

# GOSSAN RESOURCES LIMITED

404 - 171 Donald Street  
Winnipeg, Manitoba  
Canada R3C 1M4  
(GSS TSX-Venture)  
(GSR Frankfurt/Freiverkehr)

Phone: (204) 943-1990  
Toll Free: (800) 462-4283  
Fax: (204) 942-3434  
E-mail: [info@gossan.ca](mailto:info@gossan.ca)  
Website: [www.gossan.ca](http://www.gossan.ca)

---

NEWS RELEASE 07-08

## Gossan Announces Magnesium Thermodynamic Study Underway

May 24, 2007 – Gossan Resources Limited (GSS-TSX.V & GSR-Frankfurt/ Freiverkehr) advises that a chemical thermodynamic study of the Zuliani process to extract magnesium metal from dolomite is currently underway. Dr. Arthur Pelton of THERMFACT Ltd. and a Professor at Ecole Polytechnique in Montreal has been retained to conduct the study. THERMFACT is a co-developer of the world leading FactSage integrated thermodynamic databank system which calculates the conditions for multiphase, multi-component equilibria in complex gas-slag-metal systems.

The FactSage study will confirm the process thermodynamics for the Zuliani technology including the vapour pressure of magnesium as a function of process temperature and operating conditions, the slag – metal reactions and the formation of by-products.

Dr. Pelton is a co-founder of the FactSage system, which is among the world's largest database computing systems in chemical thermodynamics. FactSage has more than 200 industrial and 200 academic users worldwide. Dr. Pelton recently received a \$600,000 NSERC-CRD grant in collaboration with General Motors to develop databases for the thermodynamic and volumetric properties of magnesium alloys for purposes of evaluating the potential for new magnesium alloys. He also recently developed software dedicated to simulate the phase transformations during casting of magnesium alloys.

Dr. Pelton attended the University of Toronto where he earned three degrees culminating with a Doctorate in Metallurgy in 1970. Professor Pelton has received 22 awards for his work, including the Falconbridge Innovation Award (CIMM) in 1999. Dr. Pelton has been published in 218 scientific journals and has authored or co-authored over 95 engineering reports and contributed to thirteen books.

Over the past decade, magnesium metal markets have grown annually at double digit rates and prospects for continued growth are significant. A recently released report, "[Magnesium Vision 2020](#)" prepared by the United States Automotive Materials Partnership (USAMP) in cooperation with 61 members of the North American automotive magnesium industry including USCAR (a consortium composed of DaimlerChrysler AG, Ford Motor Company and General Motors Corporation) points to substantial future growth opportunities for magnesium in the automotive sector. While North American vehicles currently average 10-12 lbs of magnesium with select vehicles containing up to 35 lbs, [Magnesium Vision 2020](#) indicates that with the proper market infrastructure, the average magnesium content could increase to as much as 350 lbs by 2020 by replacing heavier components. At these magnesium levels, the report concludes that vehicle weight would be reduced by 500 lbs thereby significantly improving fuel efficiency and reducing emissions. To put this into perspective, the average North American vehicle currently contains about 260 lbs of plastics, 280 lbs of aluminum and 2150 lbs of steel/cast iron. A major conclusion of the study is that the magnesium industry requires a

North American based champion to promote magnesium within the auto sector as is the case with other more established materials. For further information refer to [www.gossan.ca/magvison.pdf](http://www.gossan.ca/magvison.pdf)

Gossan holds a large high-purity dolomite property at Inwood, Manitoba and is investigating opportunities for producing magnesium metal. The Company recently signed a Memorandum of Understanding defining the terms of a licensing arrangement for the Zuliani process, a new, high efficiency magnesium production process projected to significantly reduce the direct operating cost of magnesium metal production by as much as 25% compared to a typical Chinese plant. Chinese companies are strong competitors and currently produce approximately 80% of the world's magnesium metal. Over the past year, free market magnesium prices have increased sharply to approximately US \$2150 - \$2200 per tonne FOB Chinese port. Due to US import duties, the spot price in US markets is currently over US \$3200 per tonne. For further information refer to NR-07-02 dated March 16, 2007.

The US Geological Survey estimated world primary production of magnesium at 610,000 tonnes in 2005. Over the past 15 years, China has become the predominant supplier with production of 468,700 tonnes in 2005. Magnesium can be produced using a number of different processes and inputs. It is primarily used as an alloy with aluminum and as a structural metal with die casting for the auto industry being the fastest growing component. Magnesium is also used to remove sulfur in the production of iron and steel. Magnesium is the lightest of all the commonly used metals and may be substituted to some extent for aluminum and zinc in castings and wrought products. The price of magnesium has firmed during the past year with 2006 year end free market prices in Canada and Europe ranging between US \$2,000 to \$2,100 per metric tonne. Corresponding prices in the USA were \$2,975 to \$3,200 per tonne being significantly higher due to varying tariff protection against certain Chinese and Russian producers. The free market and USA magnesium prices are expected to continue to firm due to increasing substitution demand resulting from the high price for aluminum which is currently US \$2,800 per tonne as posted by the LME. Demand for magnesium is expected to remain strong particularly from the auto industry where high gasoline prices are leading to the design of lighter more fuel efficient vehicles.

Gossan Resources Limited is engaged in mineral exploration 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, tantalum, lithium, chromium, titanium and vanadium. The Company also has a large deposit of magnesium-rich dolomite and a silica sand prospect. Marathon PGM has recently optioned Gossan's nickel-PGM property on the Bird River Sill. Gossan trades on the TSX Venture and the Frankfurt/Freiverkehr & Xetra Exchanges and has 28,787,900 common shares outstanding (38,676,576 shares fully diluted).

- 30 -

For further information please contact:      Douglas Reeson, Chairman & CEO  
Gossan Resources Limited  
Tel: (204) 943-1990

**The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this news release.**