

MATERIAL CHANGE REPORT

(FORM 51-102F3)

Item 1 - Name and Address of Company

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

Item 2 - Date of Material Change

May 8, 2014

Item 3 - News Release

The attached press release with respect to the material change was disseminated through Marketwire on May 8, 2014 and subsequently filed on SEDAR.

Item 4 – Summary of Material Change

The Company announced that it entered into an agreement whereby HGI Funding LLC and Front Street Re (Cayman) Ltd (together, the "Selling Shareholders") will sell to a syndicate of underwriters led by GMP Securities L.P. and including Dundee Securities Ltd., BMO Capital Markets and Raymond James Ltd., on a bought deal basis, an aggregate of 7,032,322 common shares of the Company at a price of C\$8.55 per share for aggregate gross proceeds to the Selling Shareholders of \$60,126,353.

Item 5 – Full Description of Material Change

Please refer to the attached press release dated May 8, 2014.

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

Not applicable.

Item 7 – Omitted Information

Not applicable.

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

May 16, 2014

PRESS RELEASE – MAY 8, 2014

North American Energy Partners and Harbinger Capital Partners Announce \$60 Million Bought Deal Secondary Offering

EDMONTON, ALBERTA--(Marketwired - May 8, 2014) -

NOT FOR DISTRIBUTION TO U.S. NEWS WIRE SERVICES OR FOR DISSEMINATION IN THE UNITED STATES AND DOES NOT CONSTITUTE AN OFFER OF THE SECURITIES DESCRIBED HEREIN

North American Energy Partners Inc. ("NAEP" or the "Company") (TSX:NOA) (NYSE:NOA), HGI Funding LLC ("HGI Funding") and Front Street Re (Cayman) Ltd. ("Front Street", and together with HGI Funding, the "Selling Shareholders") are pleased to announce that they have entered into an agreement whereby the Selling Shareholders will sell to a syndicate of underwriters (collectively, the "Underwriters") led by GMP Securities L.P. and including Dundee Securities Ltd., BMO Capital Markets and Raymond James Ltd., on a bought deal basis, an aggregate of 7,032,322 common shares of the Company currently owned by the Selling Shareholders (the "Offering") at a price of C\$8.55 per share for aggregate gross proceeds to the Selling Shareholders of \$60,126,353.

NAEP will not receive any proceeds from the Offering.

The Selling Shareholders are collectively NAEP's largest shareholder and currently own an equivalent of 20.1% of the issued and outstanding common shares of NAEP on a non-diluted basis. The Selling Shareholders will, upon completion of the secondary offering, no longer own any common shares of the Company.

A preliminary short-form prospectus relating to the offering will be filed on or about May 14, 2014 with Canadian securities regulatory authorities in each of the provinces (except Quebec) and territories of Canada. Closing of the Offering is expected to occur on or about May 29, 2014 and is subject to certain conditions, including the approval of the Canadian securities regulatory authorities.

This press release shall not constitute an offer to sell or a solicitation of an offer to buy, which may be made only by means of the prospectus, nor shall there be any sale of the common shares in any state, province or other jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any state, province or jurisdiction. The common shares to be sold pursuant to the Offering have not been and will not be registered under the U.S. Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or an applicable exemption from the registrations requirements of such Act. This press release shall not constitute an offer to sell or the solicitation of an offer to buy the securities in any jurisdiction.

ABOUT NORTH AMERICAN ENERGY PARTNERS INC.

North American Energy Partners Inc. (www.naepi.ca) is the premier provider of heavy construction and mining services in 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 Information

The information provided in this release contains forward-looking information. Forward-looking information includes statements preceded by, followed by or that include the words "anticipate", "intend" or similar expressions. Actual results could differ materially from those contemplated by such forward-looking information 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 information include general economic and market conditions, success of business development efforts, changes in oil and gas prices, availability of a skilled labour force, internal controls, general economic conditions, terms of our debt instruments, exchange rate fluctuations, weather conditions, performance of our customers, access to equipment, changes in laws and ability to execute transactions. Undue reliance should not be placed upon forward-looking information and we undertake no obligation, other than those required by applicable law, to update or revise such information.

For more complete information about us you should read the Company's disclosure documents that have been 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 SEDAR website at www.sedar.com.

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