



GreatWestern
MINERALS GROUP LTD

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GREAT WESTERN MINERALS GROUP EXTENDS EXPIRY DATES OF WARRANTS AND DEBENTURE

June 24, 2010 - Saskatoon, Canada. – Great Western Minerals Group Ltd. ("GWMG" or the "Company") announced today that it has extended the expiry date of an aggregate of 750,000 common share purchase warrants originally issued on June 27, 2008 in connection with the acquisition of Less Common Metals Limited (the "Warrants"). The expiry date of the Warrants has been extended from June 27, 2010 to June 27, 2011 and all other terms of the Warrants remain unamended, including the exercise price of \$0.30. The amendments to the Warrants are subject to the approval of the TSX Venture Exchange.

GWMG also announced that it has extended the term of a secured convertible debenture with an initial principal amount (the "Principal Amount") of USD\$181,370 (the "Debenture") originally issued on August 25, 2009. The term of the Debenture has been extended to November 25, 2010. The Principal Amount has been increased to USD\$190,438.50, representing a 10% premium (per annum) to the initial Principal Amount and remains convertible into common shares in the capital of the Company ("Common Shares") at the original conversion price of C\$0.20 per Common Share at the option of the holder. The Company has the ability to repay the Debenture without penalty at any time and the Debenture has no cash interest component. The amendments to the Debenture are subject to the approval of the TSX Venture Exchange.

Jim Engdahl
President and CEO

Great Western Minerals Group Ltd. is an integrated Rare Earths producer. Its specialty alloys are used in the battery, magnet and aerospace industries. Produced at the Company's wholly-owned subsidiaries Less Common Metals Limited in Birkenhead, UK and Great Western Technologies Inc. in Troy, Michigan, these alloys contain aluminum, nickel, cobalt and Rare Earth Elements. As part of the Company's vertical integration strategy, GWMG holds an option with respect to the former Rare Earths producing Steenkampskraal mine in South Africa as well as seven Rare Earth exploration and development properties in North America.

For further information, please contact Dwight Percy, Manager of Investor Relations at (306) 659-4500. Email inquiries should be made to info@gwmg.ca. The Company's website is at www.gwmg.ca. Inquiries by direct mail should be addressed to Great Western Minerals Group Ltd., 226 Cardinal Crescent, Saskatoon, SK S7L 6H8.

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.