

**Form 51-102F3
Material Change Report**

Item 1 Name and Address of Company

North American Energy Partners Inc. (“NAEP” or the “Company”)
Suite 300,
18817 Stony Plain Road,
Edmonton, Alberta, T5S 0C2

Item 2 Date of Material Change

December 12, 2014

Item 3 News Release

The attached press release was disseminated through Marketwire on December 12, 2014 with respect to the material change.

Item 4 Summary of Material Change

On December 12, 2014, NAEP announced that it intends to make purchases in the normal course in the United States, primarily through the facilities of the New York Stock Exchange, of up to 1,771,195 voting common shares (the “Purchase Program”). Such voting common shares represent approximately 5% of the 35,423,916 issued and outstanding voting common shares as of December 10, 2014. The Purchase Program will commence on or about December 18, 2014 and will terminate no later than twelve months from the date of the first purchase under such program. All purchases of shares in the United States will be made in compliance with Rule 10b-18 under the U.S. Securities Exchange Act of 1934. The Company will enter into an agreement with a broker to establish an automatic share purchase plan (the “Plan”) in respect of the Purchase Program. The Plan will be established to provide standard instructions regarding how the Company’s voting common shares are to be purchased under the program, subject to pre-established parameters.

Item 5 Full Description of Material Change

Please refer to the attached press release dated December 12, 2014, which is incorporated by reference herein.

Item 6 Reliance on subsection 7.1(2) of National Instrument 51-102

Not applicable.

Item 7 Omitted Information

None.

Item 8 Executive Officer

The following executive officer is knowledgeable about the material change and may be contacted about this report.

Jordan Slator, General Counsel
(780) 969-5576

Item 9 Date of Report

December 19, 2014

NORTH AMERICAN ENERGY PARTNERS ANNOUNCES SHARE PURCHASE PROGRAM IN THE UNITED STATES

Edmonton, Alberta, December 12, 2014 - North American Energy Partners Inc. (“NAEP” or the “Company”) (TSX/NYSE: NOA) today announced that it intends to make purchases in the normal course in the United States, primarily through the facilities of the New York Stock Exchange, of up to 1,771,195 voting common shares (the “Purchase Program”). Such voting common shares represent approximately 5% of the 35,423,916 issued and outstanding voting common shares as of December 10, 2014.

The Company believes that the current market price of its shares does not fully reflect their underlying value. In the Company’s view, a repurchase of shares would be an effective use of its cash resources and would be in the best interests of the Company and its shareholders. It would both increase liquidity for shareholders seeking to sell and provide an increase in the proportionate interests of shareholders wishing to maintain their positions.

The Purchase Program will commence on or about December 18, 2014 and will terminate no later than twelve months from the date of the first purchase under such program. All purchases of shares in the United States will be made in compliance with Rule 10b-18 under the U.S. Securities Exchange Act of 1934. The safe harbor conditions of Rule 10b-18 limit the number of shares that can be purchased per day in the United States. Subject to certain exceptions for block purchases, the maximum number of shares which can be purchased per day in the United States will be 25% of the average daily trading volume for the four calendar weeks preceding the date of purchase. The price per share will be based on the market price of such shares at the time of purchase in accordance with regulatory requirements.

The Company will enter into an agreement with a broker to establish an automatic share purchase plan (the “Plan”) in respect of the Purchase Program. The Plan will be established to provide standard instructions regarding how the Company’s voting common shares are to be purchased under the program, subject to pre-established parameters. Concurrent with the establishment of the Plan, the Company will confirm to the broker that it is then not aware of any material undisclosed or non-public information with respect to the Company or any securities of the Company. During the term of the Plan, the Company will not communicate any material undisclosed or non-public information to the trading staff of the broker; accordingly, the broker may make purchases regardless of whether a trading blackout period is in effect or whether there is material undisclosed or non-public information about the Company at the time that purchases are made under the Plan. Pursuant to the terms of the Plan, provided that the

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Company is neither in possession of material undisclosed or non-public information relating to the Company nor in a trading blackout period, the Company will have the ability to authorize the broker to make purchases outside of the pre-established price limits. In the event that the Plan is materially varied, suspended or terminated, the Company will issue a press release advising of such variation, suspension or termination, as applicable. Shares purchased pursuant to the Purchase Program will be cancelled.

About the Company

North American Energy Partners Inc. (www.naepi.ca) is one of the largest providers of heavy construction and mining services in Western Canada. For more than 50 years, NAEP has provided services to large oil, natural gas and resource companies, with a principal focus on the Canadian Oil Sands. The company maintains one of the largest independently owned equipment fleets in the region.

Forward Looking Statements

The information provided in this release contains forward-looking statements. Forward-looking statements include statements preceded by, followed by or that include the words “may”, “could”, “would”, “should”, “believe”, “expect”, “anticipate”, “plan”, “estimate”, “target”, “project”, “intend”, “continue”, “further” or similar expressions. Examples of forward-looking statements include the expected date of the commencement of the Purchase Program. Actual results could differ materially from those contemplated by such forward-looking statements as a result of any number of factors and uncertainties, many of which are beyond our control. Important factors that could cause actual results to differ materially from those in forward-looking statements include general economic and market conditions and the finalization of the Plan. Undue reliance should not be placed upon forward-looking statements and we undertake no obligation, other than those required by applicable law, to update or revise those statements.

For more complete information about us you should read our disclosure documents that we have filed with the SEC and the CSA. You may obtain these documents for free by visiting EDGAR on the SEC website at www.sec.gov or on the CSA website at www.sedar.com.

For further information, please contact:

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