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RE: Alaska-Canada Rail Link – World Commodity Markets

The success of the proposed Alaska-Canada Rail Link will depend, in part, on the potential to rail-transport regionally produced commodities to domestic and foreign markets. Indeed, the very existence of the railway may serve to stimulate production of various resource commodities in the contiguous region.

The demand for regionally produced commodities will depend on world market conditions and the ability to produce and transport commodities under a competitive cost structure.

In the catchment area for the proposed rail line the main mineral activity relates to precious metals like gold and silver and base metals like iron, zinc, lead, copper, molybdenum and tungsten. From a railway perspective the main traffic opportunities relate to base metals in the raw or semi-processed form. Precious metals are generally smelted locally and are capable of absorbing the cost of more expensive transport alternatives.

There are also numerous occurrences of coal in the region that offer potential for export, given the availability of required transportation infrastructure to access mines and move product to market.

The oil and gas sector in the region continues to develop and, for example, exploration is occurring in northern and southeastern Yukon. The promise of northern pipeline

development will stimulate even more exploration by providing the primary means for moving product to market.

The Yukon forest products sector has experienced low levels of production over the last several years, due mainly to a declining export trade in timber and a relatively flat performance in value-added production.

Future Commodity Markets

It is virtually impossible to predict commodity markets ten years into the future, when the proposed Rail Link is assumed to commence operations.. However, it is instructive to examine current market trends and the effect they may have on demand for locally produced commodities in the longer term.

Copper:

In early May 2006 the price of copper for three-month delivery hit a new record high of \$7,465 per tonne.

Soaring prices for refined copper have caused inventories to be drawn down to very low levels. May inventories represent about a two day supply for global consumption.

The upward pressure on prices is arising from dramatically increased demand from rapidly evolving economies like China, India and Russia. The tight supply situation is expected to continue throughout most of 2006 and possibly into 2007.

Higher prices are also being fuelled by labour unrest at copper mines in Mexico, Chile and elsewhere. Chile is the world's largest producer of copper.

To avoid the higher prices China is drawing down its existing stocks of refined copper and increasing smelting capacity to enhance its ability to process refined copper from raw concentrates.

The development of hybrid cars in response to soaring energy prices is creating an entirely new market for copper that will likely extend well into the future. Hybrid cars combine electric motors with internal combustion engines as a means of effecting energy savings. While conventional cars contain an average of 27.6 kgs of copper, hybrid cars use twice this amount for cabling and motor windings.

Zinc:

Zinc is used as an anti-corrosion agent in the production of galvanised steel.

Over the past year the price of zinc for immediate delivery has more than doubled to \$3,466.50 U.S. per ton.

There is a global shortage of zinc and little relief is in sight. Again, a major driving force is China, which became a net importer of zinc in 2004 for the manufacture of rust-resistant materials in a rapidly growing market for steel buildings, cars and appliances.

Mine development takes time and it is unlikely that any new mines will materialize in the short to medium term.

The supply problem and lack of investment in new capacity is the result of lower prices historically that caused mine closures and bankruptcies amongst producers. More recently, the situation has been aggravated by labour disputes at mines in Mexico and Peru.

Stockpiles of zinc have drastically declined and it is expected that demand will exceed supply throughout the remainder of 2006 and probably into 2007.

Lead:

Lead has also experienced major price gains as demand outpaces supply.

China is once again the major driver as it consumes increasing amounts of lead to meet a booming demand in car manufacturing, building construction, battery production and telecommunications.

Historically low prices for lead and a negative environmental image for the metal have combined to discourage the development of new mines. And it takes many years to prove up a lead deposit, gain government approval and develop the necessary mine infrastructure before new lead production can be brought on line.

In short, an underlying supply problem and a growing Asian market, particularly for cars, will virtually assure a sustained longer-term market for lead.

Iron:

The current buoyancy in iron ore markets is also the result of China's rapid industrialization. The Chinese market offers enormous growth potential because of its sheer size and the opportunity for major increases in per capita consumption of steel.

Between December 2001 and December 2004 the price per tonne for hot rolled coil steel, an important market indicator, increased from \$247 to \$648 (U.S. dollars). By January 2006 the price had fallen back to \$510 per tonne.

In 2003, the top three producing countries of iron ore were China, Brazil and Australia.

In 2005, higher prices caused the world's top iron ore producers - BHP Bilton, Rio Tinto and Companhia Vale do Rio Doce – to announce major increases in production.

The Chinese Government recently announced controls on iron ore imports as a means of bringing order to China's industrial development.

It is generally expected that demand for iron ore will exceed supply until 2007 or 2008, when the combination of new production and government import restrictions are expected to have a moderating effect on the market.

Coal:

According to the U.S. Energy Information Administration, world coal consumption is expected to increase from 5,262 million tons in 2002 to 7,245 million tons in 2015, representing an average annual growth rate of 2.5 percent. Between 2015 and 2025 coal consumption is expected to grow at a more modest rate of 1.3 percent and reach 8,226 million tons.

Worldwide, 65 percent of coal was consumed by the electricity sector, 31 percent by industry and four percent by residential and commercial users.

'Although coal use is expected to be displaced by natural gas in some parts of the world, only a slight drop in its share of total energy consumption is projected by 2025. Coal continues to dominate electricity and industrial sector fuel markets in emerging Asia.'

'Coal is expected to remain the fuel of choice in China's rapidly expanding industrial sector.' Between 2002 and 2025 coal's share of China's industrial energy consumption is expected to increase from 50 percent to 55 percent. Over the same period coal's share of consumption in the rest of the world is expected to decline from 15 percent to 13 percent.

Coal can vary in quality, depending on heat, sulphur and ash content. At the top of the spectrum is bituminous coal used in the manufacture of coke for steelmaking. At the bottom end is lignite or brown coal, which has a much lower Btu content.

World coal consumption consists of two markets, the steam coal market for electricity and various industrial applications and the coking coal market for steelmaking.

From an international trade standpoint the main growth has occurred in steam coal while trade in coking coal has remained relatively flat because of improved process efficiency and greater use of electric arc furnaces (not requiring coal coke). Between 2003 and 2025 world steam coal trade is expected to grow at an average annual rate of 1.5 percent. Over the same period world coking coal trade is expected to increase by 1.3 percent annually.

Much of the coal in Yukon – Bonnet Plume, Division Mountain, Whitehorse Coal - is low sulphur and suitable for power generation.

Molybdenum:

Molybdenum is used mainly in the manufacture of steel, for example pipe for oil and gas pipelines. It is also used in making catalysts for chemical applications, such as the control of emissions.

There are numerous molybdenum deposits in Yukon.

Between 1990 and 2005 the global market for molybdenum grew at average annual rate of 4.3 percent, compared to 2.9 percent in average GDP growth. China's consumption of the metal doubled between 2001 and 2005.

Codelco in Chile and Phelps Dodge in the U.S. are the biggest mine producers of molybdenum and account for one-third of world production. Rio Tinto is the third largest producer and doubled its mine output in 2005.

In March 2004, the price of molybdenum started to rise dramatically because of increased demand and limited world 'roasting' capacity. By May 2005 the price had peaked at \$40-50/lb.U.S., compared with an average price of \$4.50/lb. during the previous decade.

Prices throughout 2006 are expected to be somewhat lower than in 2005 but nowhere close to pre-2004 levels. Prices will be sustained by limited roasting capacity and strong demand from markets like China. No major additions to roasting capacity are expected to come on line before 2009.

Tungsten:

Over half of world tungsten demand is for wear resistant materials used in mining, metalworking and the construction industries. Another 25 percent is used in the production of various steels and alloys.

Between January 2004 and January 2006 the price of tungsten increased from \$65 to \$290 per metric tonne unit (MTU).

The world demand for tungsten is less than current mining production, with the difference being met from stockpiles.

China represents a burgeoning market for tungsten and is now the world's biggest consumer. Russia's former large stockpile is now almost fully depleted. Demand is being fuelled elsewhere by the growth of the world's major economies.

In the western world mining operations are mainly confined to the Panasqueira mine in Portugal and the **Cantung mine recently re-opened in Canada (on the Yukon-NWT border).**

A major supply shortfall could occur in the next couple of years that may have to be met from mining operations in the free world.

Conclusion:

Overall, there appears to be a strong export market for commodities that are found in abundance in Yukon and Northern B.C., particularly in the base metal sector. Much of this demand is being fuelled by emerging economies like China and India and export markets are likely to remain strong well into the future as per capita consumption in these countries moves to levels that prevail in the developed world. However, the extent to which Yukon and Northern B.C. will benefit from this robust demand will depend on the ability of producers to access resources and move product to market cost-effectively.