

# GREAT WESTERN MINERALS GROUP

## CORPORATE OVERVIEW

### INTRODUCTION

The global Rare Earth Elements (REE) sector is a multi-billion dollar industry. *Great Western Minerals Group* (GWMG) is taking a leadership role in a potentially lucrative niche sector populated with only very few participants and no competitors with GWMG's unique "Mine-to-Market" Strategy (M2M).

### THE CHALLENGE FOR REE USERS

#### An Impending Rare Earth Element Shortage

Global industry giants across a wide range of sectors are extremely concerned about the impending shortage of REE. Those giants *need* REE to maintain leadership in their respective sectors. China currently controls the REE sector as the primary supplier to the global industry, producing over 97% of the world's supply of REE. In 2012-2013, the demand for REE is expected to exceed supply as China is expected to consume all that it produces. Lack of access to secure supply could be economically crippling for many global industries that rely on REE.

### THE SOLUTION

#### Great Western Minerals Group

GWMG is in the right place at the right time, with an experienced Management Team, exploration and development properties in Canada and the US, along with value-added production facilities of **Great Western Technologies** in Troy, Michigan and **Less Common Metals** in Birkenhead, UK.

### THE RARE EARTH ELEMENTS

The Rare Earth Elements (REE) are also known as the Lanthanide Series of Elements and include the 15 elements in the Lanthanide series, plus Yttrium and Scandium. REE are used in the manufacture of a wide range of products including electronic devices, electric and hybrid vehicles, wind turbines, medical devices (eg, MRIs), defense systems and many other advanced technology applications. REE also have many industrial uses in magnets and as catalysts and are used in cutting-edge technologies such as super-alloys for the aerospace and defense industries.

### INDUSTRY OVERVIEW

The major consumers of REE are Southeast Asia (Japan (22%), Korea, Thailand, China (60%)) and the USA (9%). The USA currently imports nearly 100% of its REE requirement. The gross value of REE production worldwide is estimated at US\$1.8 billion. According to the USGS, the trend is for a continued increase in the use of REE in many applications, especially automotive catalytic converters, permanent magnets, and rechargeable batteries. Demand for REE is

expected to grow from 132,500 tonnes in 2008 to 207,500 tonnes in 2013.

One of the key drivers for the increased demand is the hybrid vehicle markets. The three major manufacturers of hybrids are Toyota, Honda and Ford. General Motors is also advancing into the electric vehicle market with the introduction of the Chevy Volt.

The battery sector is also a big user of REE. Nickel-Metal Hydride (NiMH) alloys are a vital component in the rechargeable battery units of hybrid vehicles. The REE content of a NiMH battery for hybrid vehicles is now estimated to be about 20 kg, most of which is Lanthanum mischmetal.

There has been the rapid growth in demand for Neodymium-Iron-Boron (NdFeB) magnets, which has exceeded 15% per year. The permanent magnets used in the motor and generators in hybrid vehicles require between 1.5 kg and 4 kg of sintered NdFeB per vehicle. In the newer models of hybrid vehicles, the REE content is now estimated to be approximately 30 kg per vehicle, due to the increased number of motors and other magnetic devices used in the vehicles.

## **KEY PARTICIPANTS, COMPETITORS AND PEERS**

In the global REE exploration sector there are only a handful of active private or publicly-traded companies. These include *Avalon Ventures Ltd.* (Canada), *Lynas Corporation Ltd.* (Australia), and *Arafura Resources Ltd.* (Australia). *Molycorp Minerals LLC* is a major, private company that recently purchased a proven primary REE resource - the Mountain Pass rare earth operation in California..

China is a significant producer of many REE products but LCM remains well ahead of the capabilities of any of the Chinese alloy producers. There are other producers of REE products worldwide, but LCM also has several advantages over those competitors.

## **COMPANY OVERVIEW**

In addition to its four exploration projects in North America, GWMG owns production facilities in the United States and the United Kingdom which provide specialized alloys and other products for a wide range of industries. GWMG has a knowledgeable, experienced Management Team, Board of Directors, and Advisory Board with extensive experience in all aspects of the business, including exploration and development, mining operations, specialized product development, sales and marketing. The Company has an established customer base of well-known, blue chip global users in the battery, magnet, aerospace and nuclear industries.

## **PROPERTIES**

GWMG has a portfolio of properties which also includes several base metals and strategic metals properties that the Company had acquired since inception.

**Hoidas Lake** is GWMG's initial REE project, located 50km, northeast of Uranium City in Northern Saskatchewan. This is an advanced property with a proven resource which is being further developed. A NI 43-101 Compliant Resource Report has been prepared and work

continues to advance this project. A Metallurgy Study is also underway to optimize previously defined processes, and examine new potential alternatives to the extraction of rare earths from the Hoidas Lake mineralization.

The Preliminary Economic Assessment Report (PEAR) is being developed and will be updated, based on results from metallurgical testing and the 2008 winter exploration drilling program. Completion of the current stage of the PEAR leading to a Hoidas Lake Feasibility Study is dependent upon the successful completion of metallurgical testing and optimization of defined processes. Permitting efforts would be initiated once the final feasibility study is completed and a decision to proceed with the project is made.

The **Deep Sands project** is a 168 km<sup>2</sup> (65 mi<sup>2</sup>), Iron and REE-enriched mineral sand in west central Utah. The project area is 190 km (120 miles) SW of Salt Lake City and about 135 km (85 miles) NW of Delta Utah. Two drilling programs have been completed and an evaluation of the data compiled is expected to be completed by year end, with the intention developing a NI 43-101 resource report.

The **Douglas River Property** consists of two claims (totalling 803 hectares) approximately 21 km south of the former Cluff Lake Uranium mine and approximately 420 km NW of La Ronge SK. Historic trench sampling yielded rare earth element grades of up to 10% yttrium with accompanying high grades of heavy rare earths (“HREE”) including Dysprosium with grades up to 0.89%. Dysprosium is the most sought after REE by the Japanese magnet manufacturers. The planned exploration program includes geological mapping, trenching, soil and litho geochemistry in order to identify drill targets.

The **Misty Property** consists of a single exploration license in northwest Manitoba approximately 20 km northwest of Lac Brochet, MB and 240 km NW of Lynn Lake, MB. In June 2008, GWMG entered into a C\$6 Million option agreement with CanAlaska Uranium whereby GWMG can acquire up to a 51% interest in CanAlaska’s Misty Project upon the completion of a prescribed exploration program.

## **VALUE-ADDED PROCESSING FACILITIES**

*Less Common Metals* is a profitable, leading global manufacturer and supplier of rare-earth-based alloys, high purity metals, and ultra-high-purity indium. LCM has established excellent long term relationships with a wide range of blue-chip customers who operate in technically demanding industries such as automotive, aerospace, nuclear and defense.

Other specialty alloys produced in Birkenhead include Neodymium-Iron-Boron and Samarium Cobalt alloys for the permanent magnet industry, magneto-optic and magnetostrictive materials, hydrogen storage systems, high purity Rare Earth metals, ultra high purity Indium, and master alloys used in the production of other specialty alloys. LCM manufactures approximately 20% of the estimated global consumption which is estimated at 1,000 tonnes per annum (tpa). Production at the Birkenhead Plant for the 30 June 2008 year end was 430 tonnes of alloy and metals. The plant has the capacity to produce approximately 1,110 tpa. LCM’s revenue for fiscal year ending June 30, 2008 was £9.6 Million (C\$ 19.1 Million), up from £5.4 Million (C\$10.5 Million) for fiscal year 2007.

**Great Western Technologies** is an ISO 9001:2000-certified research and manufacturing facility with state-of-the-art engineering technology for the production of REE materials, powders, and custom vacuum-grade specialty alloys. From its 12,000 ft<sup>2</sup> manufacturing facilities in Troy MI, GWTI produces a wide range of alloys utilizing rare earths and aluminum, copper, cobalt, iron, nickel and titanium. In addition, GWTI manufactures special alloys for the Battery Industry and Hydrogen Storage Applications. GWTI provides special processes for a wide range of applications.

GWTI is one of few facilities in North America that can produce ground powders in an inert environment, and has the capability to provide materials of exceptionally high purity with its vacuum melt furnaces. The GWTI plants have four hydrogen-safe areas that can be used to activate hydrogen storage materials.

## **GROWTH STRATEGY**

With its diversified business model and unique M2M strategy, GWMG has developed a growth strategy for exploration, mine development, and value-added product sales.

There are several ways in which GWMG continues to implement its growth strategy, including continued development of its existing properties through advanced exploration to increase its resource base, and potentially increasing production or extending mine life.

GWMG has well-defined criteria for evaluating new REE prospects as potential additions to its portfolio. Joint Venture Agreements or Option Agreements are effective ways to develop resources while mitigating risk. Such agreements can be terminated or allowed to lapse at any time, without incurring further expense, if the property does not show potential, even after a preliminary amount of work is completed.

GWMG is regularly approached by other exploration companies which are exploring for other metals, but discover REE in their assays. These companies may not have the expertise in developing this resource, but recognize the economic potential with the right partner. These also represent growth opportunities for GWMG.

**Growth Strategy - *Fast-Track Mine Development: Acquire Existing Mining Operations:*** GWMG has the expertise to conduct technical and economic evaluations of existing mining facilities in the rare earth sector, globally. Having ownership of its own value added facilities would place GWMG in an excellent position to consider re-commissioning such mines to accelerate access to a secure supply of REE. GWMG is currently evaluating some past producers of REE.

**Growth Strategy - *Strategic Partnerships: Alternative Sources of REE:*** Rare Earth Elements are commonly found as byproducts in several deposit types including uranium and cobalt deposits. In these deposits, REE are commonly discarded because the operating company does not have the knowledge of either the recovery or marketing of the REE. As a result there is an opportunity for GWMG to enter into mutually-beneficial Joint Venture agreements to recover the REE which could provide additional revenue for the operating company and a supply of REE for GWMG's processing facilities.

**Growth Strategy - Strategic Partnerships: End Users:** Several industrial end-users have approached GWMG to discuss strategic relationships to provide end users with access to REE from GWMG's operations. In general, these companies could provide capital to GWMG in return for an off-take agreement for specific rare earth products.

**Growth Strategy - Less Common Metals and GWTI:** The recent acquisition of LCM by GWMG creates an excellent opportunity for cross-selling and marketing for LCM and GWTI. In addition, LCM and GWTI will further expand their product development to introduce new products to its existing customers while expanding their customer bases.

## **SUMMARY**

Great Western Minerals Group and its value-added production facilities of Less Common Metals and Great Western Technologies are in the unique position of establishing themselves as global leaders in developing a rare earth industry outside of China. The global fundamentals point to an impending shortage of rare earth elements, which could potentially jeopardize the technological leadership held by many of the existing industry end users. Through the successful implementation of the Company's mine-to-market strategy, Great Western Minerals can establish itself in a leadership role and meet many of the demands for rare earth elements in many years to come.

### ***Forward Looking Statements***

*Certain statements in this document may include "Forward-Looking Statements". Forward-looking statements are based on current expectations, estimates, forecasts and projections of future company or industry performance based on management's judgment, beliefs, current trends and worldwide market conditions. Forward-looking statements include, but are not limited to, Great Western Minerals Group's continued advancement of its mineral exploration and development programs. When using this document, the words "potential," "anticipate," "forecast," "believe," "estimate," "expect," "may," "project," "plan" and similar expressions are intended to be among the statements to identify forward-looking statements. Although Great Western Minerals Group believes that its expectations reflected in these forward-looking statements are reasonable, such are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict, such as general market financial, economic, regulatory and political conditions. Actual outcomes and results may differ materially from what is expressed, forecasted or implied in the forward-looking statements. Great Western Minerals Group undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.*