104P 005

820505

To: Gerald German
From: Dani Alldrick
Date: July 16, 1999

Serpentine rock contains 24% magnesium (Mg), so 20 million tons of serpentine contains 9.6 billion lbs of Mg. To get 8 billion lbs of Mg metal would require a recovery efficiency of 83 %. I don't know what recovery Noranda has reached in their new Magnola plant in Quebec, but I will continue to investigate this.

The tailings pile at Cassiar is listed in MINFILE at 17,000,000 tonnes (18.74 million tons) at a grade of 23.5% Mg. The remaining asbestos fibre content in these already-processed serpentine tailings is given as 4.2% asbestos. There may be other minor piles of ore material or tailings around.

Noranda has spent > 10 years perfecting their proprietary Mg-refining process to recover Mg from asbestos tailings - so far they have an operating pilot plant only, although full production is scheduled to begin later this year. So any efforts of independent companies to `duplicate' the invention of a similar process in BC must be viewed as a very long-term project.

The market for magnesium is forecast to grow steadily for the next several years (60% increase by 2005 in the most optimistic forecast). The main application for Mg is as an alloy of aluminum. This Al-Mg alloy can replace steel in car bodies (e.g. the new aluminum Audi; and all Range Rovers; Land Rovers, the original VW beetle). So the financial backing of Hyundai and Aluminum of Korea is a good, credible fit for this project.

Speaking of credibility, I assume your are very familiar with CF's CV? And his career-long reliance on major government subsidies.

Despite the timeliness (`trendiness') and plausibility of this proposal, somehow it still reads a lot like VSEA's grandiose arena scheme.

Important points among the attached pages are highlighted - I will continue to search for the recovery efficiency of the Noranda process.

I passed your query about the status of the original asbestos recovery proposal along to Paul Wojdak - I can find no info about this.

CASSIAR MINES & METALS INC.

777 Bay Street, Suite 1910
Toronto, Ontario M5G 2C8
Tel: (416) 204-1455
Fax: (416) 204-1450

Press Release

Contact: Brian Smith
Phone: (416) 368-8998

FOR IMMEDIATE RELEASE
July 7, 1999

TSE SYMBOL (CIR)

Cassiar Magnesium Metal Project
Joint Venture with Aluminum of Korea Ltd. - Hyundai Group

Toronto, July 7, 1999. Cassiar Mines & Metals Inc. (CIR-TSE) today announced that it has executed a Memorandum of Understanding with **Aluminum of Korea Ltd., a Hyundai Group** company, for the development of the **Cassiar Magnesium Metal Project** located in British Columbia, Canada. The Cassiar site potentially will produce up to 200 million pounds of magnesium metal product annually. Aluminum of Korea Ltd. will be entitled to buy as much of the product as it may require, with the remainder to made available for sale to international markets.

Aluminum of Korea Ltd. is the major supplier of metal products to the Hyundai Motor Company and Kia Motor Company of Korea. In accordance with the terms of the Memorandum of Understanding, Aluminum of Korea Ltd. is able to acquire a 35 per cent interest in the project in conjunction with an initial U.S.$25 million financing under the arrangements, and ultimately may acquire a 65 per cent interest by providing the additional project funding.

The Memorandum of Understanding between the Company and Aluminum of Korea Ltd. is subject to completion of the formal agreement and requisite approvals including their respective Boards of Directors.

"Following the completion of this agreement, the potential of the Cassiar property is about to be realized," said Clifford H. Frame, Chairman, Cassiar Mines & Metals Inc. "This is a major development for the economy of Northern B.C."

The Cassiar magnesium metal resource is situated on the Cassiar plant site in northern British Columbia, Canada. The magnesium resource comprises 20 million tonnes of stored serpentine materials containing eight billion pounds of recoverable magnesium metal. The scope of the development program contemplates the construction of a magnesium metal production facility in British Columbia with an annual capacity of 150 million to 200 million pounds of magnesium metal. The total capital cost of the facility will be in the order of U.S.$600 million. First production under the development plan is projected to occur in early 2003.

The companies propose to proceed with the Cassiar magnesium development plan in stages. The first stage will be the completion in 2000 of the full scale bankable feasibility report costing an estimated U.S.$25 million, which will be followed by engineering, project financing,

20 m tons ≡ 40 billion lbs, and asbestos is 23% Mg
So 20 m te of asbeste contains 9.2 billion pounds of Mg in tat
To get 8 b. lbs an Mg of product requires a recovery efficien of 87%

Q - does it grade ore assayable?

marketing, permitting, construction and commencement of operations. Full-scale commercial operation is projected for late 2003.

Cassiar Mines & Metals Inc. and its consultants have carried out preliminary engineering and economic investigations and tests to interpret requirements for the design of the plant. The preliminary work has yielded positive results with respect to the potential viability and world competitiveness of the Project. The location of the magnesium project in British Columbia is a major advantage, in that B.C. has world-competitive cost structures, experienced and efficient management and labour resources, world-class infrastructures and communications and a stable political environment.

Magnesium metal is an ultra light strong metal with exceptional engineering qualities. The metal is lighter in weight than aluminum with higher strength characteristics. Magnesium metal is used as an alloy with aluminum to increase strength, decrease weight, improve corrosion resistance and meet modern engineering specifications and requirements in light metal applications.

Magnesium metal is also one of the fastest growing metal market commodities in the world. Industry projections forecast a continuing and growing demand and a stretched supply situation into the next century. The magnesium market is driven by demand in the automotive, aeronautical and canning sectors, which use the metal to improve the strength, appearance and performance of machine parts and trim. In essence magnesium is used to lighten the weight of vehicles and airplanes without the loss of strength and durability.

"The fastest magnesium market growth sector is in the automotive industry," said Kenneth H. Bates, President, Cassiar Mines & Metals Inc. "Consumption of magnesium in automobiles increased 137 per cent between 1991 and 1997 and continues at an annual rate of 10 per cent."

In light of developments and projections in the demand for magnesium metal, major automotive manufacturers have recently moved to secure marketing positions with existing and planned major new projects in Canada, Australia, Israel and the U.S.A. Market reviews by the Company last year indicated that even if the presently projected expansion and new project developments in the world were all brought on stream as planned, there will still be a significant shortfall in world supply of magnesium metal by 2005.

Aluminum of Korea Ltd. is a subsidiary of the Hyundai Group, and is involved in the aluminum and aluminum alloy businesses. It supplies specialized aluminum alloy materials for the automobile industry in Korea, mainly to Hyundai Automobile Co. and Kia Motor Co.

Cassiar Mines & Metals Inc. (formerly Minroc Mines Inc.) is a Canadian owned mining and metals company whose major interest is the Cassiar Mine in northern British Columbia, a traditional producer for over 38 years of premiere quality chrysotile fibre now under rehabilitation for startup by November 1999.

CASSIAR Mines & Metals Inc.

Clifford H. Frame
Chairman & CEO

THE TORONTO STOCK EXCHANGE HAS NOT REVIEWED AND DOES NOT ACCEPT RESPONSIBILITY FOR THE ADEQUACY OR THE CONTENTS OF THIS NEWS RELEASE