



## MEMORANDUM

**TO** Rick Schryer - Fortune Minerals Limited

**DATE** 22 February 2012

**CC** Jen Gibson

**FROM** Ross Mitchell

**PROJECT No.** 09-1373-1004.9600

**UNDERTAKING #11**  
**CASE STUDIES OF COMMUNITIES FROM SEASONAL TO ALL-SEASON ROADS**

During Day 3 of the Technical Sessions for the NICO Project, the Mackenzie Valley Environmental Impact Review Board and the Tłı̄ch̄ Government asked Fortune Minerals Limited (Fortune) to provide any proxy studies or case studies of communities that have previously been seasonal access only where new all-season roads went in, and the effects on those communities.

The following case studies are provided for communities that have gone from seasonal access to all-season access and the effects on the communities.

- 1) AMEC Earth & Environmental. 2010. Trans Labrador Highway Transportation Impacts and Business Opportunities Project. St. John's, NFLD, Canada. Electronic document, available at: <http://www.nedc.nf.ca>. Accessed 14 February 2012.

This report explains how the Trans Labrador Highway increased people traffic between the towns along the highway, increased the rate of modernization of the towns, and increased the quality of life for the residents of the towns. The new highway also increased the amount of goods being transported to and from Labrador. In general, post-construction impact studies indicate that improved roads and linkages may do the following:

- reduce or eliminate many previous weather and seasonal delays;
- reduce operating vehicle costs leading to lower prices for freight and passenger services;
- increase traffic flow at rates higher than before the improvement, particularly among larger, more efficient trucks;
- increase substantially the supplies provided by road services, especially road passenger and carpool vehicles offering frequent service, bus services, freight delivery and courier companies;
- increase ownership of motorized vehicles, both cars and trucks;
- decrease drastically the access time by the rural population to regional centres for community services (e.g., health, education, social services);
- increase rapidly the rate of modernization including increased technological capacity, delivery of fresh produce, delivery of large items by tractor trailer that previously came by boat, accessibility to specialized health care at regional centres, employment opportunities with the Department of Transport, regular mail delivery, contracts to local business; and
- improve the overall quality of life of citizens in communities linked directly to the roads.



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- 2) Environmental Impact Statement for Mackenzie Gas Project. 2004. Volume 6, 9-31. Electronic document, available at:  
<http://www.mackenziegasproject.com/theProject/regulatoryProcess/applicationSubmission/Applicationscope/EIS.html#one>. Accessed 14 February 2012.

This article explains the cumulative effects (economic, infrastructure, community, family, land, and heritage) of the Mackenzie Gas Project on 32 communities in Northwest Territories (NWT) and Alberta along the Mackenzie River. The article explains that the Mackenzie Gas Project would not significantly contribute to the cumulative socio-economic effects of the Northern rural communities and predicts similar results for other large projects.

- 3) General Electric Canada Inc. 2011. Towards a Remote Communities Investment Strategy for Canada: Shaping Economic Growth in Canada's Remote Communities. Electronic document, available at:  
<http://www.remotecomunities.ca/en/>. Accessed 14 February 2012.

The report explains the potential economic opportunities of extracting non-renewable resources near limited access rural Canadian communities and also the existing barriers that remote communities face. Some of the benefits include modernized infrastructure and effective and efficient transportation. Report also highlights some rural Canadian success stories such as the town of Prince Rupert, Baffin Island and the province of New Brunswick.

- 4) GeoNorth Limited and Golder Associates. 1999. Mackenzie Valley Highway Extension: Scoping, Existing Information and the Regulatory Regime. Electronic document, available at: <http://www.dot.gov.nt.ca/>. Accessed 14 February 2012.

This report explains the many impacts of building permanent roads between remote towns in the NWT that were initially seasonal access only. Some towns were in favour of the highway due to the potential positive economic impact, while other towns were not in favour due to the potential social problems which can arise.

- 5) Infrastructure Canada. 2005. Planning for a Soft Landing: Non-Renewable Development and Community Infrastructure in the Northwest Territories. A Researcher Backgrounder Prepared for the Experts Workshop on Northern Communities: Boom, Bust and the Role of Infrastructure, Norman Wells, Northwest Territories. Electronic document, available at: <http://www.maca.gov.nt.ca/>. Accessed 14 February, 2012.

The report explains how non-renewable resources development affects rural communities in the NWT in terms of modernizing public infrastructure. The article focuses on the boom-bust phenomena of non-renewable resource based towns and the importance of infrastructure to be more resilient.

- 6) International Finance Corporation, World Bank Group. 2009. Projects and People: A Handbook for Addressing Project-Induced In-Migration. Washington, DC. Electronic document, available at: <http://www.ifc.org/>. Accessed 14 February 2012.

Guidebook explaining the positive and negative impacts of in-migration due to economic opportunities associated with new projects and new infrastructure in the developing world. The positive impacts were mostly seen to be economic in nature, as well as on improving quality of life. The negative impacts were



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mainly environmental as well as people's health. Concerning roads, the positive impacts due to road construction explored in the handbook are as follows:

- increased links to mainstream economy;
- increased local skills base;
- business development opportunities;
- employment creation;
- increased local labour pool;
- opening of new markets for local products and services;
- increased accessibility and availability of goods and services;
- alternate livelihood opportunities;
- improved local wage and income levels (including opportunities for local sourcing and higher prices obtainable for local products);
- increased local tax revenue levels;
- increased individual, household, and community empowerment stemming from increased income and wealth;
- improved local training and skills development opportunities;
- monetization of remote rural economies, improving purchasing power and increasing trade;
- opportunities to build community organizational structures;
- improved access through development of road systems;
- improved information and communication;
- improved housing, water, and sanitation;
- improved access to and expansion of infrastructure, public services, and utilities (health, education, waste management, electricity, water supplies, telecommunications);
- increased attention and input by government authorities, non-government organizations, etc.; and
- increased political power.

The negative impact categories due to road construction explored in this handbook include the following:

- environmental;
- infrastructure, service, and utilities;
- local economy and livelihood strategies;



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- health;
- social dynamics;
- project closure; and
- project security.

- 7) Mackenzie Valley Environmental Impact Review Board. 2008. Report of Environmental Assessment and Reasons for Decision on Tamerlane Ventures Inc.'s Pine Point Pilot Project EA0607-002. Electronic document, available at: [http://www.reviewboard.ca/registry/project.php?project\\_id=38](http://www.reviewboard.ca/registry/project.php?project_id=38). Accessed 14 February 2012.

This report explains the socio-economic impacts of northern rural communities due to a new mining project (underground mining operation to extract and initially process a 1 000 000 tonne lead/zinc ore deposit), including in-migration and new infrastructure. It considers the likely amount of in-migration to the Town of Hay River and associated social impacts. The Review Board noted that in-migration effects in the Town of Hay River are expected to be substantial over 2 years, approximately 5% growth over the community's current population of about 4000. The developer predicted that in-migration, along with increased overall economic activity associated with the project, will not have any adverse impact on community infrastructure or social service demands, nor will it have a measurable impact on inflation.

- 8) Murauskas, G.T., M.B. Green, and R.M. Bone. 1986. Modeling Changes in the In-Migration Patterns of Northern Saskatchewan Communities: A Log-Linear Approach. Montreal, Quebec, Canada. Electronic document, available at: <http://www.erudit.org/>. Accessed 14 February 2012.

This article explores in and out-migration during different time periods in northern Saskatchewan and the factors that affected in-migration up to the mid-1980s. The article talks about how the provincial highway infrastructure was greatly improved in the North which significantly improved mobility between the towns.

- 9) NAHO (National Aboriginal Health Organization). 2008. Resource Extraction and Aboriginal Communities in Northern Canada Cultural Considerations. Ottawa, Ontario, Canada. Electronic document, available at: <http://www.naho.ca/documents/naho/english/>. Accessed 14 February 2012.

This report explains how resource development affects rural First Nations communities by creating new land use patterns and the influx of immigrants to the northern rural population. The areas of concern are protecting traditional knowledge, traditional economies, access to traditional resources, diet and nutrition, and cultural continuity.

- 10) PROLOG Canada Inc. 2006. Commercial Vehicle Traffic Forecast, Mackenzie River Crossing, Fort Providence NWT. Electronic document, available at: <http://www.dot.gov.nt.ca/>. Accessed 14 February 2012.

A technical report showing that a permanent bridge over the Mackenzie River near Fort Providence, NWT would be better than the existing ferry service and ice road. The bridge would allow for increased traffic, thus generating both population increase and economic growth to the region. No comment on the negative effects.



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- 11) Sumi, L., and S. Thomsen. 2001. Mining in Remote Areas: Issues and Impacts. Environmental Mining Council of British Columbia. Ottawa, Ontario, Canada. Electronic document, available at: <http://www.miningwatch.ca/>. Accessed 14 February 2012.

This article explains the effects of mining in remote Canadian communities with respect to environmental, infrastructure, economic, and social impacts. The article presents mostly negative effects on the environment and local wildlife due to increased land use, road construction, and in-migration.