

SECOND AMENDMENT TO INVESTMENT AGREEMENT

This SECOND AMENDMENT TO INVESTMENT AGREEMENT dated as of November 5, 2010 (this “**Amendment**”) is by and between GeoMet, Inc., a Delaware corporation (the “**Company**”), and Sherwood Energy, LLC, a Delaware limited liability company (the “**Investor**”). Capitalized terms used but not defined herein have the meanings ascribed to such terms in the Investment Agreement (as defined below).

BACKGROUND

WHEREAS, the Company and Investor entered into that certain Investment Agreement dated June 2, 2010 and subsequently amended that agreement on September 3, 2010 (the “**Investment Agreement**”);

WHEREAS, the Company consummated the Rights Offering and the Investor and Company consummated the Backstop Commitment on September 14, 2010;

WHEREAS, Section 2.2(f) of the Investment Agreement requires that the Company cause a registration statement to be filed with the SEC that registers the Backstop Shares for resale no later than 60 Business Days after consummation of the Backstop Closing; and

WHEREAS, the Company and Investor desire to amend the Investment Agreement to extend the deadline for filing such registration statement with the SEC from 60 Business Days to 180 Business Days;

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby agree as follows:

1. Section 2.2(f) of the Investment Agreement is hereby amended by restatement in its entirety to read as follows:

“(f) Registration of Backstop Shares. No later than one hundred eighty (180) Business Days after the consummation of the Backstop Closing, the Company shall cause a registration statement to be filed with the SEC that registers the Backstop Shares for resale such that, upon the effectiveness of such registration statement, the Backstop Shares will be freely tradable by the Investor free and clear of any restrictions (including any restrictions that would otherwise be imposed due to the Investor’s ownership in the Company or its rights under this Investment Agreement) not otherwise agreed or consented to by Investor. Such registration statement shall be subject to the Investor’s prior review and consent, not to be unreasonably withheld. The Company shall use its commercially reasonable best efforts to have such registration statement declared effective by the SEC as soon as practicable thereafter.”

2. Ratification. The Investment Agreement, as hereby amended, is ratified and confirmed in all respects.

3. Governing Law. THIS AMENDMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK, WITHOUT REGARD TO ITS RULE OF CONFLICTS OF LAWS.

4. Counterparts. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures were upon the same instrument.

(Remainder of page intentionally left blank)

IN WITNESS WHEREOF, this Amendment is executed by the undersigned on the date set forth above.

GEOMET, INC.

By: /s/ J. Darby Seré
J. Darby Seré
President and Chief Executive Officer

SHERWOOD ENERGY, LLC

By: /s/ Michael McGovern
Michael McGovern
President