

INTERNATIONAL ISOTOPES INC  
Form SB-2  
May 07, 2007

As filed with the Securities and Exchange Commission on May 7, 2007

Registration No. 333-

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, DC 20549**

**FORM SB-2**  
**REGISTRATION STATEMENT**  
***UNDER***  
***THE SECURITIES ACT OF 1933***

**INTERNATIONAL ISOTOPES, INC.**

*(Name of small business issuer in its charter)*

**Texas**  
*(State or other jurisdiction of  
incorporation or organization)*

**2835**  
*(Primary Standard Industrial  
Classification Code Number)*

**74-2763837**  
*(I.R.S. Employer  
Identification No.)*

**4137 Commerce Circle**

**Idaho Falls, Idaho 83401**

**(208) 524-5300**

*(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)*

**Steve T. Laflin**

**President and Chief Executive Officer**

**International Isotopes, Inc.**

**4137 Commerce Circle**

**Idaho Falls, Idaho 83401**

**(208) 524-5300**

*(Name, address, including zip code, and telephone number, including area code, of agent for service)*

*Copies of all communications, including communications sent to agent for service, should be sent to:*

**Sonny Allison**

**Perkins Coie LLP**

**1899 Wynkoop Street, Suite 700**

**Denver, CO 80202**

**(303) 291-2300**

**Approximate date of commencement of proposed sale to the public:** From time to time after this Registration Statement becomes effective.

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If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) 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 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 this Form is a post-effective amendment filed pursuant to Rule 462(d) 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, check the following box.   "

**CALCULATION OF REGISTRATION FEE**

| <b>Title of each class of securities to be registered</b>    | <b>Amount to be registered (2)</b> | <b>Proposed maximum offering price per share</b> | <b>Proposed maximum aggregate offering price</b> | <b>Amount of registration fee</b> |
|--|------------------------------------|--|--|-----------------------------------|
| Common Stock - \$0.01 Par Value                              | 13,333,331                         | \$0.139(3)                                       | \$1,853,333.01                                   | \$56.90                           |
| Common Stock - \$0.01 Par Value - Shares Underlying Warrants | 13,333,331                         | \$.10  | \$1,333,333.10                                   | \$40.93                           |
| Common Stock - \$0.01 Par Value - Shares Underlying Warrants | 13,333,331                         | \$.11  | \$1,466,666.41                                   | \$45.03                           |
| <b>Total</b>   |                                    |  | <b>\$4,653,332.52</b>                            | <b>\$142.86</b>                   |

(1)

In accordance with Rule 416 under the Securities Act of 1933, as amended, in order to prevent dilution, a presently indeterminable number of shares of common stock are registered hereunder which may be issued in the event of a stock split, stock dividend, triggering of any anti-dilution provisions in the warrants for the purchase of common stock

or similar transactions involving the common stock of the Registrant. No additional registration fee has been paid for these shares of common stock.

(2)

The Registrant is hereby registering the disposition of 13,333,331 shares of its common stock and 26,666,662 shares of its common stock underlying warrants issued to the selling stockholders pursuant to the terms of the Purchase Agreement dated as of March 21, 2007.

(3)

In accordance with Rule 457(c), the price is estimated solely for purposes of calculating the registration fee and is based upon the average of the bid and asked price of the common stock as reported on the over-the-counter bulletin board on May 3, 2007.

**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 this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to Section 8(a), may determine.**

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**The information in this Prospectus is not complete and may be changed. The selling stockholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED MAY 7, 2007.**

**PROSPECTUS**

**39,999,993 Shares**

**International Isotopes, Inc.**

**Common Stock**

This prospectus relates to the disposition from time to time of up to 13,333,331 shares of our outstanding common stock and 26,666,662 shares of our common stock issuable upon the exercise of warrants that are held by certain stockholders named in this prospectus.

The selling stockholders may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. We will not receive any of the proceeds from the sale of the shares. We will, however, receive the proceeds of any cash exercise of the warrants.

Our common stock is reported on the OTC Bulletin Board® under the ticker symbol INIS.OB.

**An investment in the shares offered hereby involves a high degree of risk. See Risk Factors beginning on page 1 of this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of the prospectus. Any representation to the contrary is a criminal offense.**

**The date of this prospectus is \_\_\_\_\_, 2007.**

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## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information that you should consider before investing in our common stock. You should read the entire prospectus carefully, including the Risk Factors section, before making a decision to invest in our common stock.*

### ***Our Business***

We manufacture a full range of nuclear medicine calibration and reference standards, manufacture high purity fluoride gases and a wide range of products such as teletherapy sources, high purity fluoride gasses, cobalt sources, and provide a wide selection of radioisotopes and radiochemicals for medical devices, calibration, clinical research, life sciences, and industrial applications. We also provide a host of analytical, measurement, recycling and processing services on a contract basis to clients. The first successful operation of the Fluorine production plant was completed in January 2006. Our business consists of six reportable segments which include Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, Radiological Services and Transportation Services.

Our common stock is currently publicly traded under the symbol INIS.OB on the OTCBB.

All dollar amounts in this prospectus are in U.S. dollars unless otherwise stated.

### ***The Offering***

On March 21, 2007, we entered into a Securities Purchase Agreement with certain institutional and private purchasers pursuant to which it sold (i) 13,333,331 shares of the Company's common stock, par value \$0.01 per share, (ii) Class C Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.10, and (iii) Class D Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.11, all for an aggregate sale price of approximately \$1,200,000.

This prospectus relates to the sale of up to 39,999,993 shares of our common stock by the selling shareholders identified in the section of this prospectus entitled "Selling Security Holders."

Information regarding the selling security holders, the common shares being offering to sell under this prospectus, and the times and manner in which they may offer and sell those shares, is provided in the sections of this prospectus entitled "Selling Security Holders" and "Plan of Distribution." We will not receive any of the proceeds from these sales. The registration of common shares pursuant to this prospectus does not necessarily mean that any of those shares will ultimately be offered or sold by the selling Security Holders

***Our Corporate Information***

International Isotopes, Inc. was formed as a Texas corporation in 1995. Our wholly owned subsidiaries are International Isotopes Idaho Inc., International Isotopes Fluorine Products Inc., and International Isotopes Transportation Services Inc., all of which are Idaho corporations. Our principal executive offices are located at 4137 Commerce Circle, Idaho Falls, Idaho and our phone number is (208) 524-5300. International Isotopes, Inc. is referred to throughout this prospectus as International Isotopes, the Company, we or us.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. The following risk factors should be considered carefully before you decide to buy our common stock. The risks and uncertainties we describe are not the only ones facing us. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. If any of these risks were to occur, our business, financial condition or results of operations would likely suffer. In that event, the trading price of our common stock could decline, and you could lose all or part of your investment.*

### Risks Related to Our Common Stock

#### ***Trading in Our Common Stock is Limited and the Price of Our Common Stock May be Subject to Substantial Volatility.***

Our common stock is traded on the OTC Bulletin Board® (the OTCBB ) under the ticker symbol INIS.OB, where we expect our common stock to remain for the near future. The market for our securities is limited, the price of our stock is volatile, and the risk to investors in our common stock is greater than the risk associated with stock trading on other markets. These factors may reduce the potential market for our common stock by reducing the number of potential investors. This may make it more difficult for investors in our common stock to sell shares to third parties or to otherwise dispose of their shares. This could cause our stock price to decline.

Additionally, the price of our common stock may be volatile as a result of a number of factors, including, but not limited to, the following:

- our ability to successfully conceive and to develop new products and services to enhance the performance characteristics and methods of manufacture of existing products;
- our ability to retain existing customers and customers' continued demand for our products and services;
- the timing of our research and development expenditures and of new product introductions;
-

the timing and level of acceptance of new products or enhanced versions of our existing products; and

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price and volume fluctuations in the stock market at large which do not relate to our operating performance.

***We are Contractually Obligated to Issue Shares in the Future, Diluting your Interest in Us.***

As of April 30, 2007, there were approximately 22,650,000 shares of common stock issuable upon exercise of stock options outstanding, at a weighted average exercise price of \$0.05 per share. An additional 40,000,000 shares of common stock are reserved for issuance under our 2006 Equity Incentive Plan as of April 30, 2007. Also outstanding as of April 30, 2007 are Series B warrants for the issuance of an additional 8,741,965 shares of common stock.

Moreover, we expect to issue additional options to purchase shares of our common stock to compensate employees, consultants and directors, and may issue additional shares to raise capital. Any such issuances will have the effect of further diluting the interest of the holders of our securities.

**Risks Related to Our Company**

***We have 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 through December 31, 2006, we have generated \$29,620,633 in revenues and accumulated deficit (including preferred stock dividends and returns) in the amount of \$90,833,651. The negative cash flow we have sustained has materially reduced our working capital, which in turn, could materially and negatively impact our ability to fund future operations and continue to operate as a going concern. Management has and continues to take actions to improve our results. The availability of necessary working capital, however, is subject to many factors beyond our control, including, our ability to obtain favorable financing, economic cycles, market acceptance of our products, competitors responses to our products, the intensity of competition in our markets, the level of demand for our products, etc.

***We may need additional financing to continue operations.***

As of December 31, 2006, we have a loan from Texas State Bank in the amount of \$648,075 which matures in March 2009 and is secured by our accounts receivable and fixed assets. We also have a line of credit with Texas State Bank in the amount of \$250,000, all of which was drawn at December 31, 2006. The line matures in August 2007.

We also owe \$840,753 to our former Chairman of the Board pursuant to a note that matures in April 2012. Principal and interest payments on this note are paid annually based upon net profits (annual principal payment to equal 30% of net pre-tax profits).



***Remaining obligations on the Texas State Bank loan for the Waxahachie property could revert to us, increasing our debt obligations.***

In 2002, Texas State Bank agreed to the assumption of our loan by an individual upon our sale of our property located in Waxahachie. As of January 30, 2007, the remaining outstanding balance on this loan was \$279,244. Should this individual default on the assumed loan, the liability for the loan will revert to the Company, increasing our debt.

***Operational hazards 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 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.

***We may incur material losses and costs as a result of product liability claims that may be brought against us.***

We face an inherent business risk of exposure to product liability claims in the event that products supplied by us to the medical industry fail to perform as expected or such failure results, or is alleged to result, in bodily injury. A successful product liability claim against us in excess of our available insurance coverage or established reserves may have a material adverse effect on our business.

***Government regulation could adversely affect our business.***

Operations within our Idaho facility are subject to U.S. Nuclear Regulatory Commission and Food and Drug Administration regulations. 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 loss of Mr. Laflin could have a material adverse effect on our business. We have a \$2 million dollar key man life insurance policy on Mr. Laflin and an employment agreement that extends through February 2010. There is no assurance that we will be able to retain Mr. Laflin or our existing personnel or attract additional qualified employees. The loss of any of our key personnel or an inability to attract additional qualified employees could 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, which 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, which in turn has agreements in place with several companies for marketing and sales.

*We are subject to competition from other companies.*

Each of our business areas 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. Most of our radiochemicals are also manufactured by several other companies in the world, and there are other suppliers of high purity fluorine products. Each of our competitors has significantly greater financial resources that could give them competitive advantage over us.

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## **NOTE REGARDING FORWARD-LOOKING STATEMENTS**

When used in this discussion, the words believes, anticipates, intends to, and similar expressions are intended to identify forward-looking statements. Such statements are subject to certain risks and uncertainties which could cause actual results to differ materially from those projected. These risks and uncertainties, many of which are not within our control, include, but are not limited to, the uncertainty and timing of the successful development of our new products; decisions by customers to place orders for our products; the risks associated with reliance on a few key customers; our ability to attract and retain personnel with the necessary scientific and technical skills; the timing and completion of significant orders; the timing and amount of our research and development expenditures; the timing and level of market acceptance of customers' products for which we supply components; performance of our vendors; our ability to control costs associated with performance under fixed price contracts; and the continued availability of essential supplies, materials and services. We caution investors not to place undue reliance on these forward looking statements, which speak only as of the date hereof. We undertake no obligation to publicly release the result of any revision to these forward-looking statements which may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

## **USE OF PROCEEDS**

It is unlikely that any outstanding warrants will be exercised for cash because they contain net exercise provisions that allow the holder to forgo some of the shares that would otherwise be received in order to pay the exercise price. However, if all of the outstanding warrants were exercised for cash, the gross proceeds to us would be \$2.6 million (exclusive of related expenses). The actual exercise of any of these securities however is beyond our control and depends on a number of factors, including the market price of our common stock. The net proceeds, if any, from the exercise of these securities will be used for general corporate purposes. The net proceeds from the disposition of the shares covered hereby will be received by the selling stockholders or their transferees. We will not receive any proceeds from the disposition of the shares by the selling stockholders or their transferees.

## **DETERMINATION OF OFFERING PRICE**

The prices at which the shares of common stock covered by this prospectus may actually be disposed may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.



## SELLING STOCKHOLDERS

We issued 13,333,331 shares of common stock and two series of warrants designated as Class C and Class D Warrants to purchase an aggregate of 26,666,662 shares of common stock on March 21, 2007 to certain stockholders set forth below (the Private Placement ). The warrants are immediately exercisable, subject to certain limits as outlined in footnote (b) to the table below, at \$0.10 per share for the Class C Warrants and \$0.11 per share for the Class D Warrants. The warrants expire on March 21, 2011. Pursuant to the securities purchase agreement entered into in connection with the Private Placement among us and the selling stockholders, we agreed to file a registration statement of which this prospectus is a part with the Securities and Exchange Commission (the Commission or the SEC ) to register the disposition of the shares of our common stock we issued to those stockholders and the shares of common stock issuable upon exercise of the warrants and to keep the registration statement effective until the earlier of (i) such time as all of the shares covered by this prospectus have been sold or (ii) the date on which the shares may be sold pursuant to Rule 144(k) of the Securities Act of 1933 (the Securities Act ).

The following table sets forth: (1) the name of each of the selling stockholders; (2) the number of shares of our common stock beneficially owned by each such selling stockholder prior to this offering; (3) the number of shares of our common stock covered by this prospectus; (4) the number of shares of our common stock beneficially owned upon completion of this offering, and (5) the percentage (if one percent or more) of common stock beneficially owned by each such selling stockholder after this offering, assuming all of the shares covered hereby are sold. Beneficial ownership is determined in accordance with Rule 13d-3 promulgated by the SEC, and generally includes those shares a selling stockholder has the power to vote or the power to transfer, and stock options and other rights to acquire common stock that are exercisable currently or become exercisable within 60 days. The selling stockholders may decide to sell all, some, or none of the shares of common stock covered hereby. Accordingly, we cannot provide any estimate of the number of shares of our common stock that any of the selling stockholders will hold once the offering is complete. The calculation of the percentage owned is based on 239,619,693 shares outstanding on April 30, 2007.

| Name                                     | Common Stock                |  | Number of Shares                                       | Percentage of   |
|--|-----------------------------|--|--|---|
|  | Owned Prior to the Offering | Being Offered Pursuant to this Prospectus* | of Common Stock Owned Upon Completion of this Offering | Shares of Common Stock Owned Upon Completion of this Offering |
| Firebird Global Master Fund II, Ltd. (a) | 12,119,795(b)               | 16,666,665                                 | 3,332,000(f)   | 1.19%(f)  |
| PowerOne Capital Markets Limited (c)     | 0                           | 6,333,333                                  | 6,333,333(f)   | *   |
| Ralph Richart (d)                        | 69,717,602                  | 15,833,331                                 | 53,884,271(f)  | 22.53%(f)   |
| Christopher Grosso (d)                   | 13,335,764                  | 833,331                                    | 12,502,433(f)  | 5.23%(f)  |
| Francis Stobart (e)                      | 0                           | 333,333                                    | 333,333 (f)  | *   |

\* less than 1%

(a) The address of Firebird Global Master Fund II, Ltd. is c/o FG2 Advisors, LLC, 152 West 57th Street, 24th Floor, New York, NY, 10019. FG2 Advisors, LLC is the investment manager of Firebird Global Master Fund II, Ltd. and has voting control and investment discretion over securities held by Firebird Global Master Fund II, Ltd. James Passin and Harvey Sawikin are the controlling principals of FG2 Advisors, LLC. Each of FG2 Advisors, LLC, James Passin and Harvey Sawikin disclaims beneficial ownership of the securities held by Firebird Global Master Fund II, Ltd.

(b) Represents 8,887,555 shares of our common stock owned directly by Firebird Global Master Fund II, Ltd. and 3,232,240 shares of our common stock that the selling stockholder has the right to acquire upon the exercise of either the Class C Warrants or Class D Warrants or some combination thereof to purchase a like number of shares. Because the Class C Warrants and the Class D Warrants each provide that the holder may not exercise it unless, following such exercise, the total number of shares of common stock then beneficially owned by the holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with such holder for purposes of Section 13(d) of the Securities Exchange Act of 1934, does not exceed 4.999% of the total number of issued and outstanding shares of our common stock (including shares of our common stock issuable upon such exercise), this number excludes 7,878,870 shares of our common stock that the selling stockholder has the right to acquire upon exercise of the Class C Warrants and the Class D Warrants or some combination thereof to purchase a like number of shares. By written notice to us, any holder may waive such limitation on exercise or increase or decrease the 4.999% to any other percentage specified in such notice, but (i) any such waiver or increase will not be effective until the 61st day after such notice is delivered to us and (ii) any such waiver or increase or decrease will apply only to such holder

and not to any other holder of warrants.

(c) The address of PowerOne Capital Markets Limited is Suite 2500, 130 King Street West, Toronto ON M5X 1A9. Pat DiCapo, Managing Director of PowerOne Capital Markets Limited has voting and dispositive powers over the securities.

(d) Messrs. Richart and Grosso are directors of the Company

(e) Francis and Marie Claude Stobart have joint beneficial ownership of the securities.

(f) Represents shares held by such selling stockholder prior to the Private Placement that are not being registered hereunder and assumes that all shares being offered pursuant to this offering will be sold. We cannot be sure, however, of the number, or percentage, of shares of our common stock such selling stockholder will sell in this offering or hold following the offering.

### **PLAN OF DISTRIBUTION**

The selling stockholders and any of their pledgees, donees, transferees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- 

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

- 

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

- 

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;



- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- to cover short sales made after the date that this Registration Statement is declared effective by the Securities and Exchange Commission;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

The selling stockholders may also engage in short sales against the box, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver shares in connection with these trades.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved. Any profits on the resale of shares of common stock by a broker-dealer acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of shares will be borne by the selling stockholder. The selling stockholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares if liabilities are imposed on that person under the Securities Act.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus after we have

filed an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus and may sell the shares of common stock from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares of common stock may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares of common stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

We are required to pay all fees and expenses incident to the registration of the shares of common stock, but we will not receive any proceeds from the sale of the common stock by the selling stockholders. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling stockholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their shares of common stock, nor is there an underwriter or coordinating broker acting in connection with a proposed sale of shares of common stock by any selling stockholder. If we are notified by any selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale or purchase of shares of common stock, if required, we will file a supplement to this prospectus. If the selling stockholders use this prospectus for any sale of the shares of common stock, they will be subject to the prospectus delivery requirements of the Securities Act.

We have advised each selling stockholder that it may not use shares registered under this Registration Statement to cover short sales of common stock made prior to the date on which this Registration Statement shall have been declared effective by the Securities and Exchange Commission. The selling stockholders will be responsible for their respective compliance with the applicable provisions of the Securities Act and Exchange Act, and the rules and regulations thereunder promulgated, including, without limitation, Regulation M, as applicable to such selling stockholders in connection with resales of their respective shares under this Registration Statement.

## LEGAL MATTERS

Perkins Coie LLP, Denver, Colorado, will pass upon certain legal matters related to the shares offered by this prospectus.

## DIRECTORS AND EXECUTIVE OFFICERS

Our bylaws require that we have no fewer than one director, and provide that the Board fixes the number of directors from time to time. As of April 30, 2007, our Board of Directors consists of three directors. Each current director was elected at the 2006 annual meeting of shareholders to serve until the next annual meeting and until his successor is elected and qualified. Information regarding our directors and executive officer is provided below. There are no family relationships among our executive officer and directors.

### Directors and Executive Officers

| Names              | Age | Principal Occupation  | Positions with the Company   |
|--------------------|-----|---|--|
| Ralph M. Richart   | 73  | Professor Emeritus, Columbia University                             | Chairman of the Board  |
| Steve T. Laflin    | 50  | President and Chief Executive Officer, International Isotopes, Inc. | Director, President, Chief Executive Officer and Chief Financial Officer |
| Christopher Grosso | 39  | Principal, Kershner Grosso, Inc.                                    | Director   |

*Ralph M. Richart, M.D.* was first elected to the Board of Directors in January 2002, and was elected by the Board to serve as Chairman in April 2002. Dr. Richart is professor *emeritus* in the Department of Pathology at Columbia University College of Physicians and Surgeons, where he was employed from 1963 to 2006 as Vice Chairman. Dr. Richart has previously served on the Board of Directors of several publicly held companies and corporate medical advisory Boards. From 1972 to 2006, he served as Chief Executive Officer of several privately held companies in the fields of medicine and electronics. He has also lead clinical trials that resulted in FDA product approval, and he has served as an advisor to medical device and pharmaceutical companies as well as the Food and Drug Administration.

*Steve T. Laflin* was first elected to the Board of Directors in June 2001. Since August 2001, Mr. Laflin has served as President and Chief Executive Officer of the Company. From 1996 to 2001, he served as President and General Manager of International Isotopes Idaho Inc., a subsidiary of the Company. Mr. Laflin received a B.S. degree in Physics from Idaho State University and has been employed in various senior engineering and management positions in the nuclear industry since 1992.

*Christopher Grosso* was first elected to the Board of Directors in April 2002. He has been a principal of Kershner Grosso, Inc., a New York based money management and investment banking firm, since 1998. From 1989 to 1998, Mr. Grosso was a Senior Research Analyst and Portfolio Manager with Kershner Grosso. He currently leads the firm's investment banking and venture capital activities. Prior to joining Kershner Grosso, Mr. Grosso was with Howe and Rusling Investment Management and Chase Manhattan Bank. Mr. Grosso received a B.S. in business administration from Skidmore College.

Our sole executive officer is Mr. Laflin, who is our president and chief executive officer.

#### **SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth information known to the Company regarding the beneficial ownership of the Company's common stock as of April 10, 2007 by each person who is known to be the beneficial owner of more than 5% of the outstanding shares of the Company's common stock. Except as otherwise indicated, each person named in the tables below has sole voting and investment power with respect to all shares of the Company's common stock shown as beneficially owned by such person.



The information presented below regarding beneficial ownership of our voting securities has been presented in accordance with the rules of the Securities and Exchange Commission and is not necessarily indicative of ownership for any other purpose. Under these rules, a person is deemed to be a beneficial owner of a security if that person has or shares the power to vote or direct the voting of the security or the power to dispose or direct the disposition of the security. A person is deemed to own beneficially any security as to which such person has the right to acquire sole or shared voting or investment power within 60 days through the conversion or exercise of any convertible security, warrant, option or other right. More than one person may be deemed to be a beneficial owner of the same securities. The percentage of beneficial ownership by any person as of a particular date is calculated by dividing the number of shares beneficially owned by such person, which includes the number of shares as to which such person has the right to acquire voting or investment power within 60 days, by the sum of the number of shares outstanding as of such date plus the number of shares as to which such person has the right to acquire voting or investment power within 60 days. Consequently, the denominator used for calculating such percentage may be different for each beneficial owner. Except as otherwise indicated below and under applicable community property laws, we believe that the beneficial owners of our common stock listed above have sole voting and investment power with respect to the shares shown.

We are unaware of any contract or other arrangement the operation of which may at a subsequent date result in a change in control of the company.

| <b>Name and address of Beneficial Owner</b>   | <b>Amount and Nature of Beneficial Ownership <sup>(1)</sup></b> | <b>Percent of Class <sup>(1)</sup></b> |
|---|---|--|
| Marie C. Keane and James J. Keane <sup>(2)</sup> <sup>(6)</sup><br>17th Battery Place, 11 <sup>th</sup> Floor<br>New York, NY 10004 | 17,688,335  | 7.4%                                   |
| John M. McCormack <sup>(3)</sup> <sup>(6)</sup><br>1303 Campbell Road<br>Houston, TX 77055  | 57,744,180  | 24.1%                                  |
| William Nicholson <sup>(4)</sup> <sup>(6)</sup><br>121 Post Oak Lane, #2105<br>Houston, TX 77055                                    | 23,070,414  | 9.6%                                   |
| Walter O'Hearn <sup>(5)</sup> <sup>(6)</sup><br>Fifty Broadway<br>New York, NY 10004  | 16,405,535  | 6.9%                                   |

(1)

Unless otherwise indicated in these footnotes, to the knowledge of the Company, all shares are owned directly.

(2)

Includes (i) 206,500 shares owned by Keane Securities Co. Inc. of which Mr. Keane is a major shareholder.

(3)

Includes (i) an aggregate of 24,121,689 shares beneficially owned by Mr. McCormack's children's trusts.

(4)

Includes 1,056,324 shares subject to warrants.

(5)

Includes (i) 206,500 shares owned by Keane Securities Co. Inc. of which Mr. O'Hearn is a major shareholder.

(6)

According to a Schedule 13D filed on January 14, 2002, Mr. and Mrs. Keane, Mr. McCormack, Mr. Nicholson, Mr. O Hearn, Mr. Christopher Grosso, Dr. Ralph M. Richart, Dr. Thomas R. Kershner, John William McCormack, Daniel Patrick McCormack and Meagan Anne McCormack are members of a group that, as reported, collectively owned 11,531,180 shares of the Company's common stock pursuant to Rule 13d-5 of the Securities Exchange Act of 1934, as amended. The beneficial ownership numbers and percentages set forth in the table above for each individual exclude shares owned by other members of the group and each individual disclaims beneficial ownership of shares owned by other members of the group.

**Security Ownership of Management**

The following table sets forth information regarding beneficial ownership of the Company's common stock as of April 10, 2007 by each of the Company's directors, executive officer and named executive officer and by the Company's directors and executive officer as a group.

| <b>Name and address of Beneficial Owner</b>  | <b>Amount and Nature of Beneficial Ownership <sup>(1)</sup></b> | <b>Percent of Class <sup>(1)</sup></b> |
|--|---|--|
| Christopher Grosso <sup>(2) (5) (6)</sup><br>480 Broadway, Suite 310<br>Saratoga Springs, NY 12866 | 13,335,764  | 5.6%                                   |
| Steve T. Laflin <sup>(3)</sup>   | 11,000,125  | 4.6%                                   |
| Dr. Ralph M. Richart <sup>(4) (5) (6)</sup><br>350 Shore Drive<br>Oakdale, NY 11769                | 69,717,602  | 29.1%                                  |
| Executive Officer and Directors as a Group<br>(3 persons) <sup>(6)</sup>                           | 94,053,491  | 39.3%                                  |

(1)

Unless otherwise indicated in these footnotes, to the knowledge of the Company, all shares are owned directly.

(2)

Includes (i) 555,554 shares subject to warrants; (ii) 3,000,000 shares subject to stock options; and (iii) 4,064,873 shares and warrants held by Mr. Grosso's family members.

(3)

Mr. Laflin's address is that of the Company. Includes 11,000,000 shares subject to stock options.

(4)

Includes (i) 10,555,554 subject to warrants (ii) 3,000,000 shares subject to stock options and (iii) 1,374,866 shares held in Richart family trust of which Dr. Richart is a co-trustee.

(5)

Mr. Grosso and Dr. Richart are members of a group pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, as amended, because Mr. Grosso has investment power over the shares owned by Dr. Richart. The beneficial ownership number and percentage set forth in the table above for Mr. Grosso excludes 65,591,778 shares owned by Dr. Richart, his children or other family trusts. Mr. Grosso disclaims beneficial ownership of shares owned by Dr. Richart, his children or other family trusts.

(6)

According to a Schedule 13D filed on January 14, 2002, Mr. and Mrs. Keane, Mr. McCormack, Mr. Nicholson, Mr. O Hearn, Mr. Grosso, Dr. Richart, Dr. Thomas R. Kershner, John William McCormack, Daniel Patrick McCormack and Meagan Anne McCormack are members of a group that, as reported, collectively owned 11,531,180 shares of the Company's common stock pursuant to Rule 13d-5 of the Securities Exchange Act of 1934, as amended. The beneficial ownership numbers and percentages set forth in the table above for each individual exclude shares owned by other members of the group and each individual disclaims beneficial ownership of shares owned by other members of the group.

### **DESCRIPTION OF SECURITIES**

The following description of our capital stock and provisions of our articles of incorporation and bylaws, each as amended, is only a summary. You should also refer to our articles of organization, a copy of which is incorporated by reference as an exhibit to the registration statement of which this prospectus is a part, and our bylaws, a copy of which is incorporated by reference as an exhibit to the registration statement of which this prospectus is a part. Our authorized capital stock consists of 500,000,000 shares of common stock, par value \$0.01 per share and 5,000,000 shares of Preferred Stock. As of April 30, 2007, there were 239,212,163 shares of common stock and 850 shares of Preferred Stock issued and outstanding.

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of our stockholders. Holders of our common stock have no rights under our articles of incorporation or our by-laws regarding dividends unless and until dividends are declared by the board of directors, nor do they have any rights under our articles of incorporation or our by-laws regarding preemption rights. The outstanding shares of common stock are fully paid and non-assessable.

### **INTEREST OF NAMED EXPERTS AND COUNSEL**

Our consolidated financial statements for the years ended December 31, 2006 and 2005 have been audited by HANSEN, BARNETT & MAXWELL, P.C., an independent registered public accounting firm, as set forth in their report, and are included in reliance upon such report, given upon the authority of such firm as experts in accounting and auditing.



## COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

We are organized under the laws of the State of Texas. We have authority under Article 2.02-1 of the Texas Business Corporation Act to indemnify our directors and officers to the extent provided in that statute. Our articles of incorporation and our Bylaws require the Company to indemnify each of our directors and officers against liabilities imposed upon them (including reasonable amounts paid in settlement) and expenses incurred by them in connection with any claim made against them or any action, suit or proceeding to which they may be a party by reason of their being or having been a director or officer of the company. We intend to enter into indemnification agreements with each of our officers and directors containing provisions that may require us, among other things, to indemnify our officers and directors against certain liabilities that may arise by reason of their status or service as officers or directors (other than liabilities arising from willful misconduct of a culpable nature) and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified. Management believes that such indemnification provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions or otherwise, we have 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.

## BUSINESS OF ISSUER

### General Business and Products Description

International Isotopes Inc., was formed as a Texas corporation in 1995. Its wholly owned subsidiaries, are International Isotopes Idaho Inc.; International Isotopes Fluorine Products Inc.; and International Isotopes Transportation Services Inc., all of which are Idaho corporations. Our headquarters and all operations are located in Idaho Falls, Idaho. Our business consists of six reportable segments which include: Nuclear Medicine Standards , Cobalt Products , Radiochemical Products , Fluorine Products , Radiological Services , and Transportation Services.

#### Nuclear Medicine

This segment consists of the manufacture of sources and standards associated with SPECT (Single Photon Emission Computed Tomography), patient positioning, and calibration or operational testing of dose measuring equipment for the nuclear pharmacy. These items include flood sources, dose calibrators, rod sources, flexible and rigid rulers, spot

markers, pen point markers, and a host of specialty design items. We manufacture these products through an exclusive manufacturing agreement with RadQual LLC. RadQual has, in turn, numerous distributors for direct sales of the products. There are over 5,000 nuclear medicine centers around the country that require these types of products on a regular repeat basis. We have been manufacturing these products since 2001, and have continued to grow this business at an annual rate of between 10% and 15% per year. The nuclear pharmacy business has been growing, and is anticipated to continue to grow, at an annual rate of about 5%.

### Cobalt Products

This segment includes the production of high and medium specific activity bulk cobalt, recycling of expended cobalt sources, and fabrication of a wide array of cobalt teletherapy and experimental irradiator source capsules. Because of the lengthy production cycle required for bulk cobalt, and because those sales occur in large batches, we typically see large variations in revenues for this segment in financial period comparisons. However, the year-over-year demand for bulk cobalt, and our ability to supply it, remains steady.

New products added to this area include cobalt source recycling and sealed source fabrication. Increasing sales and additional contract opportunities were encountered with these products in 2006 and additional opportunities are expected in the future.

### Radiochemical Products

This segment includes production and distribution of various isotopically pure radiochemicals for medical, industrial, or research applications. These products are either directly produced by us or are purchased in bulk from other producers and distributed by us in customized packages and chemical forms tailored to meet customer requirements.

Our sales in this segment consist of Cobalt-60 (Co-60), Cobalt-57 (Co-57), Cesium-137 (Cs-137), Iodine-131 (I-131), Sodium-22 (Na-22), and Barium-133 (Ba-133) isotopes. Radiopharmaceuticals produced with Iodine-131 are used in the treatment and diagnosis of various diseases of the thyroid such as Graves disease, thyroid cancer, and hyperthyroidism and are also used in a host of investigational and clinical trials such as for the treatment of breast, lung, prostate, and ovarian cancers. Other isotopes are used in a host of research and industrial applications although in smaller quantities.

### Fluorine Products

We acquired seven patents for the Fluorine Extraction Process (FEP) in January 2004 and plan to use this technology to produce several high purity fluorine products, such as germanium tetrafluoride. High purity fluorine gases are in ever-increasing demand for ion-implantation or chemical vapor deposition processes for microelectronics components and high-speed silicon chip manufacture. The FEP fluorine product is expected to have very high purity, which makes it ideally suited to these specialty applications, where high purity gas is required. In addition, we anticipate that the production costs of FEP products will be low compared to processes used by our competitors to manufacture ultra pure fluorine products. This will enable us to effectively compete with existing high purity fluorine product suppliers.

The FEP plant was completed in the fourth quarter of 2005 and the first successful trial operation of the plant was conducted in January 2006. During the remainder of 2006, we invested significant resources in completing additional design and resolving technical issues that would interfere with full commercial scale production of high purity germanium tetrafluoride from the plant. As of December 31, 2006 nearly all of these upgrades and technical issues have been resolved and we expect to begin commercial production and obtain contracts for this product in the third quarter of 2007. We have indications that the market size and growth outlook for high purity fluorine products should provide us with an opportunity to grow our revenue in the coming years. In addition to FEP production we were successful in obtaining our first Small Business Innovative Research (SBIR) grant for phase I investigational development of germanium tetrafluoride as a fluorinating agent for the production of hydro fluorocarbons. The Phase I investigational studies will be completed by mid 2007 and if successful we will be making application for full phase II funding to commercialize this technology in 2008.

### Radiological Services

This segment includes a wide variety of miscellaneous services, the largest of which is processing gemstones that have undergone irradiation for color enhancement. One customer accounts for most of our sales in this segment. We have an exclusive contract with this customer for gemstone processing. Other services in this segment consist of radiological engineering consultant services, research and development activities, and Type A package certification testing. In 2006, this segment also included operations associated with the support of the orphan source recovery project for the Department of Energy.

### Transportation Services

This segment was established in 2006 under the subsidiary name of International Isotopes Transportation Services (IITS). IITS was established to provide for transportation of the Company products (such as cobalt sources) and to offer for hire transportation services of hazardous and non-hazardous cargo materials. A major factor in the Company's determination of the need to establish this subsidiary and business segment was based upon many new requirements involving security and tracking of shipments of cobalt. IITS provides the Company with considerable



savings for the transportation of our own products and has introduced a new revenue stream for transportation of products for other companies.

We believe that all of our business segments will perform well and should continue to demonstrate continued growth. We expect that revenues generated from these operations should be expected to produce sufficient cash to meet our operational needs.

### **Industry Overview, Target Markets, and Competition**

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.

#### Nuclear Medicine

Calibration and Reference Standards are required for the daily operational checks and calibration of the measurement of SPECT imaging devices frequently used in nuclear medicine. This calibration and quality assurance testing is required as a routine part of the normal operations of this equipment to ensure its reliability and accuracy. We exclusively manufacture many of these products for RadQual LLC, which in turn has several distributors who make direct sales around the U.S. We directly ship these products to all 50 states and several overseas locations. There are two other major producers of these products within the U.S. and that directly compete with us for these products.

Most of the products manufactured by our competitors are similar in design to our products because all must meet Original Equipment Manufacturer (OEM) dimensional and performance standards. However, we attempt to differentiate our products from our competitors' products through increased levels of quality control and customer service.

### Cobalt Products

We sell high activity bulk cobalt to a customer that uses it to fabricate sealed sources for the Elekta Gamma knife unit. The gamma knife is a device used for the precise radiation treatment of certain tumors and vascular deformities of the brain. There are over 80 treatment centers around the U.S that are using the gamma knife and through 2006 it is estimated that approximately 100,000 patients have been successfully treated with this device. We also accept old gamma knife sources for recycling when they have decayed past their useful activity. This recycled cobalt, combined with cobalt we produce in a reactor, is incorporated into new sealed sources for teletherapy, experimental irradiators. There are no other producers of cobalt in the U.S.; however, there are at least three significant producers in other parts of the world. There is only one other company in the U.S. currently licensed to handle the form and quantity of cobalt we are authorized to handle and one other company in the U.S. capable of handling large quantities of sealed cobalt material and competing directly with us for some sealed sources and recycling services in this segment.

### Radiochemical Products

We typically supply radioisotope products in bulk form. The markets for most radiochemicals are highly competitive. The target markets for these products are customers who 1) incorporate them into finished industrial or medical devices; 2) use radioisotope products in clinical trials for various medical applications; or 3) further process and include the radioisotope products into a pharmaceutical product for FDA approved therapy or imaging.

### Fluorine Products

We are developing our fluorine products for several reasons including: (i) we intend to take advantage of increased market demand for certain high purity fluorine compounds in the microelectronics industry ; (ii) we believe the FEP process could provide a unique opportunity to produce derivative commercial products; and (iii) the FEP process should be compatible with various governments efforts to convert depleted uranium forms and to produce oxide for other purposes. We established manufacturing capacity for germanium tetrafluoride in the fourth quarter of 2005, and worked to resolve final technical issues and complete systems necessary to support full commercial production during 2006. We now anticipate the start of regular commercial production during the third quarter of 2007. Several of these fluorine compounds are already being produced by other companies using other processes. Since the anticipated cost of the FEP process is low, we anticipate that we will have a price advantage with our fluorine products. However, this price advantage may initially be our only competitive advantage in this market.

In addition to FEP production we were successful in obtaining our first Small Business Innovative Research (SBIR) grant from the National Science Foundation for phase I investigational development of germanium tetrafluoride as a fluorinating agent for the production of hydro fluorocarbons. The Phase I investigational studies will be completed by mid 2007 and, if successful, we will be making an application for phase II funding in mid 2007 (in the amount of \$750,000) to develop the commercial potential of this technology. Phase II funding award determination should be made by the end of 2007.

Radiological Services

Most of our radiological services are performed in support of gemstone processing to enhance color. Color-enhanced gemstones are used in commercial jewelry. The color enhancement process is a highly competitive industry and there are several alternatives to irradiation treatment. There are also other reactors located outside the U.S. that offer irradiation service. In 2006, this segment also included operations associated with the support of the orphan source recovery project for the Department of Energy.

Transportation Services

IITS was a new subsidiary for our company in 2006. IITS was formed in order to transport our own products and to provide for hire services. IITS specializes in the transportation of hazardous, radioactive, materials and especially large quantity cobalt shipments which have gained a significant amount of new regulation intended to address enhanced security for the transportation of those materials. IITS has specially trained drivers and equipped vehicles intended to meet all the new standards for transportation large cobalt shipments. Therefore, IITS is capable of providing unique transportation services that perhaps only one or two other commercial carriers in the U.S. can also provide. Revenues from for hire services are expected to increase in the coming year as greater awareness is made of IITS capabilities to other commercial businesses. IITS will also support the planned growth of our cobalt product segment sales.

## **Government Regulation**

We have obtained two materials licenses from the Nuclear Regulatory Commission (NRC) that permit use and possession of by-product material. The first materials license covers calibration and reference standard manufacturing and distribution, radioisotope processing and distribution, large scale cobalt processing and recycle operations, radioactive gemstone processing, environmental sample analysis, and various research and development activities.

The second materials license specifically covers FEP production and our subsidiary, International Isotopes Fluorine Products Inc.. The existing license and permits are adequate to allow all of our current business operations. At this time, there are no additional permits or approvals required for the planned scope of our operations in 2007.

We also have an operating permit from the NRC, which requires that we maintain an adequate cash reserve, in the form of a certificate of deposit and irrevocable letter of credit to the NRC, to support our estimated decommissioning and disposal costs for our facilities. We do not handle "special nuclear materials" (i.e. nuclear fuels and weapons grade uranium, thorium and plutonium). Therefore, our facility is not designated as a nuclear facility that would require additional licensing.

## **Regulation of Radioisotope Production Radioactive Waste**

All of our manufacturing processes generate some radioactive waste. We must handle this waste pursuant to the Low Level Radioactive Waste Policy Act of 1980, which requires the safe disposal of mildly radioactive materials. The estimated costs for storage and disposal of these materials have been included in the manufacturing and sales price of our products. However, actual disposal costs are subject to change at the discretion of the disposal site and are ultimately applied at the time of disposal. We have obtained all necessary permits and approvals for the disposal of our waste materials. We do not anticipate any changes in capacity or regulatory conditions that would limit or restrict our waste disposal capabilities.

## **Other Regulations**

We are registered as a medical device manufacturer through the Food and Drug Administration (FDA) for several of our nuclear medicine reference and calibration standards. We are registered with the U.S. Department of Transportation for the shipment of radioactive materials. In the first quarter of 2006, we obtained an NRC license for the import and export of radioactive materials. Because of increasing security controls and regulations, it is likely that we may encounter additional regulations effecting transportation, storage, sale, and import/export of radioactive materials. Registration of any of our radiochemicals into a Drug Master File (DMF) could subject us to the additional regulations of the FDA.

## **Employees**

As of April 30, 2007 we had 27 employees, all of whom are full-time.

### **Reports to Security Holders**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy materials that we have filed with the SEC at the SEC public reference room located at 450 Fifth Street, N.W., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to the public at no charge from the SEC's website at [www.sec.gov](http://www.sec.gov) and under the "Investor Center" section of our website at [www.intisoid.com](http://www.intisoid.com). Information on our website is not incorporated into this report or other securities filings.

### **Distribution Methods for Products**

We use common commercial carriers and our own IITS subsidiary for delivery of the company's products. For smaller quantities of material, and overnight and next day delivery, we utilize other commercial carriers. For our products that involve large quantities of radioactive material, most commonly cobalt-60, that invoke certain special transportation requirements, we use our new IITS transportation subsidiary. The creation of IITS subsidiary has produced additional revenue in for-Hire operations and saved expense by transporting our own products more cost effectively than other commercial carriers.

### **Dependence on Customers**

Sales to three major customers accounted for 81% of our sales during 2006. This is a significant reduction in dependence compared to 2005 in which 83% of sales were based upon sales to two major customers.

### **Patents, Trademarks, Licenses, Royalty Agreements, etc**

During the years ended December 31, 2005 and 2004, we obtained certain patents and patents pending related to a Fluorine Extraction Process and a container to transport radioactive materials.



## **Research and Development**

We had research and development expenses totaling \$58,360 in 2006 and \$77,162 in 2005. These expenses were associated with initial development of the processing opportunities for new radiochemical products and for development work associated with the addition of several new products in the nuclear medicine reference and calibration business including several measurement devices, calibrated vials, and various markers. Beginning in 2006, R&D in this area was conducted as a radiological engineering service and generated some limited revenues.

## **MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

*The following discussion of the results of the company's operations and financial condition should be read in conjunction with the accompanying financial statements and the notes thereto included within this report.*

### **Overview**

International Isotopes Inc. manufactures a full range of nuclear medicine calibration and reference standards, manufactures high purity fluoride gases and a wide range of products such as teletherapy sources, high purity fluoride gasses, cobalt sources, and provides a wide selection of radioisotopes and radiochemicals for medical devices, calibration, clinical research, life sciences, and industrial applications. We also provide a host of analytical, measurement, recycling, and processing services on a contract basis to clients. The first successful operation of the Fluorine production plant was completed in January 2006. For the remainder of the year we completed numerous test runs, installed remaining plant operations equipment, and resolved technical system issues to allow full scale commercial production.

### **Results of Operations**

**Year ended December 31, 2006 compared to year ended December 31, 2005**

#### ***Revenues***

Total revenues in 2006 were \$4,469,538 compared to \$2,985,434 in 2005, which represents an increase of \$1,484,104 or 50%. Revenues generated by our largest segment, Nuclear Medicine, increased by \$142,833 or 9% to \$1,684,727 in 2006 from \$1,541,894 in 2005 while revenues generated by the Radiochemical Segment increased \$136,152 or 19% to \$844,014 in 2006 from \$707,862 in 2005. The Radiological Services segment increased \$231,925 or 57% to \$641,411 in 2006 compared to \$409,486 in 2005. The Cobalt Products segment increased \$865,832 or 265% to \$1,192,024 in 2006 from \$326,192 in 2005.

### ***Cost of Revenues and Gross Profit***

Cost of revenue for 2006, was \$2,462,715 compared to \$1,601,361 in 2005, an increase of \$861,354 or 54%. Gross profit for 2006, was \$2,006,823 or 45% as compared to \$1,384,073 or 46% in 2005.

### ***Operating Costs and Expenses***

Total operating costs and expenses for 2006, were \$2,871,295 as compared to \$2,201,933 in 2005, an increase of \$669,362 or 30%. The increase was equally attributable to three contributing factors namely, FEP production supplies and equipment depreciation; wages attributable to the cost of stock options; and costs associated with our new transportation subsidiary (IITS). We anticipate no further significant increases in these operational expenses during 2007 and should, in fact, begin to see a portion of these operational expenses shift into cost of goods sold for fluorine products manufactured and sold by the subsidiary.

### ***Other Income (expense)***

Other (expense) in 2006 was (\$172,840) compared to other expense of (\$165,093) in 2005. The difference of \$7,747 was principally attributable to an increase in interest expense in 2006.

### ***Net Loss***

The Net Loss was \$1,037,312 in 2006 compared to a loss of \$982,953 in 2005. The \$54,359 increase in net loss was equally attributable to three contributing factors namely, FEP production supplies and equipment depreciation; wages attributable to the cost of stock options; and costs associated with our new transportation subsidiary (IITS).





## Liquidity and Capital Resources

On December 31, 2006, we had cash and cash equivalents of \$169,702 compared to \$184,631 at December 31, 2005. For the year ended December 31, 2006, our cash flows included net cash used in operating activities of \$259,941, net cash provided by financing activities of \$490,430 and cash used in investing activities of \$245,418.

We incurred a loss of \$1,037,312 for the year ended December 31, 2006, and have an accumulated deficit of \$90,833,651 since inception. Prior to 2006, our operations and plant and equipment expenditures were funded principally from proceeds from public and private sales of equity as well as through asset sales.

As of December 31, 2006, we had net term borrowings of \$648,075 with Texas State Bank. The current maturity date of this loan is March 2009. We also have a \$250,000 revolving line of credit with Texas State Bank that has a maturity date of August 2007. As of December 31, 2006, we had drawn \$250,000 against this line of credit.

We completed an unsecured note purchase agreement on January 21, 2004, with certain of our principal investors and Directors totaling \$650,000. Pursuant to the terms of the note purchase agreement, we issued unsecured notes, accruing interest at 6% per year. In December 2005, the holders of these notes agreed to modify the terms of the Note Purchase Agreement and the Notes by extending the maturity date of the notes from December 31, 2005 to January 2, 2007, and by reducing the original conversion price from \$0.18 to \$0.08 per share. In April 2007, the Note holders converted this debt, and accrued interest, into 8,420,172 shares of the Company's common stock.

Series B Warrant exercises in 2006 generated \$500,724 for the Company. As of April 30, 2007 there are 8,741,965 Series B warrants outstanding, which, if exercised would generate an additional \$437,098.

In 2006, we continued to build our various business segments, make investments into facilities and infrastructure, launch new products, and improve production costs. The following is a list of some of the more significant accomplishments in 2006.

- 

We have made significant increases in sales in all business segments and an approximate overall 50% increase in revenue for the company compared to 2005.

-

Our customer base has increased. New products and services, such as our Transportation Services, were added in 2006 and have diversified the Radiological Services segment by contributing more than 30% of the revenue to that segment.

- 

Cobalt source capsule fabrication demand has grown and several different types of capsules and several new customers have been added in 2006.

- 

We were awarded several contracts by the Department of Energy to assist with efforts related to the Orphan Source Recovery Project.

- 

We received a grant from the National Science Foundation of phase I research into use of germanium tetrafluoride as a fluorinating agent for production of hydro fluorocarbon. Successful completion of phase I could lead to full scale commercial development of this promising technology under a phase II program in 2008.

Based upon the investments we have made in our facilities and products developed in 2006 we have the following goals and objectives for 2007:

- 

To begin commercial production and sale of germanium tetrafluoride using the FEP gas production plant and begin certain research activities intended to develop germanium tetrafluoride as a fluorinating agent for production of hydrofluorcarbon.

- 

To pursue additional opportunities for various source recovery and recycle programs expected to be funded through the federal government and to which we are uniquely suited to provide services.

-

Continue to advertise and promote the use of International Isotopes Transportation Services (IITS) revenues for the Company's products and other commercial customers.

- 

To continue to expand our customer base, increase revenues in every business segment, continue to reduce production and operating costs, and achieve profitability.

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In March 2007, the Company's Board of Directors approved, by unanimous consent, the completion of a Securities Purchase Agreement (SPA) with certain investors to obtain funding for working capital and general corporate purposes. The SPA authorized the sale of units comprised of (i) 13,333,331 shares of the Company's common stock at \$0.09 per share (par value \$0.01 per share), (ii) Class C Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.10, and (iii) Class D Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.11, all for an aggregate sale price of approximately \$1,200,000 and pursuant to the terms and conditions set forth in the Securities Purchase Agreement.

We believe that revenues generated from these business activities will have a positive effect upon our business in 2007 and should produce sufficient cash to meet our operational needs.

### **Properties**

We lease two properties. The following paragraphs provide a brief summary of these properties.

4137 Commerce Circle The facility located on this property houses our main corporate headquarters and all of our manufacturing operations except our FEP operations. We hold this property pursuant to a lease that extends through April 2011. The facility was new when leased in March 2001 and remains in excellent condition. Our lease includes unlimited automatic five year extensions of the lease at our sole discretion. Lease payments are adjusted annually based upon the Consumer Price Index. We also have a purchase option and a right of first refusal on this property that allows us to purchase this property at any time for a stated amount.

3159 Commerce Way - The facility located on this property houses our FEP production operations. The facility was first leased in February 2004 and is in excellent overall condition. We hold this property pursuant to a lease that extends through January 2009. The facility is in excellent condition. Our lease includes unlimited automatic five year extensions of the lease at our sole discretion. Lease payments are adjusted annually based upon changes in the CPI. We also have a purchase option and a right of first refusal on this property that allows us to purchase this property at any time for a stated amount.

## **CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

### **Transaction with Related Persons**

On April 2, 2007, holders of \$650,000 of our 6% unsecured notes converted the principal and accrued interest of \$23,614 into 8,420,172 shares of Common Stock. Mr. Grosso converted \$26,945 in principal and interest under such notes, and was issued 336,807 shares of Common Stock, and Dr. Richart converted \$161,667 in principal and interest, for 2,020,841 shares of Common Stock.

On March 21, 2007, the Company completed a sale of securities in a private offering consisting of (i) 13,333,331 shares of Common Stock at \$0.09 per share, (ii) Class C Warrants exercisable for 13,333,331 shares of Common Stock at an exercise price of \$0.10 and (iii) Class D Warrants exercisable for 13,333,331 shares of Common Stock at an exercise price of \$0.11, all for an aggregate sale price of approximately \$1,200,000. Dr. Richart purchased 5,277,777 shares of Common Stock and an equal number of each of the Class C and Class D warrants for a total purchase price of \$475,000. Mr. Grosso purchased 277,777 shares of Common Stock and an equal number of each of the Class C and Class D warrants for a total purchase price of \$25,000.

### MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our common stock is reported on the Over the Counter Bulletin Board (OTCBB) under the trading symbol INIS.OB. High asked prices and low bid prices reported by the OTCBB during the periods indicated are shown below:

| <b>Fiscal Year</b> | <b>Quarter</b>  | <b>High Asked</b> | <b>Low Bid</b> |
|--------------------|-----------------|-------------------|----------------|
| 2006               | 1 <sup>st</sup> | \$0.21            | \$0.09         |
| 2006               | 2 <sup>nd</sup> | \$0.15            | \$0.08         |
| 2006               | 3 <sup>rd</sup> | \$0.14            | \$0.08         |
| 2006               | 4 <sup>th</sup> | \$0.15            | \$0.10         |
| 2005               | 1 <sup>st</sup> | \$0.12            | \$0.02         |
| 2005               | 2 <sup>nd</sup> | \$0.12            | \$0.07         |
| 2005               | 3 <sup>rd</sup> | \$0.08            | \$0.05         |
| 2005               | 4 <sup>th</sup> | \$0.09            | \$0.07         |

On April 30, 2007, there were 358 holders of record of our common stock. We have never paid any cash dividends on our common stock. In the future, and based upon our profit performance, our Board of Directors will evaluate and determine whether to issue dividends or retain funds for research and development and expansion of our business. It is unlikely that we will pay any dividends to shareholders for the foreseeable future.

## EXECUTIVE COMPENSATION

### Executive Compensation

The following table sets forth information regarding compensation for our President and Chief Executive Officer for 2006. The Company has no other executive officers.

#### 2006 SUMMARY COMPENSATION TABLE

|   | Salary    | Bonus    | All Other<br>Compensation | Total     |
|---|-----------|----------|---------------------------|-----------|
| Name and Principal Position                 | (\$)      | (\$)     | \$(1)                     | (\$)      |
| <b>Steve T. Laflin</b><br>President and CEO | \$145,080 | \$15,000 | \$4,557                   | \$164,637 |

(1) This amount includes premiums paid by the Company towards Mr. Laflin's health and life insurance.

*Employment Agreement.* In February 2001, the Company entered into an Employment Agreement with Mr. Laflin to serve as President and Chief Executive Officer at an original base salary of \$120,000. The salary has been adjusted annually by the Board of Directors under the terms of that agreement. The agreement terminated on February 28, 2007 and the Company and Mr. Laflin expect to enter into a new agreement, on substantially the same terms and conditions, effective as of March 1, 2007. Under the new agreement, Mr. Laflin's annual base salary is expected to be set at \$160,000 and he will be entitled to an annual bonus at the end of each year, in the discretion of the Board. The new agreement is to terminate on February 28, 2010, unless terminated earlier on standard terms and conditions.

Under the agreement, if the Company were dissolved or sold, or were to become a private company whose shares are no longer traded on a public exchange, the Board would have the power to terminate Mr. Laflin's employment and Mr. Laflin would be entitled to receive salary and benefits under the agreement through the date of termination and for an additional 12 months thereafter. Mr. Laflin will be subject to a noncompetition and nonsolicitation provision.

**OUTSTANDING EQUITY AWARDS AT 2006 FISCAL YEAR END**

The following table provides information regarding the number and estimated value of outstanding stock options and unvested stock awards held by the Company's Named Executive Officer at 2006 fiscal year-end.

| <b>Option Awards</b>                   |                   |                    |                      |                                   |                               |
|--|-------------------|--------------------|----------------------|-----------------------------------|-------------------------------|
| <b>Number of Securities Underlying</b> |                   |                    |                      |                                   |                               |
| <b>Unexercised Options (#)</b>         |                   |                    |                      |                                   |                               |
| <b>Name</b>                            | <b>Grant Year</b> | <b>Exercisable</b> | <b>Unexercisable</b> | <b>Option Exercise Price (\$)</b> | <b>Option Expiration Date</b> |
| <b>Steve T. Laflin</b>                 | 2001              | 1,000,000          | 0                    | \$.076                            | 4/23/11                       |
| Stock Options                          | 2002              | 10,000,000         | 0                    | \$0.02                            | 2/27/12                       |

**Director Compensation**

We do not pay our non-employee directors retainer fees or other fees for service related to the Board or its committees. We reimburse our non-employee directors for their costs associated with attending Board and committee meetings. In 2006, those reimbursements ranged from \$1,000 to \$2,000. In addition, on August 15, 2006, the Company granted each non-employee director options to purchase shares of the Common Stock under its stockholder-approved 2006 Equity Incentive Plan. The following table provides information on the compensation paid to non-employee directors during fiscal 2006. The Company does not pay Mr. Laflin any compensation in addition to his employee compensation for his Board activities.

| <b>Name</b>        | <b>Option Awards (\$)(1)</b> | <b>Total (\$)</b> |
|--------------------|------------------------------|-------------------|
| Ralph M. Richart   | \$156,221(2)                 | \$156,221         |
| Christopher Grosso | \$156,221(2)                 | \$156,221         |



(1)

Amounts shown are dollar amounts recognized for financial statement reporting purposes with respect to fiscal 2006, in accordance with FAS 123R. The exercise price per share of the option awards shown was \$ 0.08 per share, the fair market value on the date of grant.

(2)

At December 31, 2006, Dr. Richart held options to purchase 3,000,000 shares of Common Stock and Mr. Grosso held options to purchase 3,000,000 shares.

### AVAILABLE INFORMATION

Upon written or oral request, we will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered a copy of any or all of such documents which are incorporated herein by reference (other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates). Written or oral requests for copies should be directed to:

International Isotopes, Inc.

4137 Commerce Circle

Idaho Falls, Idaho 83401

Attn: Steve T. Laflin

(208) 524-5300

We are subject to the informational requirements of the Exchange Act, and, accordingly, file reports, proxy statements and other information with the Commission. You can read our Commission filings, including the registration statement, over the Internet at the Commission's website at <http://www.sec.gov>. You may also read and copy any document we file with the Commission at its public reference facilities at 450 Fifth Street, N.W., Washington, D.C. 20549. Please call the Commission at 1-800-SEC-0330 for further information on the operation of public reference facilities.

**CONSOLIDATED FINANCIAL STATEMENTS**

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**HANSEN, BARNETT & MAXWELL, P.C.**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and the Shareholders

International Isotopes Inc

We have audited the accompanying consolidated balance sheets of International Isotopes Inc and subsidiaries as of December 31, 2006 and 2005, and the related consolidated statements of operations, shareholders' equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement

presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of International Isotopes Inc and subsidiaries as of December 31, 2006 and 2005, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

As discussed in Note 1 to the consolidated financial statements, the Company adopted Statement of Financial Accounting Standards No. 123 (R), Share-Based Payment, effective January 1, 2006.

**HANSEN, BARNETT & MAXWELL, P.C.**

Salt Lake City, Utah

March 19, 2007

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**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**  
**Consolidated Balance Sheets**

| Assets  | December 31, |              |
|---|--------------|--------------|
|   | 2006         | 2005         |
| Current assets:   |              |              |
| Cash and cash equivalents                                   | \$ 169,702   | \$ 184,631   |
| Accounts receivable   | 353,379      | 386,862      |
| Inventories (Note 3)  | 2,537,627    | 2,668,911    |
| Prepays and other current assets                            | 115,589      | 132,562      |
| Total current assets  | 3,176,297    | 3,372,966    |
| Long-term assets  |              |              |
| Restricted certificate of deposit                           | 176,966      | 178,684      |
| Property, plant and equipment, net (Note 4)                 | 2,077,844    | 1,876,464    |
| Capitalized lease disposal costs, net (Note 11)             | 98,103       | 112,935      |
| Patents, net (Note 5)                                       | 73,500       | 84,000       |
| Total long-term assets                                      | 2,426,413    | 2,252,083    |
| Total assets  | \$ 5,602,710 | \$ 5,625,049 |
| <b>Liabilities and Stockholders' Equity</b>                 |              |              |
| Current liabilities   |              |              |
| Accounts payable  | \$ 208,993   | \$ 238,393   |
| Accrued liabilities   | 436,099      | 261,709      |
| Current installments of capital leases (Note 7)             | 26,518       | -            |
| Current installments of notes payable (Note 6)              | 1,738,828    | 1,057,069    |
| Total current liabilities                                   | 2,410,438    | 1,557,171    |
| Long-term liabilities                                       |              |              |
| Obligation for lease disposal costs (Note 11)               | 206,451      | 191,160      |
| Notes payable, excluding current installments (Note 6)      | 650,000      | 1,327,421    |
| Capital leases, excluding current installments (Note 7)     | 112,111      | -            |
| Mandatorily redeemable convertible preferred stock (Note 8) | 850,000      | 850,000      |
| Total long-term liabilities                                 | 1,818,562    | 2,368,581    |
| Total liabilities   | 4,229,000    | 3,925,752    |
| Stockholders' equity (Note 8)                               |              |              |

Common stock, \$0.01 par value; 500,000,000 shares  
authorized;

216,721,144 and 206,582,688 shares issued and outstanding  
respectively

|  |              |              |
|--|--------------|--------------|
|  | 2,167,211    | 2,065,826    |
| Additional paid-in capital                 | 90,040,150   | 89,429,810   |
| Accumulated deficit                        | (90,833,651) | (89,796,339) |
| Total stockholders' equity                 | 1,373,710    | 1,699,297    |
| Total liabilities and stockholders' equity | \$ 5,602,710 | \$ 5,625,049 |

*See accompanying notes to consolidated financial statements.*

**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES**  
**Consolidated Statements of Operations**

|  | <b>Years ended December 31,</b> |              |
|--|---------------------------------|--------------|
|  | <b>2006</b>                     | <b>2005</b>  |
| Sales of product   | \$ 4,469,538                    | \$ 2,985,434 |
| Cost of products   | 2,462,715                       | 1,601,361    |
| Gross profit   | 2,006,823                       | 1,384,073    |
| Operating costs and expenses:                                  |                                 |              |
| Salaries and contract labor                                    | 1,328,111                       | 916,081      |
| General, administrative and consulting                         | 1,484,824                       | 1,208,690    |
| Research and development                                       | 58,360                          | 77,162       |
| Total operating expenses                                       | 2,871,295                       | 2,201,933    |
| Operating loss   | (864,472)                       | (817,860)    |
| Other income (expense):  |                                 |              |
| Other income   | 14,228                          | 635          |
| Interest income  | 5,734                           | 4,231        |
| Interest expense   | (192,802)                       | (169,959)    |
| Total other (expense)  | (172,840)                       | (165,093)    |
| Net loss   | \$ (1,037,312)                  | \$ (982,953) |
| Net loss per common share basic and diluted:                   | \$ (0.00)                       | \$ (0.01)    |
| Weighted average common shares outstanding - basic and diluted | 211,984,394                     | 186,630,510  |

*See accompanying notes to consolidated financial statements.*





**INTERNATIONAL ISOTOPES INC AND SUBSIDIARIES**  
**Consolidated Statement of Stockholders' Equity**  
**Years ended December 31, 2005 and 2006**

|   | <b>Common Stock</b> |               | <b>Additional</b> | <b>Accumulated</b> | <b>Total</b>         |
|---|---------------------|---------------|-------------------|--------------------|----------------------|
|   | <b>Shares</b>       | <b>Amount</b> | <b>Paid-in</b>    | <b>Deficit</b>     | <b>Stockholders'</b> |
|   |                     |               | <b>Capital</b>    |                    | <b>Equity</b>        |
| Balance December 31, 2004                           | 159,077,940         | \$ 1,590,779  | \$ 87,773,992     | \$ (88,813,386)    | \$ 551,385           |
| Exercise of Series A and B warrants                 | 47,424,474          | 474,245       | 1,652,362         | -                  | 2,126,607            |
| Redemption of warrants                              | -                   | -             | (1,192)           | -                  | (1,192)              |
| Shares issued under employee stock purchase plan    | 80,274              | 802           | 4,648             | -                  | 5,450                |
| Net loss  | -                   | -             | -                 | (982,953)          | (982,953)            |
| Balance December 31, 2005                           | 206,582,688         | 2,065,826     | 89,429,810        | (89,796,339)       | 1,699,297            |
| Exercise of Series B warrants                       | 10,014,490          | 100,145       | 400,579           | -                  | 500,724              |
| Shares issued under employee stock purchase plan    | 123,966             | 1,240         | 8,432             | -                  | 9,672                |
| Compensation expense related to issuance of options | -                   | -             | 201,329           | -                  | 201,329              |
| Net loss  | -                   | -             | -                 | (1,037,312)        | (1,037,312)          |
| Balance December 31, 2006                           | 216,721,144         | \$ 2,167,211  | \$ 90,040,150     | \$ (90,833,651)    | \$ 1,373,710         |

*See accompanying notes to consolidated financial statements.*



**INTERNATIONAL ISOTOPES INC. AND SUBSIDIARIES****Consolidated Statements of Cash Flows****Years ended December 31,****2006****2005**

## Cash flows from operating activities:

|  |    |             |    |             |
|--|----|-------------|----|-------------|
| Net loss   | \$ | (1,037,312) | \$ | (982,953)   |
| Adjustments to reconcile net loss to net cash used in operating activities |    |             |    |             |
| Depreciation and amortization  |    | 206,758     |    | 213,386     |
| Loss on abandonment of patent  |    | -           |    | 13,097      |
| Loss on disposal of property, plant and equipment                          |    | 27,263      |    | -           |
| Accretion of obligation for lease disposal costs                           |    | 15,291      |    | 16,415      |
| Compensation expense related to issuance of options                        |    | 201,329     |    | -           |
| Changes in operating assets and liabilities:                               |    |             |    |             |
| Accounts receivable  |    | 33,483      |    | 45,888      |
| Prepays and other current assets   |    | 16,973      |    | (36,942)    |
| Inventories  |    | 131,284     |    | (431,490)   |
| Accounts payable and accrued liabilities                                   |    | 144,990     |    | (54,825)    |
| Net cash used in operating activities                                      |    | (259,941)   |    | (1,217,424) |
| Cash flows from investing activities:                                      |    |             |    |             |
| Restricted certificate of deposit  |    | 1,718       |    | (25,956)    |
| Purchase of patents  |    | -           |    | (10,287)    |
| Purchase of property, plant and equipment                                  |    | (247,136)   |    | (944,763)   |
| Net cash used in investing activities                                      |    | (245,418)   |    | (981,006)   |
| Cash flows from financing activities:                                      |    |             |    |             |
| Proceeds from exercise of warrants   |    | 500,724     |    | 2,126,607   |
| Redemption of warrants   |    | -           |    | (1,192)     |
| Proceeds from sale of stock under employee stock purchase plan             |    | 9,672       |    | 5,450       |
| Proceeds from issuance of debt   |    | 100,000     |    | 150,000     |
| Principal payments on notes payable  |    | (119,966)   |    | (47,855)    |
| Net cash provided by financing activities                                  |    | 490,430     |    | 2,233,010   |
| Net change in cash and cash equivalents                                    |    | (14,929)    |    | 34,580      |
| Cash and cash equivalents at beginning of year                             |    | 184,631     |    | 150,051     |
| Cash and cash equivalents at end of year                                   | \$ | 169,702     | \$ | 184,631     |

Supplemental disclosure of cash flow activities:

|                        |    |         |    |         |
|------------------------|----|---------|----|---------|
| Cash paid for interest | \$ | 149,733 | \$ | 209,666 |
|------------------------|----|---------|----|---------|

Supplemental disclosure of noncash financing and investing transactions:

|                                       |    |         |    |   |
|---------------------------------------|----|---------|----|---|
| Assets acquired through capital lease | \$ | 202,910 | \$ | - |
|---------------------------------------|----|---------|----|---|

|  |  |   |  |        |
|--|--|---|--|--------|
| Capitalization of lease disposal costs |  | - |  | 25,413 |
|--|--|---|--|--------|

*See accompanying notes to consolidated financial statements*

NOTE 1 - DESCRIPTION OF BUSINESS AND SIGNIFICANT ACCOUNTING POLICIES

**Description of Business**

International Isotopes Inc. (the Company) was incorporated in Texas in November 1995. The consolidated financial statements include all the accounts of the Company and its wholly owned subsidiaries. In November 2005, the Company created two new wholly owned subsidiaries; International Isotopes Fluorine Products, Inc. (to account for the activity and operations of the fluorine extraction process) and International Isotopes Transportation Services Inc. (to account for the activity and operations of isotope transportation services). The Company also owns 100% of the outstanding common shares of International Isotopes Idaho, Inc.

*Nature of Operations* The Company's business consists of six major business segments which include: Nuclear Medicine Standards, Cobalt Products, Radiochemical Products, Fluorine Products, Radiological Services, and Transportation Services.

With the exception of certain unique products, the Company's normal operating cycle is considered to be one year. Due to the time required to produce some cobalt products, the Company's operating cycle for those products is considered to be three years. All assets expected to be realized in cash or sold during the normal operating cycle of business are classified as current assets. As of December 31, 2006, the Company had 26 full time employees.

*Principles of Consolidation* The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries International Isotopes Idaho Inc.; International Isotopes Fluorine Products, Inc; and International Isotopes Transportation Services Inc. All significant - accounts and transactions have been eliminated in consolidation.

**Significant Accounting Policies**

(a)

**Financial Instruments and Cash Equivalents**

The carrying value of notes payable approximates fair value because they bear interest at rates which approximate market rates.

Cash and cash equivalents, totaling \$169,702 and \$184,631 at December 31, 2006 and 2005, respectively, consist of operating accounts, and money market accounts. For purposes of the consolidated statements of cash flows, the Company considers all highly-liquid financial instruments with original maturities of three months or less at date of purchase to be cash equivalents.

At December 31, 2006 and 2005, the Company has pledged a certificate of deposit valued at \$176,966 and \$178,684, respectively as security on a letter of credit. The letter of credit is required as part of the licensing agreement with the Nuclear Regulatory Commission ( NRC ). Among other things, the licensing agreement calls for a letter of credit to provide a level of financial assurance to maintain licensing with the NRC. Accordingly, withdrawal of the certificate is restricted over the remaining life of the license.

At December 31, 2006, the Company had cash deposits in excess of federally insured limits.

(b)

#### Accounts Receivable

The Company sells products mainly to recurring customers, wherein the customer's ability to pay has previously been evaluated. The Company generally does not require collateral. The Company periodically reviews accounts receivable for amounts considered uncollectible. Allowances are provided for uncollectible accounts when deemed necessary.

(c)

#### Inventories

Inventories are carried at the lower of cost or market. Cost is determined using the first in, first out method. Work in progress inventory contains product that is undergoing irradiation. This irradiation process can take up to three years to reach high specific activity (HSA) levels.

(d)

#### Property, Plant and Equipment

Depreciation on property, plant and equipment is computed using the straight-line method over the estimated useful life of the asset.

Leasehold improvements are amortized over the shorter of the life of the lease or the service life of the improvements. Maintenance, repairs, and renewals that neither materially add to the value of the property nor appreciably prolong its life are charged to expense as incurred. Gains or losses on dispositions of property and equipment are included in the results of operations.

(e)

Patents are amortized using the straight-line method over their estimated useful lives and are evaluated for impairment at least annually or when events or circumstances arise that indicate the existence of impairment.

(f)

#### Impairment of Long-Lived Assets and Long-Lived Assets to be Disposed Of

Long-lived assets are reviewed for impairment yearly. Recoverability of assets to be held and used is measured by comparison of the carrying amount of an asset to future net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount that the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell. Based on the evaluation, no impairment was considered necessary during the years ended December 31, 2006 or 2005.

(g)

#### Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rate is recognized in income in the period that includes the enactment date.

(h)

#### Use of Estimates

Management of the Company has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period to prepare these consolidated financial statements in conformity with accounting principles generally accepted in the United States of America. Actual results could differ from those estimates.

(i)

#### Revenue Recognition



Revenue is recognized when products are shipped. No warranty coverage or right of return provisions are provided to customers.

Sales to three major customers accounted for 81% of sales during 2006 and sales to two major customers accounted for 83% during 2005. At December 31, 2006 and 2005 those same three customers accounted for 78% and 96% of total receivables, respectively.

(j)

#### Research and Development Costs

The Company had research and development expenses totaling \$58,360 in 2006 and \$77,162 in 2005. These expenses were associated with initial development of the processing opportunities for new radiochemical products and for development work associated with the addition of several new products in the nuclear medicine reference and calibration business including several measurement devices, calibrated vials, and various markers.

(k)

Shipping and Handling Costs

The Company expenses all shipping and handling costs incurred. For the years ended December 31, 2006 and 2005, the Company expensed \$3,348 and \$5,123, respectively of shipping and handling costs. These costs are included in general, administrative and consulting costs in the statements of operations.

(l)

Stock Option Plan

Effective January 1, 2006, the Company adopted Statement of Financial Accounting Standards (SFAS) No. 123(R), share based payments using the modified prospective method. SFAS 123R requires the recognition of the cost of employee services received in exchange for an award of equity instruments in the financial statements and is measured based on the grant date fair value of the award. SFAS 123R also requires the stock option compensation expense to be recognized over the period during which an employee is required to provide service in exchange for the award (the vesting period). Prior to the adoption of SFAS 123R, the Company accounted for stock-based compensation plans under Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25"). The Company adopted the disclosure-only provision of SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123").

For the twelve months ended December 31, 2006, the Company recognized compensation expense of \$201,329 related to stock options. As of December 31, 2006, there was approximately \$205,809 of unrecognized compensation cost related to stock options that will be recognized over a weighted average period of 1.6 years.

Prior to January 1, 2006, the Company determined the value of stock-based compensation arrangements under provisions of APB Opinion No. 25 and accounted for options and warrants issued to non-employees at their fair value in accordance with SFAS No. 123, Accounting for Stock-Based Compensation ( SFAS 123 ). No compensation cost was recognized for stock options in the accompanying consolidated financial statements for the year ending December 31, 2005. Had the Company determined compensation cost based on the fair value at the grant date for its stock options under SFAS No. 123, the Company's net loss would have been increased to the pro forma amounts indicated below for the year ended December 31, 2005:

|                       |              |
|-----------------------|--------------|
|                       | <b>2005</b>  |
| Net loss, as reported | \$ (982,953) |

|   |    |             |
|---|----|-------------|
| Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects |    | (149,370)   |
| Pro forma net loss  | \$ | (1,132,323) |
| Loss per share, basic and diluted:  |    |             |
| As reported   | \$ | (0.01)      |
| Pro forma   | \$ | (0.01)      |

(m)

## Net Loss Per Common Share-Basic and Diluted

Basic loss per share is computed on the basis of the weighted-average number of common shares outstanding during the year. Diluted loss per share is computed on the basis of the weighted-average number of common shares and all dilutive potentially issuable common shares outstanding during the year.

At December 31, 2006, and 2005, the Company had the following common stock equivalents outstanding that were not included in the computation of diluted net loss per common share as their effect would have been anti-dilutive, thereby decreasing the net loss per common share:

|  | <b>December 31,</b> |             |
|--|---------------------|-------------|
|  | <b>2006</b>         | <b>2005</b> |
| Options/warrants                       | 32,104,871          | 38,118,481  |
| 850 shares of Series B redeemable      |                     |             |
| Convertible preferred stock            | 425,000             | 425,000     |
| \$650,000 of convertible notes payable | 8,125,000           | 8,125,000   |
|  | 40,654,871          | 46,668,481  |

(n)

## Business Segments and Related Information

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, establishes standards for the way public business enterprises are to report information about operating segments in annual financial statements and requires enterprises to report selected information about operating segments in interim financial reports issued to shareholders. It also establishes standards for related disclosure about products and services, geographic areas and major customers. The Company currently operates in six business segments (see Note 12).

(o)

## Reclassifications

Certain 2005, amounts have been reclassified to conform to the 2006, presentation. These reclassifications had no effect on the previously reported net loss.

(p)

#### Recent Accounting Pronouncements

In July 2006, the FASB issued Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* (FIN 48), which attempts to set out a consistent framework for preparers to use to determine the appropriate level of tax reserves to maintain for uncertain tax positions. This interpretation of FASB Statement No. 109 uses a two-step approach wherein a tax benefit is recognized if a position is more-likely-than-not to be sustained. The amount of the benefit is then measured to be the highest tax benefit which is greater than fifty percent likely to be realized. FIN 48 also sets out disclosure requirements to enhance transparency of an entity's tax reserves. The Company will be required to adopt this Interpretation as of January 1, 2007. The Company is still evaluating the impact of the adoption of FIN 48.

In September 2006, the FASB issued Statement of Financial Accounting Standards No. 157, *Fair Value Measurements* (SFAS 157), which defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and requires additional disclosures about fair value measurements. SFAS 157 aims to improve the consistency and comparability of fair value measurements by creating a single definition of fair value. The Statement emphasizes that fair value is not entity-specific, but instead is a market-based measurement of an asset or liability. SFAS 157 upholds the requirements of previously issued pronouncements concerning fair value measurements and expands the required disclosures. This Statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, however earlier application is permitted provided the reporting entity has not yet issued financial statements for that fiscal year. The Company does not believe that the adoption of SFAS 157 will have a material effect on its consolidated financial statements.

In September 2006, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 108 (SAB 108). SAB 108 was issued to provide interpretive guidance on how the effects of the carryover reversal of prior year misstatements should be considered in quantifying a current year misstatement. The provisions of SAB 108 are effective for the Company for its December 31, 2006 year-end. The adoption of SAB 108 had no impact on the Company's consolidated financial statements.

In February 2006, the FASB issued SFAS No. 155, *Accounting for Certain Hybrid Financial Instruments – an amendment of FASB Statements No. 133 and 140*. SFAS No. 155 resolves issues addressed in SFAS No. 133 Implementation Issue No. D1, *Application of Statement 133 to Beneficial Interests in Securitized Financial Assets*. SFAS No. 155 will become effective for the Company's fiscal year after September 15, 2006. The impact of SFAS No. 155 will depend upon the nature and extent of any new derivative instruments entered into after the effective date.

## NOTE 2 BUSINESS CONDITION AND LIQUIDITY

*Business Condition* The Company has a history of recurring losses with an accumulated deficit of \$90,833,651 at December 31, 2006, and a net loss of \$1,037,312 for the year then ended. The Company's working capital has decreased by \$1,049,936 from the prior year, working capital includes inventory which will not be sold for up to three years, and the Company has used cash flows from operations of \$259,941. During 2006, the Company sought to improve future cash flows from operating activities through significant investments into facilities and infrastructure, launching new products and implementing and improving operating cost control measures. The Company has been able to grow the Nuclear Medicine Reference and Calibration Standards segment at an annual rate of approximately 12% per year and anticipates similar growth trends over the coming year. During 2006 all of the Company's remaining business segments grew between 9% and 56%.

During 2004, the Company acquired seven patents for the Fluorine Extraction Process (FEP) and began construction of a plant to use this technology to produce several high purity fluorine products, such as germanium tetrafluoride. During January 2006, the Company successfully tested the fluorine extraction process and expects to begin full commercial production in 2007. In addition, the company was successful in obtaining a phase I SBIR grant from the National Science Foundation for development of alternative methods of hydrofluorocarbon production. Based on the market size and growth outlook for high purity fluorine products, management believes this plan and its operations should increase future revenues.

In March 2007, the Company converted \$650,000 in principal and \$23,614 in accrued interest into 8,420,172 shares of common stock. As further discussed in note 13, the Board approved securities purchase agreement on March 21 2007, which issues common stock and warrants for proceeds of \$1,200,000.

Management believes these changes to operations, the reduction of debt obligations, equity funding, and the additional capital received from the exercise of warrants subsequent to year end will be sufficient to enable the Company to continue its operations as a going concern; however, management's plans may not be fulfilled and profitable operations may not be obtained.

## NOTE 3 - INVENTORIES

Inventories consisted of the following at December 31, 2006 and 2005:

|                  | <b>2006</b>  | <b>2005</b>  |
|------------------|--------------|--------------|
| Raw materials    | \$ 263,791   | \$ 264,137   |
| Work in progress | 2,273,836    | 2,404,774    |
|                  | \$ 2,537,627 | \$ 2,668,911 |

Included in inventory are the various pellet holders and housings involved in target fabrication, raw cobalt, nickel and other raw elements, completed flood sources and irradiated cobalt.

Work in progress includes cobalt-60 isotopes that are located in the U.S. federal government's Advanced Test Reactor (ATR) located outside Idaho Falls, Idaho. These isotopes are at various stages of irradiation. Some isotopes are near completion and others may require up to three years to complete. At December 31, 2006 and 2005, these isotopes had a carrying value of \$1,939,702 and \$1,948,055, respectively.

## NOTE 4 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are summarized as follows at December 31, 2006 and 2005:

|                                  | <b>2006</b>  | <b>2005</b>  | <b>Estimated<br/>Useful Lives</b> |
|----------------------------------|--------------|--------------|-----------------------------------|
| Furniture and fixtures           | \$ 83,637    | \$ 82,205    | 3 5 years                         |
| Transportation equipment         | 23,016       | 6,290        | 5 10 years                        |
| Plant and improvements           | 149,608      | 149,608      | 5 years                           |
| Production equipment             | 2,587,850    | 2,247,418    | 5 10 years                        |
|                                  | 2,844,111    | 2,485,521    |                                   |
| Less accumulated depreciation    | (766,267)    | (609,057)    |                                   |
| Property, plant & equipment, net | \$ 2,077,844 | \$ 1,876,464 |                                   |

Depreciation was \$181,426 and \$187,425 for the years ended December 31, 2006 and 2005, respectively.

## NOTE 5 - PATENTS

During the years ended December 31, 2006 and 2005, the Company obtained certain patents and patents pending related to a Fluorine Extraction Process and a container to transport radioactive materials. Patents, as of December 31, 2006 and 2005 are as follows:

|                          | <b>2006</b> | <b>2005</b> |
|--------------------------|-------------|-------------|
| Beginning Patents        | \$ 105,000  | \$ 109,000  |
| Additions                | -           | 10,287      |
| Abandonments             | -           | (14,287)    |
| Ending patents           | 105,000     | 105,000     |
| Accumulated amortization | (31,500)    | (21,000)    |
| Patents - net            | 73,500      | 84,000      |

During the year ended December 31, 2006 and 2005, the Company recognized \$10,500 of amortization expense, respectively. Estimated amortization expense of patents is as follows:



**Years ending December 31:**

|            |    |        |
|------------|----|--------|
| 2007       | \$ | 10,500 |
| 2008       |    | 10,500 |
| 2009       |    | 10,500 |
| 2010       |    | 10,500 |
| 2011       |    | 10,500 |
| Thereafter |    | 21,000 |
|            | \$ | 73,500 |

## NOTE 6 - NOTES PAYABLE

During 2006, the Company renegotiated its line of credit with a bank. The maximum amount available to borrow is \$250,000. The line accrues interest at the bank prime rate plus 1.5% (9.7% at December 31, 2006). The line comes due in August 2007, and is secured by equipment, accounts receivable and inventory. As of December 31, 2006, the Company had drawn \$250,000 against this line of credit.

During November 2005, the Company renegotiated the \$650,000 convertible notes payable to certain directors and shareholders and extended the due date to January 2, 2007. As consideration for this, the conversion price was reduced to \$0.08 per share, which was the market value of the common stock on the date of the amendment. In March 2007, the Company converted \$650,000 in principal and \$23,614 in accrued interest at \$0.08 per share, resulting in 8,420,172 shares of common stock issued. As a result, the \$650,000 is classified as a long-term liability in the accompanying financial statements.

Notes payable as of December 31, 2006 and 2005, consist of the following:

|  | 2006       | 2005       |
|--|------------|------------|
| Unsecured note payable to certain directors and shareholders, accrues interest at 6%, convertible to common stock at the option of the creditor, converted to 8,125,000 shares of common stock in February 2007. | \$ 650,000 | \$ 650,000 |
| Note payable to a finance company accruing interest at 8.7%; settled in March 2006.  | -          | 44,680     |
| Bank line of credit, renegotiated in 2006, maximum available to borrow is  |            |            |
| \$250,000, accrues interest at bank prime plus 1.5% (9.7% at December 31, 2006);   |            |            |
| secured by equipment and accounts receivable, due August 2007.   | 250,000    | 150,000    |
| Promissory note to a bank, bearing interest at 8.25%; monthly installments of \$8,961,   |            |            |
| secured by equipment, accounts receivable and inventory; due March 2007.   | 648,075    | 699,057    |
|  | 840,753    | 840,753    |

Note payable to the former chairman of the board, interest accrues at 7%; payable

annually on April 1; principal payments are due annually on April 1 consisting of

30% of prior year net income, with remaining balance due April 2012; unsecured.

|   |             |              |
|---|-------------|--------------|
| Total notes payable                           | 2,388,828   | 2,384,490    |
| Less: current maturities                      | (1,738,828) | (1,057,069)  |
| Notes payable, excluding current installments | \$ 650,000  | \$ 1,327,421 |

NOTE 7 LEASE OBLIGATIONS

Capital leases

In March 2006, the Company entered into a capital lease obligation for production equipment. The agreements call for monthly payments of \$3,341 through February 2011.

The following table summarizes equipment and the related depreciation held under capital leases at December 31, 2006:

|                                   |            |
|-----------------------------------|------------|
| Production equipment              | \$ 202,910 |
| Less: accumulated depreciation    | (10,146)   |
| Net equipment under capital lease | \$ 192,764 |

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The following is a schedule by years of future minimum lease payments under capital leases together with the present value of the net minimum lease payments as of December 31, 2006:

| <b>Years ending December 31</b>             |            |
|---|------------|
| 2007  | \$ 43,433  |
| 2008  | 40,092     |
| 2009  | 40,092     |
| 2010  | 40,092     |
| 2011  | 10,023     |
| Total minimum lease payments                | 173,732    |
| Less amount representing interest           | (35,103)   |
| Present value of net minimum lease payments | 138,629    |
| Less current portion                        | (26,518)   |
| Capital lease obligation - long term        | \$ 112,111 |

Operating leases

The Company leases office space, certain office equipment and production equipment under operating leases expiring at various dates through 2011. Rental expense under such leases for the years ended December 31, 2006 and 2005 was \$155,857 and \$144,225 respectively.

Future minimum lease payments under noncancelable operating leases (with initial or remaining lease terms in excess of one year) as of December 31, 2006 are:

| <b>Years ending December 31</b> | <b>Operating<br/>Leases</b> |
|---------------------------------|-----------------------------|
| 2007                            | \$ 173,597                  |
| 2008                            | 173,597                     |
| 2009                            | 119,940                     |
| 2010                            | 114,380                     |
| 2011                            | 38,127                      |
| Total minimum lease payments    | \$ 619,641                  |

NOTE 8 - SHAREHOLDERS' EQUITY, REDEEMABLE CONVERTIBLE PREFERRED STOCK, OPTIONS AND WARRANTS

### Stock Rights Offering

On August 12, 2003, the Company completed a rights offering to its common shareholders. Each right issued was exercisable at \$0.03 in exchange for the issuance of one common share, a Series A warrant to purchase one common share at \$0.04 and a Series B warrant to purchase one common share at \$0.05. Common shareholders exercised 43,790,153 rights. The remaining warrants are exercisable through July 2007.

During 2004, there were 18,356,024 Series A warrants, and 1,358,870 Series B warrants, issued from the 2003 rights offering that were exercised by shareholders for common stock generating \$802,184 and resulted in the Company issuing an additional 19,714,894 shares of common stock. The Series A warrant agreement contained a provision allowing the Company to redeem the Series A warrants at any time, provided the average closing price of the Company's common stock equaled, or exceeded, \$0.12 for 30 consecutive trading days. The Company stock met this requirement and in January 2005, the Company announced that the Series A warrants would be redeemed on February 25, 2005 at a redemption price of \$0.001 per warrant. Prior to the redemption date of February 25, 2005, 24,461,672 of Series A warrants were exercised for cash proceeds of \$978,467. On February 25, 2005, the Company redeemed the remaining 972,457 Series A warrants for \$1,192. During 2005, 22,962,802 Series B warrants were exercised for cash proceeds of \$1,148,140. During 2006, 10,014,490 Series B warrants were exercised for cash proceeds of \$500,724. At December 31, 2006, there were no outstanding Series A warrants and 9,454,871 Series B warrants outstanding.

### Mandatorily Redeemable Convertible Preferred Stock

The Company has authorized to issue up to 5,000,000 shares of Preferred Stock, par value \$0.01 per share. The Board of Directors is authorized to set the distinguishing characteristics of each series prior to issuance, including the granting of limited or full voting rights, rights to the payment of dividends and amounts payable in event of liquidation, dissolution or winding up of the Company.

At December 31, 2006, there were 850 shares of the Series B Preferred Stock outstanding with a mandatory redemption date of May 2022 at \$1,000 per share. The shares are also convertible into common stock at a conversion price of \$2.00 per share. These preferred shares carry no dividend preferences.

### Employee Stock Purchase Plan

On September 30, 2004, the Company's Board of Directors approved an employee stock purchase plan for an aggregate of up to 2,000,000 shares of the Company's common stock. The plan allows employees to deduct up to 15% of their payroll each pay period to be used for the purchase of common stock at a discounted rate. The common shares will be purchased at the end of each three month offering period or other period as determined by the Board.

The Plan is intended to qualify as an employee stock purchase plan under Section 423 of the Internal Revenue Code. Employees began making payroll deductions in January 2005.

During 2006, the Company issued 123,966 shares of common stock to employees for proceeds of \$9,672 in accordance with the employee stock purchase plan.

During 2005, the Company issued 80,274 shares of common stock to employees for proceeds of \$5,450 in accordance with the employee stock purchase plan.

### 2006 Equity Incentive Plan

In April 2006, the Company adopted the International Isotopes 2006 Equity Incentive Plan (the 2006 Plan). The 2006 Plan obtained shareholder approval in July 2006. The 2006 Plan replaced the Company's 2002 Long-Term Incentive Plan (the Prior Plan).

The 2006 Plan permits the granting of any or all of the following types of awards: (1) incentive and nonqualified stock options, (2) stock appreciation rights, (3) stock awards restricted stock and stock units, (4) performance shares and performance units conditioned upon meeting performance criteria and (5) other stock or cash based awards.

The 2006 Plan authorizes the issuance of up to 20,000,000 shares of Common Stock, plus 1,350,000 shares previously reserved under the Prior Plan and up to 18,650,000 additional shares that are subject to outstanding options granted under the Prior Plan, that may become available for issuance under the 2006 Plan to the extent that such outstanding options are forfeited or otherwise expire or terminate without the issuance of shares.

The Company made stock option grants totaling 4,000,000 shares during 2006, in accordance with the Company's 2006 Equity Incentive Plan. Of those options granted 1,000,000 shares were vested at the date of grant. The Company has made no other stock option grants during the year ended December 31, 2006. Unless earlier terminated the 2006 Plan will terminate on July 12, 2016.

#### Stock Option Plan

In January 1997, the Company adopted a Stock Incentive Plan (the Plan) pursuant to which the Company's Board of Directors may grant stock options to officers, key employees, and consultants. The Plan was amended in 2000, to authorize grants of options to purchase up to 1,000,000 shares of authorized but unissued common stock. Stock options are granted with an exercise price of not less than 85% of the reported market value of the common stock at the date of grant and vest over three years. Effective March 2002, the Company amended and restated the 2000 Stock Incentive Plan. The 2002 Long-Term Incentive Plan (the Plan) authorizes grants of options to purchase up to 20,000,000 shares of common stock. The maximum number of options that can be granted to each employee in one year is 10,000,000.

For options granted subsequent to January 1, 2006, the fair value of each stock option grant is estimated on the date of grant using the Black-Scholes option pricing model. During 2005, the Company granted 150,000 options to purchase common stock at an exercise price of \$0.07 and 500,000 options to purchase common stock at an exercise price of \$0.08 which was equal to the closing market price of the common stock on the grant dates. These offerings vest quarterly through January 2008, and July 2008, respectively.

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A summary of the stock options issued under the Company's Plan is as follows:

| <b>Fixed Options</b>             | <b>Shares</b> | <b>Weighted-Average Exercise Price</b> | <b>Weighted-Average Remaining Contractual Term</b> | <b>Aggregate Intrinsic Value</b> |
|----------------------------------|---------------|--|--|----------------------------------|
| Outstanding at December 31, 2004 | 18,000,000    | \$ 0.03                                |  |                                  |
| Granted                          | 650,000       | \$ 0.08                                |  |                                  |
| Outstanding at December 31, 2005 | 18,650,000    | \$ 0.04                                |  |                                  |
| Granted                          | 4,000,000     | \$ 0.08                                |  |                                  |
| Outstanding at December 31, 2006 | 22,650,000    | \$ 0.05                                | 6.3  | 1,505,000                        |
| Exercisable at December 31, 2005 | 16,662,500    | \$ 0.03                                |  |                                  |
| Exercisable at December 31, 2006 | 18,825,000    | \$ 0.04                                | 5.7  | 1,404,500                        |

The following table summarizes information about fixed stock options under the Plan outstanding at December 31, 2006:

| <b>Range of Exercise Prices</b> | <b>Options Outstanding</b>                      |  |  | <b>Options Exercisable</b>                     |  |
|---------------------------------|---|--|--|--|--|
|                                 | <b>Options Outstanding at December 31, 2006</b> | <b>Weighted-Average Remaining Contractual Life</b> | <b>Weighted Average Exercise Price</b> | <b>Number Exercisable at December 31, 2006</b> | <b>Weighted-Average Exercise Price</b> |
| 0.02-0.03                       | 15,000,000                                      | 5.33   | \$ 0.02                                | 15,000,000                                     | \$ 0.02                                |
| 0.07-0.08                       | 5,650,000                                       | 8.55   | \$ 0.08                                | 2,325,000                                      | \$ 0.08                                |
| 0.12                            | 500,000   | 7.85   | \$ 0.12                                | 375,000  | \$ 0.12                                |
| 0.17                            | 1,500,000                                       | 7.59   | \$ 0.17                                | 1,125,000                                      | \$ 0.17                                |

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

|                         | <b>2006</b> | <b>2005</b> |
|-------------------------|-------------|-------------|
| Expected dividend yield | -           | -           |
| Risk-free interest rate | 4.9%        | 4.2%        |



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|                                       |          |          |
|---------------------------------------|----------|----------|
| Expected volatility                   | 137%     | 143%     |
| Expected life                         | 10 years | 10 years |
| Weighted average fair value per share | \$0.08   | \$0.08   |

The expected life of stock options represents the period of time that the stock options granted are expected to be outstanding based on historical exercise trends. The expected volatility is based on the historical price volatility of our common stock. The risk-free interest rate represents the U.S. Treasury bill rate for the expected life of the related stock options. The dividend yield represents our anticipated cash dividend over the expected life of the stock options.

## Warrants

The following summarizes warrant activity for the years ended December 31, 2006 and 2005:

| <b>Fixed Warrants</b>            | <b>Outstanding<br/>Shares</b> | <b>Weighted-<br/>Average<br/>Exercise<br/>Price</b> | <b>Exercisable<br/>Shares</b> | <b>Weighted-<br/>Average<br/>Remaining<br/>Contractual<br/>Life (Years)</b> |
|----------------------------------|-------------------------------|---|-------------------------------|---|
| Outstanding at December 31, 2004 | 67,866,292                    | \$ 0.05   |                               |   |
| Exercised                        | (47,424,474)                  | \$ 0.04   |                               |   |
| Redemptions                      | (972,457)                     | 0.04  |                               |   |
| Outstanding at December 31, 2005 | 19,469,361                    | \$ 0.05   |                               |   |
| Exercised                        | (10,014,490)                  | \$ 0.05   |                               |   |
| Outstanding at December 31, 2006 | 9,454,871                     | \$ 0.05   | 9,454,871                     | 0.58  |

## NOTE 9 - INCOME TAXES

The Company paid no federal or state income taxes during 2006 or 2005. Income tax expense on loss differed from the amounts computed by applying the U.S. federal income tax rate of 34% to pretax losses as a result of the following:

|                                    | <b>2006</b>  | <b>2005</b>  |
|------------------------------------|--------------|--------------|
| Income tax benefit                 | \$ (352,686) | \$ (344,204) |
| Nondeductible expenses             | 2,805        | 397          |
| State taxes net of federal benefit | (47,716)     | (41,308)     |
| Change in valuation allowance      | 397,597      | 385,115      |
| Total income tax expense           | \$ -         | \$ -         |

The tax effects of temporary differences that give rise to significant portions of the Company's deferred tax assets (liabilities) as of December 31, 2006 and 2005 are presented below:

|                           | <b>2006</b> | <b>2005</b> |
|---------------------------|-------------|-------------|
| Deferred income tax asset |             |             |

|  |    |             |    |             |
|--|----|-------------|----|-------------|
| Net operating loss carryforward              | \$ | 2,267,371   | \$ | 1,859,037   |
| Valuation allowance                          |    | (2,144,963) |    | (1,747,366) |
| Total deferred income tax asset              |    | 122,408     |    | 111,671     |
| Deferred income tax liability - depreciation |    | (122,408)   |    | (111,671)   |
| Deferred tax asset (liability)               | \$ | -           | \$ | -           |

At December 31, 2006, the Company had net operating losses of \$5,784,109 that will begin to expire in 2023. The valuation allowances for 2006 and 2005 have been applied to offset the deferred tax assets in recognition of the uncertainty that such benefits will be realized.

The Internal Revenue Code contains provisions which reduce or limit the availability and utilization of net operating loss carry forwards in the event of a more than 50% change in ownership. If such an ownership change occurs with the Company, the use of these net operating losses could be limited.

#### NOTE 10 COMMITMENTS AND CONTINGENCIES

##### Litigation

The Company has been named as a defendant in a lawsuit filed by a former employee. The plaintiff has alleged that the Company breached his employment contract, by failing to provide six months continuation pay upon his termination. The plaintiff seeks damages of approximately \$57,500, plus attorneys' fees and court costs. The suit is still in discovery stage and the Company intends to vigorously defend against this law suit. The Company determined the likelihood of an unfavorable outcome to be remote and accordingly has not recorded an accrued expense.

### Dependence on Third Parties

The production of HSA Cobalt is dependent upon the U.S. Department of Energy, and its prime operating contractor, who controls the reactor and laboratory operations. The revenue associated with the sale of HSA Cobalt is largely dependent on the Company's sole customer for this product. Nuclear Medicine Reference and Calibration Standard manufacturing is conducted under an exclusive contract with RadQual, LLC, who in turn has an agreement in place with several companies for distributing the product. A loss of either of these customers could adversely affect operating results by causing a delay in production or a possible loss of sales.

### Contingencies

Because all of the Company's business segments involve radioactive materials the Company is required to have an operating license from the Nuclear Regulatory Commission ( NRC ) and specially trained staff to handle these materials. The Company has an NRC operating license and has amended this license several times to increase the amount of material permitted within the facility. Additional processing capabilities and license amendments could be implemented that would permit processing of other reactor produced radioisotopes by the Company but this license does not currently restrict the volume of business operation performed or projected to be performed in the coming year. An irrevocable, automatic renewable letter of credit against a Certificate of Deposit at Texas State Bank has been used to provide the financial assurance required by the NRC for the Idaho facility license.

### Sale of Waxahachie Real Estate

In January 2003, the Company entered into an agreement to sell real estate in Waxahachie ,Texas for the assumption of \$345,295 of debt associated with the property. The Company remains contingently liable to Texas State Bank for the debt on the real estate for the remainder of the term of the debt and could become directly liable should the purchaser default on the note.

In accordance with FASB No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, the Company has recognized a \$10,000 obligation under the guarantee that consists of the obligation to stand ready to reassume the note held at Texas State Bank in the event the purchaser defaults on the note. The obligation is based on the cost necessary for the purchaser to refinance the note, which would release the Company from the guarantor position. Should the purchaser default on the note and the Company reassumes the liability, the Company would also regain the real estate.

### NOTE 11 ASSET RETIREMENT OBLIGATION

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In accordance with the provisions of SFAS No. 143, the Company has capitalized lease disposal costs of \$174,745, and accumulated amortization of \$76,642 and \$61,810, at December 31, 2006 and 2005.

The following summarizes the asset retirement obligation activity for the years ended December 31, 2006 and 2005:

|  |    |         |
|--|----|---------|
| Balance January 1, 2005                | \$ | 149,332 |
| Accretion expense                      |    | 16,415  |
| Additional asset retirement obligation |    | 25,413  |
| Balance December 31, 2005              |    | 191,160 |
| Accretion expense                      |    | 15,291  |
| Balance December 31, 2006              | \$ | 206,451 |

### NOTE 12 SEGMENTS INFORMATION

Information related to the Company's reportable operating business segments is shown below. The Company's reportable segments are reported in a manner consistent with the way management evaluates the businesses. The Company identifies its reportable business segments based on differences in products and services. The accounting policies of the business segments are the same as those described in the summary of significant accounting policies. The Company has identified the following business segments:

- 

Nuclear Medicine segment consists of manufacture of sources and standards associated with SPECT imaging, patient positioning, and calibration or operational testing of dose measuring equipment for nuclear pharmacy.

- 

Cobalt Products segment includes the production of high and medium specific activity bulk cobalt, recycling expended cobalt sources, and fabrication of a wide array of cobalt teletherapy and experimental irradiator source capsules.

- 

Radiochemical Products segment includes production of various isotopically pure radiochemical for medical, industrial, or research applications. These products are either directly produced by the company or are purchased in bulk from other producers and distributed by the Company in customized packages and chemical forms tailored to

customer and market demands.

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•

Fluorine Products segment concerns the production of high purity fluorine gas compounds (such as germanium tetrafluoride) for the electronics and silicon chip manufacturing industry. The Company has acquired all patent rights to this process and is in the process of constructing/licensing a separate FEP production facility.

•

Radiological Services segment concerns a wide array of miscellaneous services such as processing of gemstone which has undergone irradiation for color enhancement, radiological engineering consultant services, Type A package certification testing, and waste packaging/recycle services.

•

Transportation segment includes transportation services the Company engages in for the commercial transfer of nuclear products for which it is licensed to move.

The following presents certain segment information as of and for the years ended December 31, 2006 and 2005:

| Sale of Product            |    | <b>2006</b> |    | <b>2005</b> |
|----------------------------|----|-------------|----|-------------|
| Radiochemical Products     | \$ | 844,014     | \$ | 707,862     |
| Cobalt Products            |    | 1,192,024   |    | 326,192     |
| Nuclear Medicine Standards |    | 1,684,727   |    | 1,541,894   |
| Radiological Services      |    | 641,411     |    | 409,486     |
| Flourine Products          |    | -           |    | -           |
| Transportation             |    | 107,362     |    | -           |
| Total Segments             |    | 4,469,538   |    | 2,985,434   |
| Corporate revenue          |    | -           |    | -           |
| Total Consolidated         | \$ | 4,469,538   | \$ | 2,985,434   |

| Depreciation and Amortization |    | <b>2006</b> |    | <b>2005</b> |
|-------------------------------|----|-------------|----|-------------|
| Radiochemical Products        | \$ | 47,983      | \$ | 52,300      |
| Cobalt Products               |    | 48,359      |    | 43,606      |
| Nuclear Medicine Standards    |    | 10,122      |    | 33,050      |
| Radiological Services         |    | 1,600       |    | 24,184      |

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|   |    |         |    |         |
|---|----|---------|----|---------|
| Flourine Products                       |    | 57,837  |    | 19,469  |
| Transportation                          |    | 4,508   |    | -       |
| Total Segments                          |    | 170,409 |    | 172,610 |
| Corporate depreciation and amortization |    | 36,349  |    | 40,777  |
| Total Consolidated                      | \$ | 206,758 | \$ | 213,387 |

| Segment Income (Loss)      |    | <b>2006</b> |    | <b>2005</b> |
|----------------------------|----|-------------|----|-------------|
| Radiochemical Products     | \$ | 50,408      | \$ | (33,015)    |
| Cobalt Products            |    | 476,145     |    | 182,902     |
| Nuclear Medicine Standards |    | 683,840     |    | 686,784     |
| Radiological Services      |    | 410,604     |    | 161,966     |
| Flourine Products          |    | (727,461)   |    | (533,634)   |
| Transportation             |    | (122,365)   |    | -           |
| Total Segments             |    | 771,171     |    | 465,003     |
| Corporate loss             |    | (1,808,483) |    | (1,447,956) |
| Net Loss                   | \$ | (1,037,312) | \$ | (982,953)   |



| Expenditures for Segment Assets | <b>2006</b> |         | <b>2005</b> |         |
|---------------------------------|-------------|---------|-------------|---------|
| Radiochemical Products          | \$          | -       | \$          | 1,800   |
| Cobalt Products                 |             | 59,454  |             | 118,856 |
| Nuclear Medicine Standards      |             | -       |             | -       |
| Radiological Services           |             | -       |             | -       |
| Flourine Products               |             | 368,021 |             | 805,634 |
| Transportation                  |             | 19,369  |             | -       |
| Total Segments                  |             | 446,844 |             | 926,290 |
| Corporate purchases             |             | 3,202   |             | 28,760  |
| Total Consolidated              | \$          | 450,046 | \$          | 955,050 |

| Segment Assets             | <b>2006</b> |           | <b>2005</b> |           |
|----------------------------|-------------|-----------|-------------|-----------|
| Radiochemical Products     | \$          | 348,769   | \$          | 557,608   |
| Cobalt Products            |             | 2,772,027 |             | 2,633,211 |
| Nuclear Medicine Standards |             | 438,522   |             | 582,341   |
| Radiological Services      |             | 58,999    |             | 217,949   |
| Flourine Products          |             | 1,343,799 |             | 1,161,687 |
| Transportation             |             | 38,255    |             | -         |
| Total Segments             |             | 5,000,371 |             | 5,152,796 |
| Corporate assets           | \$          | 602,339   | \$          | 472,253   |
| Total Consolidated         |             | 5,602,710 |             | 5,625,049 |

#### NOTE 13 - SUBSEQUENT EVENTS

As discussed in Note 6, the Company converted \$650,000 of notes payable and \$23,614 of accrued interest into 8,420,172 shares of common stock.

During January and February 2007, an additional 712,906 shares of common stock were issued as holders of Series B Warrants exercised their warrants for \$35,645.

In January 2007, the Company issued 24,609 shares of Company stock to employees as part of the employee stock purchase program.

In March 2007, the Company's Board of Directors approved, by unanimous consent, the completion of a Securities Purchase Agreement (SPA) with certain non-affiliates to obtain funding for working capital and general corporate purposes. The SPA authorized the sale of (i) 13,333,331 shares of the Company's common stock at \$0.09 per share (par value \$0.01 per share), (ii) Class C Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.10, and (iii) Class D Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.11, all for an aggregate sale price of approximately \$1,200,000 and pursuant to the terms and conditions set forth in the Securities Purchase Agreement.

**We have not authorized any dealer, salesperson or other person to give any information or represent anything not contained in this prospectus. You must not rely on any unauthorized information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not offer to sell any shares in any jurisdiction where it is unlawful. The information in this prospectus is current as of the date shown on the cover page.**

**International Isotopes, Inc.**

**39,999,993 Shares of**

**Common Stock**

**PROSPECTUS**

\_\_\_\_\_, 2007



**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 24. INDEMNIFICATION OF DIRECTORS AND OFFICERS**

We are organized under the laws of the State of Texas. We have authority under Article 2.02-1 of the Texas Business Corporation Act to indemnify our directors and officers to the extent provided in that statute. Our Articles of Incorporation and our Bylaws require the company to indemnify each of our directors and officers against liabilities imposed upon them (including reasonable amounts paid in settlement) and expenses incurred by them in connection with any claim made against them or any action, suit or proceeding to which they may be a party by reason of their being or having been a director or officer of the company. We intend to enter into indemnification agreements with each of our officers and directors containing provisions that may require us, among other things, to indemnify our officers and directors against certain liabilities that may arise by reason of their status or service as officers or directors (other than liabilities arising from willful misconduct of a culpable nature) and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified. Management believes that such indemnification provisions and agreements are necessary to attract and retain qualified persons as directors and executive officers.

**ITEM 25. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION**

The following table sets forth the costs and expenses of the sale and distribution of the securities being registered, all of which are being borne by us. All of the amounts shown are estimates except for the fee payable to the Commission.

|   |                     |
|---|---------------------|
| Securities and Exchange Commission registration fee | \$ 150.00           |
| Printing and engraving expenses                     | \$ 3,000.00         |
| Accountant's fees and expenses                      | \$ 5,000.00         |
| Legal fees and expenses                             | \$ 25,000.00        |
| Miscellaneous expenses                              | \$ 0                |
| <b>Total</b>  | <b>\$ 33,150.00</b> |

## ITEM 26. RECENT SALES OF UNREGISTERED SECURITIES

On April 12, 2007, the Company purchased from Randall O' Kane, one of the owners and founders of RadQual L.L.C., approximately 6% of RadQual and an option to purchase additional units totaling just over 20% of the ownership interest of RadQual. As part of the purchase price, the Company issued to Mr. O'Kane 392,857 shares of common stock at \$0.14 per share.

On April 2, 2007, we offered and sold 8,420,172 shares of common stock in exchange of for the cancellation of certain unsecured promissory notes in an aggregate amount of \$650,000 in principal and \$23,614 in accrued interest without registration under the Securities Act, or state securities laws, in reliance on the exemptions provided by Section 4(2) of the Securities Act and Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws.

On March 21, 2007, the Company entered into a securities purchase agreement with certain institutional and private purchasers pursuant to which it sold (i) 13,333,331 shares of the Company's common stock, par value \$0.01 per share ("Common Stock"), (ii) Class C Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.10, and (iii) Class D Warrants exercisable for 13,333,331 shares of the Company's common stock at an exercise price of \$0.11, all for an aggregate sale price of approximately \$1,200,000. The offering was made in reliance on the exemptions provided by Section 4(2) of the Securities Act and Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws.

On August 15, 2006, the Company granted 2,000,000 options to purchase shares of the Company's common stock under its 2006 Equity Incentive Plan to each of its two non-employee directors. The options are exercisable for common stock at an exercise price of \$0.08 per share. The offering was made in reliance on the exemptions provided by Section 4(2) of the Securities Act and Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws.

Prior to February 2005, 24,461,672 of Series A warrants were exercised for cash proceeds of \$978,467. In February 2005, the Company redeemed the remaining 972,457 Series A warrants for \$1,192. During 2005, 22,962,802 Series B warrants were exercised for cash proceeds of \$1,148,140. During 2006, 10,014,490 Series B warrants were exercised for cash proceeds of \$500,724.

**ITEM 27. EXHIBITS**

The following is a list of exhibits filed as part of this registration statement.

3.1

Second Amended and Restated Articles of Incorporation (incorporated by reference to Appendix C to the Company's definitive proxy statement on Schedule 14A filed on April 28, 2005).

3.2

Bylaws of the Company (incorporated by reference to the Company's Registration Statement on Form SB-2 filed on May 1, 1997 (Registration No. 333-26269)).

5.1

Opinion of Perkins Coie LLP\*

10.1

2002 Long Term Incentive Plan (incorporated by reference to the Company's Annual Report on Form 10KSB for the year ended December 31, 2002).

10.2

Form of Incentive Stock Option Agreement (incorporated by reference to the Company's Annual Report on Form 10KSB for the year ended December 31, 2004).

10.3

Series A and B Warrant Agreement and Form of Series A and B Warrant (incorporated by reference to the Company's Registration Statement on Form S-3 filed on June 18, 2003 (Registration No. 333-106215)).

10.4

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International Isotopes Employee Stock Purchase Plan (incorporated by reference to Appendix B to the Company's definitive proxy statement on Schedule 14A, as amended, filed on May 6, 2005).

10.5

International Isotopes Employment Agreement with Steve T. Laflin (incorporated by reference to the Company's Annual Report on Form 10KSB for the year ended December 31, 2004).

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10.12

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Form of Note Purchase Agreement and Form of Unsecured Convertible Promissory Notes (incorporated by reference to the Company's Annual Report on Form 10KSB for the year ended December 31, 2004).

10.14

2006 Equity Incentive Plan (incorporated by reference to the Company's definitive proxy statement on Schedule 14A filed on May 1, 2006).

21.

Subsidiaries (incorporated by reference to the Company's Annual Report on Form 10 KSB for the year ended December 31, 2005).

23.1

Consent of Hansen, Barnett & Maxwell. P.C.\*

23.2

Consent of Perkins Coie LLP (included in opinion filed as Exhibit 5.1).

23.1

Power of Attorney (included on the signature page of this registration statement).

\* Filed herewith



## ITEM 28. UNDERTAKINGS

The undersigned registrant hereby undertakes to:

(1)

To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i)

include any prospectus required by section 10(a)(3) of the Securities Act:

(ii)

Reflect in the prospectus any facts or events which, individually or together, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b)(ss.230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii)

Include any additional or changed material information on the plan of distribution.

(2)

For determining liability under the Securities Act, treat each post-effective amendment as a new registration statement of the securities offered, and the offering of the securities at that time to be the initial bona fide offering.

(3)

File a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

(4)

For determining liability of the undersigned small business issuer under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned small business issuer undertakes that in a primary offering of securities of the undersigned small business issuer pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communication, the undersigned small business issuer will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i)

Any preliminary prospectus or prospectus of the undersigned small business issuer relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter)

(ii)

Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned small business issuer or used or referred to by the undersigned small business issuer;

(iii)

The portion of any other free writing prospectus relating to the offering containing material information about the undersigned small business issuer or its securities provided by or on behalf of the undersigned small business issuer; and

(iv)

Any other communication that is an offer in the offering made by the undersigned small business issuer to the purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the "Act") may be permitted to directors, officers and controlling persons of the small business issuer pursuant to the foregoing provisions, or otherwise, the small business issuer has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy and as expressed in the Act and is, therefore, unenforceable.

In the event that a claim for indemnification against such liabilities (other than the payment by the small business issuer of expenses incurred or paid by a director, officer or controlling person of the small business issuer 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, the small business issuer 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 Securities Act and will be governed by the final adjudication of such issue.

Each prospectus filed pursuant to Rule 424(b)(4)(§230.424(b)(4) of this chapter) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements of filing on Form SB-2 and has duly caused this registration statement on Form SB-2 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Idaho Falls, State of Idaho, on May 7, 2007.

International Isotopes, Inc.

By: /s/ Steve T. Laflin  
Steve T. Laflin  
  
President and Chief  
Executive Officer

Each person whose signature appears below hereby constitutes and appoints Steve T. Laflin his true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement on Form SB-2 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 full power and authority to be done in and about the premises, as fully to 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 their substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form SB-2 has been signed by the following persons in the capacities and on the dates indicated.

| <b>Signature</b>                         | <b>Title</b>                          | <b>Date</b> |
|--|---------------------------------------|-------------|
| /s/ Steve T. Laflin<br>Steve T. Laflin   | President and Chief Executive Officer | May 7, 2007 |
| /s/ Ralph M. Richart<br>Ralph M. Richart | Chairman of the Board                 | May 7, 2007 |
| /s/ Christopher Grosso                   | Director                              | May 7, 2007 |

Christopher Grosso

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