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GREAT WESTERN MINERALS GROUP COMMENCES \$1 MILLION TRUE BLUE REE EXPLORATION PROGRAM

July 8, 2010 - Saskatoon, Canada. Great Western Minerals Group ("GWMG" or the "Company", TSX:V – GWG) today reported on the commencement of its Rare Earth Element (REE) exploration program at the True Blue Property located 55 kilometres south of Ross River, Yukon.

In March 2010, True North Gems Inc. (TGX) and Great Western Minerals Group Ltd. announced that TGX had granted GWMG an option to acquire up to a 65% working interest in TGX's True Blue property and Area of Interest in exchange for carrying TGX through to completion of a bankable feasibility study.

John Pearson, Vice-President, Exploration with Great Western Minerals Group said, "The purpose of the True Blue exploration program, in which GWMG has committed to spend \$1 Million in 2010, is to determine the surface dimensions of the currently known Rare Earth Element mineralization and identify new areas of mineralization in the area encompassed by the True Blue syenite and host rocks."

The exploration program commenced in mid-June and is scheduled to continue to late August, 2010. The exploration program will include the following:

- An evaluation of known REE showings through a program of geological mapping and soil geochemical sampling of the area around the showings, followed by a detailed mapping and systematic sampling of the showings,
- Geological mapping of the entire property,
- A low level, high resolution airborne magnetic and radiometric survey to be flown over the entire host syenite and its metamorphic aureole in order to assist in identifying other REE showings and to aid in the geological mapping of the property,
- Stream sediment sampling of the property in order to identify new areas of REE,
- Prospecting of the area around anomalies identified by the airborne geophysical survey and the stream sediment geochem survey, and
- Metallurgical testing of the REE showings including QEMSCAN to detail the REE mineral phases present and also preliminary metallurgical testing for extraction of the REE.

GWMG's Vice President Exploration, John Pearson, M.Sc., P.Geo., is the qualified person responsible for the technical data presented in this release.

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.

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parties. Forward-looking statements are based upon the opinions, expectations and estimates of management of GWMG as at the date the statements are made and are subject to a variety of known and unknown risks and uncertainties and other factors that could cause actual events or outcomes to differ materially from those anticipated or implied by such forward-looking statements. Those factors include, but are not limited to the satisfaction by GWMG of the conditions required to exercise the option, receipt of all required approvals and risks, uncertainties and other factors that are beyond the control of GWMG, risks associated with the industry in general, commodity prices and exchange rate changes, operational risks associated with exploration, development and production operations, delays or changes in plans, risks associated with the uncertainty of reserve estimates, health and safety risks and the uncertainty of estimates and projections of production, costs and expenses. In light of the risks and uncertainties associated with forward-looking statements, readers are cautioned not to place undue reliance upon forward-looking information. Although GWMG believes that the expectations reflected in the forward-looking statements set out in this press release or incorporated herein by reference are reasonable, it can give no assurance that such expectations will prove to have been correct. The forward-looking statements of GWMG contained in this News Release, or incorporated herein by reference, are expressly qualified, in their entirety, by this cautionary statement and the risk factors contained in GWMG's current annual information form.