

N/A

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01

Entry into a Material Definitive Agreement.

The disclosure in Item 3.02 below is incorporated by reference into this Item 1.01.

Item 2.03

Creation of Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.

The disclosure in Item 3.02 below is incorporated by reference into this Item 2.03.

Item 3.02

Unregistered Sales of Equity Securities.

On February 20, 2013 (the Closing Date), International Isotopes Inc. (the Company) entered into a Securities Purchase Agreement (the Securities Purchase Agreement) with certain institutional and private purchasers (the Investors) pursuant to which it sold to the Investors convertible debentures (the Debentures) for an aggregate of \$1,060,000.

The Debentures mature on the second anniversary of the Closing Date (the Maturity Date) and accrue interest of 10% per year, compounded annually. The Debentures are convertible at the option of the Investors into shares of the Company's common stock, par value \$0.01 per share (Common Stock), at an initial conversion price equal to \$0.14, subject to adjustment as set forth in the Debentures. The Company may force the conversion of the Debentures if, at any time following the Closing Date, the 30-day volume-weighted daily average price of the Company's common stock exceeds \$0.50 per share, at a conversion price equal to \$0.14, subject to adjustment as set forth in the Debentures. Upon maturity, the outstanding principal amount of the Debentures and all accrued but unpaid interest will be converted into Common Stock at a conversion price equal to the lesser of \$0.14 and the average closing price of the Common Stock for the 120 consecutive trading days up to, but not including, the maturity date, subject to adjustment as set forth in the Debentures.

The Securities Purchase Agreement provides the Investors with certain piggyback registration rights with respect to the underlying common stock to be issued upon conversion of the Notes. The registration rights provisions contain customary indemnification and contribution provisions.

The above description of the Securities Purchase Agreement and the Debentures does not purport to be a complete summary of such documents and are qualified in their entirety by reference to such documents, copies of which are filed herewith as Exhibits 2.1 and 4.1, respectively, and are incorporated by reference herein.

The securities sold in the transactions discussed above were sold in reliance on Section 4(2) of the Securities Act of 1933, as amended (the Act) and Regulation D thereunder. Each Investor represented that it was an accredited investor within the meaning of the Act and had reviewed all information about the Company necessary to make an informed investment decision.

The transaction documents have been included to provide you with information regarding their terms. The transaction documents contain representations and warranties made by the parties to each other. The assertions embodied in those representations and warranties are qualified by information in confidential disclosure schedules that the parties have exchanged in connection with signing the transaction documents. While the Company does not believe that the disclosure schedules contain information that it is required to disclose pursuant to applicable securities laws, other than information that has already been publicly disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached transaction documents. Accordingly, you should not rely on the representations and warranties as characterizations of the actual state of facts, since they are modified in important part by the underlying disclosure schedules. These disclosure schedules contain information that has been included in the Company's general prior public disclosures, as well as potential additional non-public information. Moreover, information concerning the subject matter of the representations and warranties may have changed since the date of the transaction documents, which subsequent information may or may not be fully reflected in the Company's public disclosures.

Item 9.01

Financial Statements and Exhibits.

(d) Exhibits

2.1

Securities Purchase Agreement dated February 20, 2013*

4.1

Form of Convertible Debenture

* Schedules and similar attachments to the Securities Purchase Agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant will furnish supplementally a copy of any omitted schedule or similar attachment to the Securities and Exchange Commission upon request.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

International Isotopes Inc.

Date: February 26, 2013

By:

/s/ Laurie McKenzie-Carter
Laurie McKenzie-Carter

Chief Financial Officer

EXHIBIT INDEX

**Exhibit
Number**

Description of Document

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