INTERNATIONAL ISOTOPES INC Form POS AM April 15, 2011

As filed with the Securities and Exchange Commission on April 14, 2011

Registration No. 333-171140

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Post-Effective Amendment No. 1

to

FORM S-1

REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

INTERNATIONAL ISOTOPES INC.

(Exact name of registrant as specified in its charter)

Texas

(State or other jurisdiction of incorporation or organization)

3823

(Primary Standard Industrial Classification Code Number)

74-2763837

(I.R.S. Employer Identification Number)

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 to:

Sonny Allison

Perkins Coie LLP

1900 Sixteenth Street, Suite 1400

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.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. x

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act of 1933, check the following box. o

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act of 1933, check the following box. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o

Accelerated filer o

Non-accelerated filer o (Do not check if a smaller reporting company)

Smaller reporting company x

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered (3)	Amount to Be Registered (1)	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common stock, par value \$0.01				
Common stock, par value \$0.01 Shares				
Underlying Warrants				
Total			\$12,548,933.20	\$1,536.44

(1)

No additional securities are being registered and registration fees were paid upon filing of the original Form S-1 Registration Statement with the Securities and Exchange Commission on December 13, 2010 (Registration No. 333-171140). Therefore, no further registration fee is required.

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

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 to the Registration Statement on Form S-1 (File No. 333-171140) (the <u>Registration Statement</u>) is being filed in order to update the information required by Item 12 of Form S-1 included under the heading Incorporation of Certain Information by Reference in the Registration Statement, to include the Company s Annual Report on Form 10-K filed on March 31, 2011. This Post-Effective Amendment No. 1 deletes the information required by Item 12 of Form S-1 included under the heading Incorporation of Certain Information by Reference in the Registration Statement in its entirety and replaces it with the following:

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

We are allowed to incorporate by reference information contained in documents that we file with the SEC. This means that we can disclose important information to you by referring you to those documents and that the information in this prospectus is not complete. You should read the information incorporated by reference for more detail. We list below certain documents that we have already filed with the SEC. The information in these documents is considered part of this prospectus.

We incorporate by reference into this prospectus the documents listed below, and any filings we make with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement (in each case, except for the information furnished under Item 2.02 or Item 7.01 in any current report on Form 8-K and Form 8-K/A):

our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed on March 31, 2011; and

the description of the Common Stock that is contained in the Company's Registration Statement on Form 8-A dated August 1, 1997, filed pursuant to Section 12 of the Exchange Act, and all amendments thereto and reports which have been filed for the purpose of updating such description.

We will provide each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with this prospectus upon written or oral request at no cost to the requester. Requests should be directed to Steve Laflin, President and Chief Executive Officer, at our principal offices, which are located at 4137 Commerce Circle, Idaho Falls, Idaho 83401; telephone number (208) 524-5300; or to the Company s general email address: admin@intisoid.com.

This prospectus is part of a registration statement on Form S-1 that we filed with the SEC. That registration statement contains more information than this prospectus regarding us and our common stock, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's Internet website.

You should rely only on the information provided in and incorporated by reference into this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front cover of these documents.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this post-effective amendment to the registration statement to be signed on its behalf by the undersigned, there under duly authorized, in the City of Idaho Falls, State of Idaho, on the 14th day of April, 2011.

International Isotopes Inc.

/s/ Steve T. Laflin

By: Steve T. Laflin

President and Chief Executive Officer

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

Signature	Title	Date
* Ralph M. Richart	Chairman of the Board	April 14, 2011
* Steve T. Laflin	Director, President, and Chief Executive Officer (Principal Executive Officer)	April 14, 2011
/s/ Laurie A. McKenzie-Carter Laurie A. McKenzie-Carter	Chief Financial Officer (Principal Finance and Accounting Officer)	April 14, 2011
* Christopher Grosso	Director	April 14, 2011

s/ Steve T. Laflin

Steve T. Laflin

Attorney-in-fact