



MIDLAND EXPLORATION FORMALIZED ITS RARE EARTH YTTERBY OPTION AGREEMENT WITH JAPAN OIL, GAS AND METALS NATIONAL CORPORATION

Montreal, May 18, 2010. Midland Exploration Inc. (“Midland”) (TSX-V: MD) is pleased to announce that Japan Oil, Gas and Metals National Corporation (“JOGMEC”) has satisfactory completed its due diligence for the Ytterby rare earth elements (“REE”) project. Accordingly, JOGMEC made the initial payment of \$200,000 in favour of Midland, pursuant to the Memorandum of Agreement executed by the parties.

Midland is very proud to join forces with a major Japanese leader such as JOGMEC, and is looking forward to the start of its first exploration program. A first technical meeting was held early May and a important field program of \$1,000,000 has been approved and will be initiated at the end of June.

The project, currently held 100% by Midland, consists of 1804 claims covering a surface area of about 679 square kilometres. The Ytterby project comprises 4 distinct claim blocks located between 200 to 230 kilometres east and northeast of Schefferville, Québec. Midland’s Ytterby main claim block is strategically well located 5 km south of the Strange Lake REE deposit and the B-Zone REE new deposit discovered by Quest Rare Minerals (“Quest”) (formally known as Quest Uranium Corporation) in 2009 (*see its press release dated August 19th, 2009*). With this position, Midland controls almost entirely the Napeu Kainiut Pluton which hosts the Strange Lake Peralkaline Complex.

Based on compilation of Provincial and Federal Government lake sediment geochemistry, geological maps, mineral occurrences and airborne geophysical surveys, Midland’s Ytterby claim blocks are all marked by extensive strong unsourced yttrium, uranium, lanthanum and beryllium lake bottom sediment anomalies combined with uranium (eU) and thorium (eTh) airborne radiometric anomalies within the Mistastin Batholith. All these indications point to the presence of systems similar in nature to the Strange Lake and the B-Zone deposits.

Diamond drilling completed in 2009 by Quest over the B-Zone, just 5 kilometres north of Midland property boundary, defined a 43-101 Inferred Resource of 114.8 million tonnes grading 0.999% TREO, 1.973% zirconium oxide, 0.208% niobium pentoxide, 0.053% hafnium oxide and 0.082% beryllium oxide (*See Quest Uranium’ press release dated April 7, 2010*). A peralkaline granitic pluton hosts the B-Zone and the Strange Lake REE deposits (historical resource estimate, pre-National Instrument 43-101, with 52 million tonnes @ 3.25% ZrO₂, 0.56% Nb₂O₅, 0.66% Y₂O₃, 0.12% BeO and 1.30% TREO) which is associated with the Mesoproterozoic Mistastin Batholite. The Strange Lake deposit has been found in the 80’s by Iron Ore Company while investigating lake sediment anomalies.

The Strange Lake Area may emerge as a world class future source of rare earth metals. Recent geochemical analysis show the area having a high percentage of the expensive heavy rare earth elements (europium to lutetium, a series of 9 elements in the periodic table) for which the world demand should increase with the emerging green technologies like hybrid and electric vehicles, energy efficient lighting and wind power.

Terms of the Exploration Agreement

JOGMEC has the option to acquire 50% interest in the Ytterby project prior to March 31, 2012 by funding \$2,500,000 in exploration expenditures including \$1,000,000 in work expenditures during the first year. Midland will be operator as long as it will hold an interest equal to or higher than 50% in the project. JOGMEC also has the right to transfer its interests in the Ytterby project, in whole or in part, to one or more Japanese companies or a consortium of Japanese companies.

About JOGMEC

JOGMEC was established in February, 2004, following the integration of the former Japan National Oil Corporation (“JNOC”) and Metal Mining Agency of Japan (“MMAJ”). It is a corporation under the Japanese Ministry of Economics, Trade and Industry (“METI”), with a mandate of investing in developing minerals projects worldwide to help secure a stable supply of natural resources for Japanese industry.

About Midland

Midland targets the excellent mineral potential and the favourable investment climate of Quebec to make the discovery of new world-class deposits of gold, base metals and REE. Midland is proud to count on reputable partners such as JOGMEC, Agnico-Eagle Mines Limited, Osisko Mining Corporation, North American Palladium Limited, Zincore Metals Inc. and Soquem Inc. Midland prefers to work in partnership and intends to conclude additional agreements in regard to newly acquired properties. Midland is currently evaluating new opportunities and other projects in order to increase the portfolio of the Company.

This press release was prepared by Gino Roger, registered engineer and Qualified Person as defined by NI 43-101. For further information, please consult Midland’s website or contact:

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