of prospectus as a new registration statement for the securities offered in the registration statement, and that offering of the securities at that time as the initial bona fide offering of those securities.

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POWER OF ATTORNEY TO SIGN AMENDMENTS

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below does hereby constitute and appoint Steve T. Laflin and Dr. Ralph M. Richart, and each of them, with full power to act without the other, his true and lawful attorney-in-fact and agent for him and in his name, place and stead, in any and all capacities, to sign any or all amendments to this Registration

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Statement and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises in order to effectuate the same, as fully, for all intents and purposes, as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

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SIGNATURES

In accordance with the requirements of the Securities Act of 1933, Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and authorized this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, in Idaho Falls, State of Idaho, on the 23rd day of July, 2003.

INTERNATIONAL ISOTOPES INC.

By: /s/ Steve T. Laflin

Steve T. Laflin
President and CEO

In accordance with the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates stated.

Signature	Title	Date
/s/ Steve T. Laflin ----- Steve T. Laflin	President, CEO and CFO	July 23, 2003
/s/ Dr. Ralph M. Richart ----- Dr. Ralph M. Richart	Chairman	July 23, 2003
/s/ Christopher Grosso ----- Christopher Grosso	Director	July 23, 2003

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