



RESOURCES LIMITED

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Independent Study Concludes Automotive GHG Emissions Can Be Materially Reduced By Gossan's New Breakthrough Magnesium Production Process

April 23, 2012 – Gossan Resources Limited (GSS-TSX.V & GSR-Frankfurt/Freiverkehr & Xetra – WKN 904435) reports Process Research ORTECH (PRO) has conducted an independent Green House Gas (“GHG”) Emission Study of the Gossan-Zuliani Process for primary magnesium production. A dramatic reduction in carbon emissions is achieved by the high raw material utilization efficiency of the production process and the use of hydro-electricity, natural gas and high-purity dolomite. The study concludes that midsize car emissions could be reduced by almost 7% over the car's life expectancy (200,000 km) by lightweighting using magnesium produced by the Zuliani Process and that this technology is a new breakthrough magnesium production process. The Zuliani Process is a cost saving magnesium extraction technology being developed by Gossan which has been successfully demonstrated by thermodynamic modeling and bench scale testing. Subject to confirmation of the process on a commercial scale, the direct cost of magnesium ingot produced with the Zuliani Process is expected to be about 25-30% less than the direct cost of Chinese magnesium ingot landed in western markets.

The environmental Life Cycle Analysis (LCA) for Zuliani Process magnesium, as reported in the PRO Study is based upon the substitution of cast iron, steel and aluminum in mid-sized cars with magnesium at levels proposed in a comprehensive report by the United States Automotive Materials Partnership (USAMP). Based on the high efficiency of the Zuliani Process and using hydro-electricity and natural gas as energy inputs, Gossan magnesium ingot produced using the Zuliani Process has a Global Warming Potential (GWP – reported in kg CO₂ per kg Mg) of only 9.1. The GWP achieved through the Zuliani Process is 78% lower than the GWP for magnesium produced by the Pidgeon Process in China (GWP 43.3) and 28% lower than the average GWP for aluminum (GWP 12.7). The improvement of the GWP for magnesium production using the Zuliani Process has significant positive environmental implications.

The LCA for auto parts made with Gossan magnesium produced by the clean Zuliani Process shows that the cradle to grave break-even for GHG saved from the reduced vehicle weight is just over 69,500 km which would make magnesium the most environmentally attractive weight-saving material. At a vehicle life expectancy of 200,000 km, greenhouse gases from vehicles could be reduced by almost 7% and fuel efficiency would improve by an even greater amount.

A copy of PRO's report entitled “Lowering of CO₂ Emission for Magnesium Production by Gossan-Zuliani Process” may be found at: www.gossan.ca/projects/pdf/MgGHGReport.pdf

From an environmental and performance perspective, ultra-light magnesium components have the potential to significantly reduce vehicle weight which in turn has important implications for reducing emissions and improving fuel efficiency of combustion engines and increasing the range of electric vehicles.

The LCA analysis is based on the USAMP study which determined that a total of 159 kg of magnesium could be incorporated into the average North American car which represents an increase of 154 kg over today's average of 5 kg. USAMP estimated that a total weight savings of 227 kg could be realized by direct substitution weight savings of about 132 kg from replacing 226 kg of cast iron and steel and 59 kg of aluminum with 154 kg of magnesium. In addition, there will be secondary weight savings expected to be a further 95 kg as a result of vehicle redesign efficiencies using magnesium. The analysis also assumes SF₆ free, near net shape parts manufacturing and utilizes a model developed by D'Errico, Fare and Garces for determining a LCA when using magnesium alloy parts in transportation.

Magnesium alloys exhibit the highest strength to weight and stiffness to weight ratios in many structural applications and typically provide weight savings of between ~50-75% over conventional steel, ~40-60% over high strength "light steel" and ~20-35% over aluminum. In addition magnesium alloys also demonstrate excellent castability, fabrication characteristics and dent resistance.

Dr. R. Sridhar, Ph.D., and Dr. V. I. Lakshmanan, Ph.D., of Process Research ORTECH (PRO) of Mississauga, Ontario, supervised the study, "Lowering of CO₂ Emission for Magnesium Production by Gossan-Zuliani Process" and have reviewed the technical contents of this news release.

Gossan is developing the Zuliani Process for magnesium production and holds an option on the world-wide rights to the technology. In order to prove out the technology prior to commercialization, Gossan is undertaking a four stage evaluation process. Initially independent FactSage thermodynamic modeling was successfully used to verify the process fundamentals. The second stage which involved three phases of bench scale testing was successfully conducted at PRO. The third stage which is now being planned and sourced will involve large-scale batch and process testing. Thereafter a fourth stage of pilot plant testing will be required to demonstrate commercial viability. Gossan may seek a joint venture partner to assist in the pilot plant testing and subsequent commercialization of the process.

Based on the extensive bench scale trials and thermodynamic modeling completed to date and the dominance of Chinese Pidgeon Process magnesium (about 80% of world supply utilizing technology originally developed in the 1940's), Gossan expects commercialization of the Zuliani Process will provide the Company with a significant operating cost advantage in the North American and European magnesium markets.

Gossan holds a very-large, high-purity, at surface, magnesium-bearing dolomite deposit with a NI 43-101 Measured Resource that alone would be capable of sustaining a very substantial production facility of 80,000 tonnes of magnesium per year for about 30 years. Manitoba has abundant low-cost hydro-electricity.

On April 25-26, 2012, Dr. Zuliani will be delivering a paper, "Making Magnesium A More Cost & Environmentally Competitive Lightweighting Option" at the Global Automotive Lightweight Materials 2012 Conference in London, UK. Interested parties are invited to meet with Gossan management and Dr. Zuliani at Conference Booth 17. www.global-automotive-lightweight-materials.com

Gossan Resources Limited is engaged in mineral exploration and development in Manitoba and northwestern Ontario. It has a well-diversified portfolio of properties hosting gold, platinum group and base metals, as well as the specialty and minor metals, vanadium, titanium, tantalum, lithium and chromium. The Company also has a large deposit of magnesium-rich dolomite, the world-wide rights to the Zuliani high-efficiency magnesium production process, and a silica frac

sand deposit. Gossan trades on the TSX Venture and the Frankfurt/Freiverkehr & Xetra Exchanges and has 33,140,400 common shares outstanding.

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 news release.

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