CONSULTING

Alaska Canada Rail Link

Integrated Traffic Forecast

Work Package: A-1&2 (G)

June 6, 2006

Suite 701, 9707 – 110 Street
Edmonton, Alberta T5K 2L9

1-866-246-6287 (toll free)
1-780-447-2111 (office)
1-780-451-8710 (fax)

www.qgiconsulting.com

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Suite 701
9707 – 110th Street
Edmonton, AB
T5K 2L9
Phone: (780) 447-2111
Fax: (780) 451-8710

To: Kells Boland – Project Manager - Alaska-Canada Rail Link

Subject: Work Packages A1 (g) and A2 (g) – Integrated Traffic and Revenue Forecasts

Attached is the report of QGI Consulting for the above noted work package within the market analysis phase of the ongoing feasibility study for the proposed Alaska-Canada Rail Link.

The principal objectives of this work assignment were to:

- Develop integrated volume and revenue forecasts for inbound and outbound rail traffic that could potentially move via the proposed Alaska Canada Rail Link; and
- Identify areas of key risk and issues for further analysis;

The analysis and forecast traffic flows and revenue streams contained in this submission have been developed using the data tables and analysis developed by QGI and other consultants engaged by the Alaska Canada Rail Link Study in the completion of fifteen (15) preceding work packages.

The specific methodologies utilized in developing the forecast volume and revenue scenarios are summarized in this report and documented in greater detail in the individual consulting reports prepared in support of this report.

Sincerely,

Milt Poirier
Partner
QGI Consulting Ltd.

Executive Summary

This report provides a view of integrated tonnage and revenue forecasts for the Alaska Canada Rail Link railway. The forecasts presented in this report and in the accompanying source documentation constitute base or Tier 1 forecasts developed through the amalgamation of preceding work undertaken by members of the broader consulting team.

Although drawn from preceding work we note that that the initial base forecasts have been modified in some aspects to reflect the outcome of the initial review completed by the financial consultants retained to develop the investment model and business case. Most notable among these modifications are:

- a change in methodology for assessment of the viability of mineral deposit traffic focusing on net value of concentrate shipped as opposed to net value of ore mined;
- a change in the timing of traffic volumes for mineral exports to reflect the staggered development of individual mine start ups based on current status of feasibility studies and preliminary exploration;
- a change in the annual shipment volumes for individual mines for mineral exports and inbound industrial goods to support mining operations to reflect estimated shipping patterns for actual mine life as opposed to a thirty year annualized view of shipments; and
- incorporation of the market share expected to be captured and the rate of market share growth for intermodal traffic.

On this latter point it is noted that two separate forecast views have been developed to reflect a difference in the level of market share to be captured for intermodal traffic that currently moves to the Alaska market using water based transportation from the U.S. Pacific Northwest. It is further noted that as this report is submitted the financial and investment case analyses are not yet complete. These analyses include the assessment of so-called Tier 2 and Tier 3 traffic volumes and revenues related to the potential future shipment of refined metals and processed iron ore from Yukon and Alaska origins to export markets. The analysis of these potential volumes and revenues is external to the work conducted by QGI Consulting and these values are not included in this report.

While preliminary analysis in both the market and technical phases of the project has evaluated multiple route options this forecast reflects a single network definition. The selected network design connects with Canadian National Railways' (CN) main line at New Hazelton, British Columbia in the south, moves northeastward through Watson Lake, YT, on to Carmacks, YT and connects at its most northerly point with the Alaska Railroad (ARR) at Delta Junction, AK.

Additionally the network includes route segments extending southwest from Carmacks to Whitehorse, YT and on to the Port of Skagway. The network consists of 1,508 total miles with the core north-south route that bridges the existing CN and ARR railways being 1,295 miles long.

Limitations of the analytical framework have required the adoption of certain core assumptions that govern the development of these forecasts. Key assumptions in this regard include:

- that current railway earnings for North American Class 1 railways as represented by average cent per ton mile revenues by commodity group and rates published in publicly available railway tariffs are representative of the level of earnings that can be achieved by the ALCAN railway;
- that all required railway and port infrastructure and capacity exists at a time and place that imposes no constraints on the ability of the railway to move traffic to the appropriate markets as assumed in the traffic forecasts;
- that revenue maximization for the ALCAN railway, in the absence of profitability data, is a reasonable criterion for selecting the routing of traffic in specific instances where traffic could move to alternative locations.

The forecast reflects other assumptions specific to individual traffic segments that influence the magnitude of freight estimates, the commencement and duration of individual traffic flows and the revenues associated with the movement of individual commodities. These assumptions are documented in detail in the body of this report.

It is estimated that over the 30 year planning horizon used for forecast development that the ALCAN railway will transport between 174 and 200 million tons of freight generating revenues between $5.5 and $8.1 billion. The principal difference between these forecast scenarios is the assumed market share to be captured for intermodal traffic that currently enters the Alaska market using marine transportation from the U.S. Pacific Northwest, specifically the ports of Seattle / Tacoma. At the lower, or conservative end of the scale it is assumed that the railway will be successful in capturing 50% of this market whereas in the higher more optimistic scenario it is assumed that 100% of this market will shift to rail.

In examining the traffic and revenues patterns for the ALCAN railway we segregate the traffic into three principal categories or traffic types:

Originated: Traffic originating on the ALCAN railway and terminating either on its own lines or on another railway (intra-line versus interline).

Terminated: Traffic originating on another railway and terminating on the ALCAN network.

Bridge: Traffic originating on another railway that moves across some portion of the ALCAN railway and terminates on another railway.

Although the absolute weightings between the traffic categories change somewhat between the optimistic and conservative scenarios the overall traffic and revenue patterns are reasonably similar in either scenario[1]. Principal highlights include:

- originated traffic, consisting almost entirely of mineral exports, represents between 43% and 51% of total traffic volumes throughout the planning period but only 22% to 32% of railway revenues;
- terminating traffic, consisting initially of pipeline related traffic and subsequently of industrial products related to mining operations, represents 21% to 24% of total traffic volumes and 6% to 9% of revenues;
- bridge traffic while representing 25% to 35% of traffic volumes is a key financial driver in either forecast scenario accounting for anywhere from 59% to 72% of revenues;
- the initial five years of railway operations account for 9-10% of total forecast volumes and revenues with the last 25 years accounting for approximately 90% of traffic and revenues;

In either forecast scenario bridge traffic, 90% of which is intermodal traffic originating south of the 60th parallel destined to the Alaska market, is a key financial driver for the railway. The significant revenue weighting associated with bridge traffic is a result of its longer rail haul as compared to other traffic segments. Originating in the south and moving through to Alaska this traffic traverses the entire length of the ALCAN railway increasing the railway's earnings dramatically.

A number of issues and underlying assumptions present risk to these forecasts particularly in recognition of the long lead times and the varied nature of the external forces that can influence the various traffic segments. Key among these is:

Revenue estimation methodology	Does not account for potential competitive or commercial issues that may evolve within certain markets in the future that could influence the views of participating railways in the joint movement of traffic with the Alaska Canada Rail Link.
Profitability vs. revenues	Without the benefit of traffic profitability analysis the forecast uses the core assumption that the railway will seek to maximize revenues.
Railway behaviour	The future behaviour of railways currently participating in traffic moving to Alaska or which have investments in competing transportation infrastructure have the potential to improve or degrade the traffic volumes presented in these forecasts.

[1] Throughout this report volume and revenue values and percentages will be discussed for both the conservative and optimistic forecast scenarios. When ranges of values are presented the lower values will typically refer to the conservative forecast while the higher values will refer to the optimistic scenario.

Competitive response	Intermodal traffic, currently moving via marine systems from the lower 48 U.S. states are a key financial driver for the Alaska Canada Rail Link. The nature of the competitive response of these marine providers when faced with direct competition into what is currently a captive market has the potential to seriously impact volumes and revenues.
Shipper Cost Minimization	For minerals export traffic the criterion of minimizing shipper costs versus maximizing railway revenues can result in a negative impact on revenues of some 23% stemming from shorter hauls and potentially the loss of some traffic.
Non transportation issues	Key issues include: • timing of pipeline development relative to the construction of the railway and commencement of railway operations; • viability and timing of resource development given the cyclical nature of commodity prices and the potential opportunity costs associated with investments held in other regions by the companies that own the deposits located in the study region; • the mixed impact that the construction of permanent power generation facilities and transmission infrastructure could have on mine development and the inbound movement of industrial products
Port Infrastructure	The potential impact on volumes and revenues related to mineral export traffic forecast move to the port of Skagway should the required investments in port and rail infrastructure not be undertaken concurrently or in advance of the construction of the railway.

It is recommended that the following areas be considered for more in depth examination in order to better understand and quantify these risks.

Pacific Northwest Container Operations

It would be advantageous to have a better understanding of the commercial flexibility of coastal marine operators currently involved in Alaska regional re-supply movements to respond to the competitive threat that may be presented by the introduction of a direct competitor in the form of the Alaska Canada Rail Link.

Key issues for examination include the operating costs for marine operators, capacity utilization rates, existing infrastructure condition, possible infrastructure investment requirements in the medium term, external regulatory and commercial forces that may impact the competitiveness of water based services, and a broader view of the coastal marine industry along the western coast

of the Americas to gauge overall demand for services and potential opportunities for asset re-deployment that may guide operators' competitive response.

Canadian National Railways

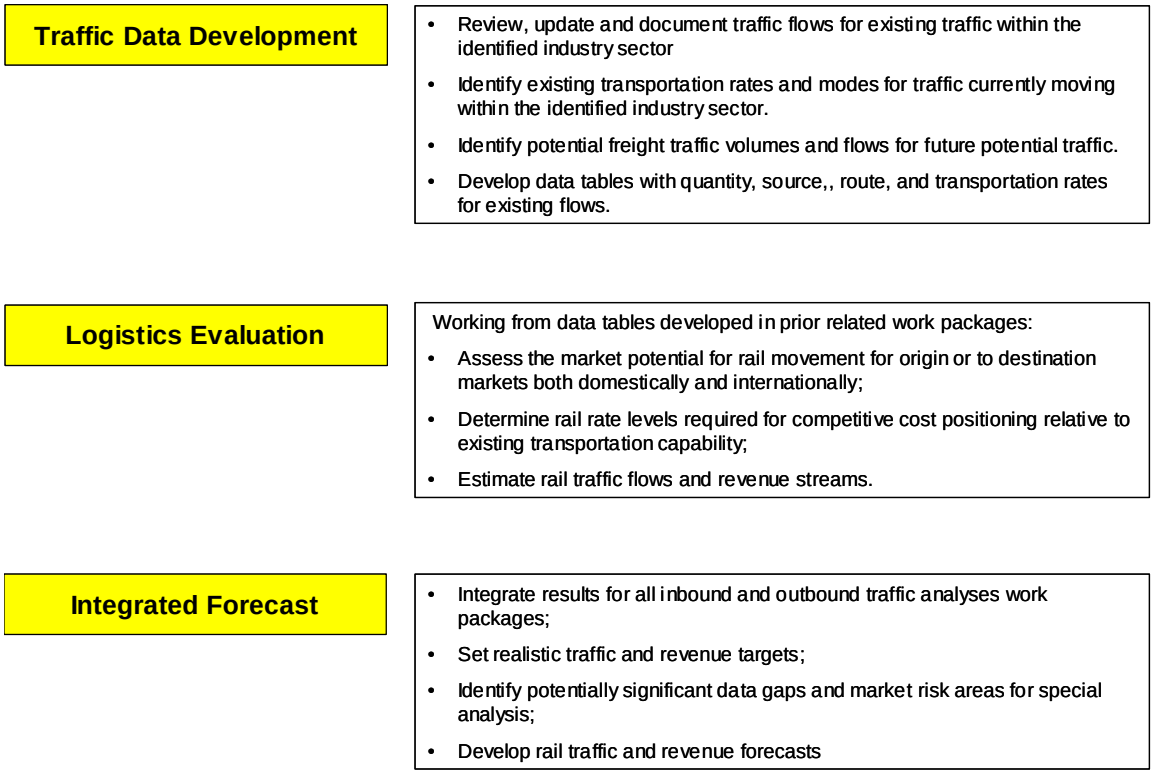
As the principal southern connector to the proposed ALCAN railway Canadian National Railways will be a key commercial partner of the ALCAN railway. Its involvement in this study to date has been limited to participation in stakeholder discussions and individual discussions regarding movements of specific commodities. The analysis and data is now in place to approach CN for a definitive contribution to the project. Key areas for discussion with CN that can serve to mitigate or confirm the perceived risks to the ALCAN railway include: its long-term strategic vision for the CN Aquatrain service, validation of operating capabilities for interline movements of intermodal, industrial, and resource commodities, and confirmation of rate assumptions used in the construction of through rates. These discussions would best be had with the railway's senior management team.

1.0 Forecast Methodology and Assumptions

1.1 Methodology

The development of the forecasts presented in this report has been completed through the compilation of previously completed analyses that have examined various industry sectors to identify the existing and potential freight traffic that could accrue to the proposed Alaska Canada Rail Link. The principal areas examined include: pipeline projects, regional re-supply, resource projects including mining and oil and gas, mineral export development, and forestry resources. The analytical process undertaken for each of these areas is depicted in Figure 1 below.

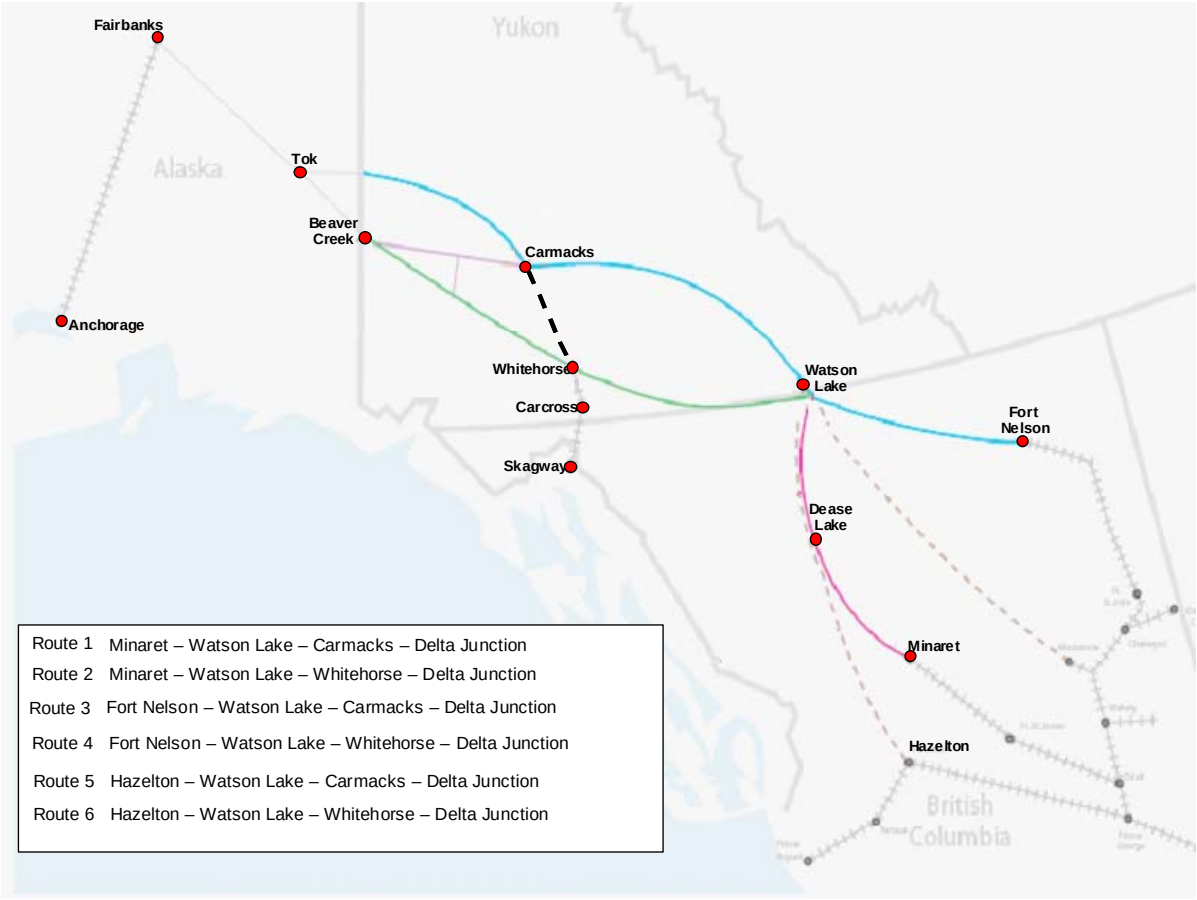
Figure 1 – Methodology Overview



1.2 Network Definition

Much of the initial logistics evaluation work was completed using multiple network definitions for the proposed Alaska Canada Rail Link (ALCAN). The initial network definitions evaluated in both the market and technical analyses included six potential routes as shown in Figure 2 below.

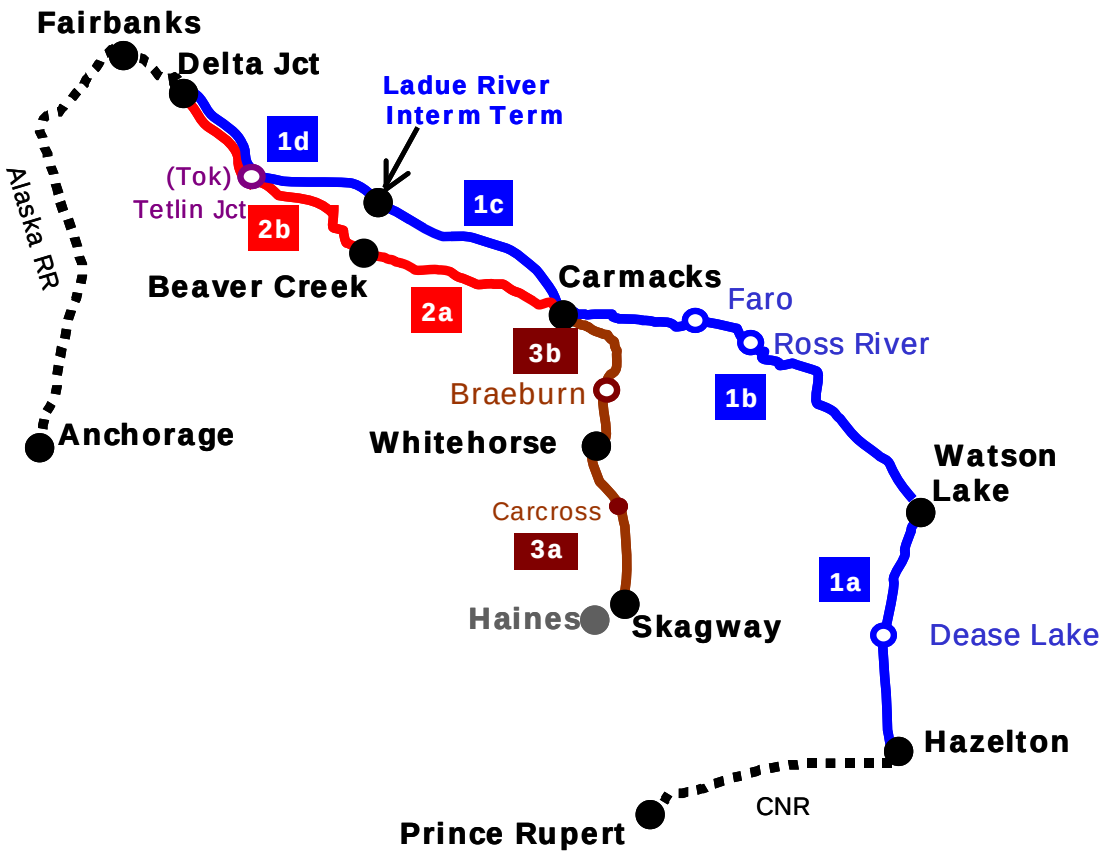
Figure 2 – Initial Network Definitions



The latter two routes, via New Hazelton, while not included in the initial terms of reference were added to the analysis based on industry input, specifically that received from the mineral resources industry. These companies identified the New Hazelton routing as having significant potential to enhance the feasibility of moving export minerals from southern Yukon and northern British Columbia locations to the Port of Prince Rupert.

Subsequent to the evaluation of the multiple route options it was decided that the final analysis would focus on a single route option. The selected route option is identified as Route #5 in Figure 2 above and graphically represented in Figure 3 below. This route connects with Canadian National Railways' (CN) main line at New Hazelton, British Columbia in the south, moves northeastward through Watson Lake, YT, on to Carmacks, YT and connects at its most northerly point with the Alaska Railroad (ARR) at Delta Junction, AK. Additionally route segments extending southwest from Carmacks to Whitehorse, YT and on to the Port of Skagway are included in the proposed network design.

Figure 3 – Modified Network Definition



This network consists of 1,508 total miles including the route segments between Carmacks – Whitehorse – Skagway. The core north-south route that bridges the existing CN and ARR railways is 1,295 miles long and comparable in length to the other five route options examined. The principal advantage offered by the Hazelton route is the shorter overall distance it offers for movements to and from connections with CN Rail and specifically the distance savings on traffic routing between the Alaska Canada Rail Link and the Port of Prince Rupert, potentially a valuable outlet for mineral resources originating on the ALCAN railway. When measured from the common junction of Watson Lake, this route is 541 miles and 622 miles shorter than the other proposed CN connection points at Minaret and Fort Nelson respectively. As compared to the other route options, this route provides the ALCAN railway with the benefit of longer hauls and higher revenues for bridge traffic moving through to Alaska and in some instances for southbound traffic minerals traffic destined to Prince Rupert.

1.3 Forecast Methodology

The preceding work packages that developed base traffic data and examined the logistics feasibility of various traffic segments were completed by independent consultants working as part of the Alaska Canada Rail Link project team. The methodologies used by the consultants in the completion of their work are documented in the various reports submitted to the project team. While each consultant has employed an independent methodology the principal work steps completed to arrive at the overall forecast included in this report can be summarized as follows:

- analysis and assessment of existing traffic flows, patterns, and volumes for each identified industry segment through research of publicly available data and direct discussion with industry representatives;
- determination of existing transportation rates in relevant transportation corridors by surface transportation mode through discussion with industry participants and existing transportation providers.
- identification of potential traffic volumes that could accrue to the ALCAN railway that do not currently move today – this study element relates principally to the potential for future mineral resource exports and the future construction of the Alaska and Mackenzie Gas pipelines.
- development of estimated transportation rates for direct rail movements from known origins to known destination regions using a combination of direct transportation quotes from railway providers and rate modeling techniques.
- integration of individual forecasts into comprehensive inbound and outbound tonnage and revenue forecasts for the ALCAN railway.

Key constraints faced in the development of revenue forecasts for the ALCAN railway include:

- the physical railway infrastructure is not in place requiring the development and application of railway price modeling and assumptions to derive reasonable revenue assumptions for the movement of traffic.
- the inability to employ transportation profitability criteria in forecast development resulting in the need for a different criteria to be employed in determining the “best” routing for traffic deemed viable in multiple lanes (e.g. mineral resource traffic to export);
- potential future connecting railways, most notably CN, do not service this region today and demonstrated little interest in facilitating rate development scenarios for future traffic that could potentially move over their network in combination with the ALCAN railway.

1.4 Forecast Assumptions

These limitations necessitated the development of macro assumptions for the development of estimated ALCAN rail rates and the construction of the overall traffic and revenue forecasts.

Key assumptions include:

- average earnings for existing North American Class 1 railways for selected commodity groups are representative of the types of earnings that could be achieved by the ALCAN railway;

- publicly available tariff rates for the movement of selected commodities provide a reasonable basis from which to identify the level of earnings that could be expected across the ALCAN network for movements of similar commodities, similar distances, using similar equipment;
- physical infrastructure required for the movement of traffic through to destination (e.g. ports) is assumed to be in place and possess sufficient capacity to handle the project volumes and types of commodities;
- proposed rail alignments are assumed to be in place in their entirety at the beginning of the forecast period. While subsequent financial analyses may examine the viability of incremental route construction no limitations or staggering of traffic volumes have been incorporated in the forecasts to reflect such potential scenarios;
- a criterion of revenue maximization for the ALCAN railway, in the absence of traffic profitability analysis, is a reasonable basis by which to identify optimal routing in situations where multiple options are available (e.g. mineral export traffic).

On this latter point we would note that the complimentary analysis underway to examine planned railway operations and costs using this traffic forecast as a key input will enable the assessment of traffic profitability. As this analytical phase is dependant on the development of this base traffic forecast this criterion was not available for evaluating optimal traffic routing in the construction of this forecast. Other assumptions specific to individual traffic segments were employed as noted below.

Pipeline

Traffic volumes related to the construction of the Alaska and Mackenzie Gas pipelines including pipe, fuel, and equipment are shown in the initial two years of the traffic forecast. It is assumed that the railway infrastructure will be in place and the railway operational prior to the commencement of pipeline construction. It is further assumed that both the Mackenzie Gas and Alaska pipeline projects will move forward in a similar time frame providing the opportunity for the ALCAN railway to transport such materials related to construction activities for both these projects. Finally, it is assumed that these materials will be sourced from Canada and the lower U.S. 48 states and be available for movement by direct rail or in some instances a combination of barge and rail transportation using Alaska and Yukon port destinations in combination with inland rail routings using the ALCAN railway.

Mineral Exports

Mineral export forecasts are based on a revised methodology that examines the viability of traffic based on net concentrate value as opposed to net ore value[2]. Additionally the forecast reflects

[2] Net concentrate value analysis uses the raw data developed by Gartner Lee but examines the value of the concentrate shipped as opposed to the value of the ore mined. (Requested by Ernst & Young)

annual tonnages and revenues based on expected mine life as opposed to a 30 year annualized view of shipments.

Start up of individual mines has been staggered over a three-year period based on determinations made by Ernst and Young. No mineral export traffic is assumed to begin movement on the ALCAN railway until the fourth year of operations. This timing reflects the assumption that some mine construction would begin in the initial year of railway operations and be completed (for each mine) over a three-year timeframe resulting in a construction phase for such operations that spans the initial five years of railway operations. This assumption, while delaying the commencement of mineral exports traffic, provides for the capture of the industrial commodities for rail movement related to the construction and development of these mines.

Resource Projects

Resource project activity relates to the movement of inbound supplies for support of ongoing operations and development of both the mining and oil and gas industries. This forecast component is limited to the industrial products associated with the expected mineral development activities.

There is little oil and gas exploration and development ongoing in the Yukon and while the potential unit volumes to support such operations were developed through the course of Work Packages A1 (b) and A1 (e) no reasonable assumptions, based on available information, can be made on the future level of activity in this sector and as such no volumes or revenues have been included in the forecast presented in this report.

Alaska based oil and gas development is significantly further advanced and is expected to grow in the future as a result of the construction of the proposed Alaska and Mackenzie Gas pipeline projects. Current traffic volume associated with the support of Alaska gas production was identified by members of the consulting team in the completion of a prior work package. These volumes, consisting principally of chemicals and tubular products were identified as originating in the lower 48 U.S. States moving to Alaska using a rail-barge-rail supply chain through the Alaska Rail Belt Marine system through the ports of Seattle and Whittier.[3] For the purpose of this analysis these current traffic volumes have been captured in the regional re-supply analysis, Work Packages A1 (a) and (d), and to avoid duplication have not been identified separately within the resource project category. No forecast of future traffic was provided to QGI Consulting and as

[3] Oil and gas resource development work for Alaska completed by Lockheed Martin Co. in the completion of Work Package A1 (a).

such no future traffic in this regard, beyond a continuation of current volumes, has been included in the forecast.

Regional Re-supply

Regional re-supply traffic consists principally of general merchandise traffic moving into the Alaska and Yukon markets to support general economic activity. As noted earlier included in this forecast are the volumes of industrial products moving via the two rail barge systems that support ongoing oil and gas exploration and operations in Alaska.

The majority of the traffic within this category consists of general merchandise traffic currently moving in containers from the Seattle / Tacoma region to various Alaska ports. While it is recognized that the existing traffic is a combination of containerized cargo, bulk cargo, and non-containerized industrial cargo (i.e. vehicles and machinery) the available information does not provide the ability to segregate the traffic. We have reasonably assumed that the large majority of the traffic is containerized freight and as such if it were to be moved using direct rail routings that it would remain containerized and move in an intermodal service.

This traffic is the focal point of differentiation between the two forecast scenarios presented in this report. The high or optimistic forecasts assumes that direct rail routings can capture 100% of this traffic whereas the more conservative forecast view assumes only 50% of the estimated market shifts to rail.

Forestry Resources

The forecasts developed for this report **do not** include any forest products traffic. At present, forest products production in the Yukon is limited to small niche markets and local operations and volumes are very low and not suitable for conversion to rail transportation. While various interests have advocated for the creation of a lumber industry in the southeast Yukon – centered on Watson Lake – a number of factors have to date combined to prevent the emergence of a competitive export-oriented lumber industry in this region. These factors, which include uncertainty of assured fiber supply and higher total manufacturing costs than competitive regions are, in our opinion, likely to persist into the future. In the case of Northeastern British Columbia, the proposed rail alignment between Watson Lake and Hazelton through the Cassiar Timber Supply Area would not likely lead to the development of new lumber or wood products production capacity due to the extreme terrain and limited allowable cut for timber in this region, whose resources would be expected to continue to supply existing mills. In Alaska, forest products production has decreased steadily due to competitive factors. In addition, the major commercial

fiber resources are located in southeast Alaska, which is close to competitive water transportation and not situated such that it could reasonably take advantage of the proposed rail routings.

2.0 Traffic Forecasts

The tonnage and revenue forecasts presented in this report constitute the base or Tier 1 forecasts for the Alaska Canada Rail Link. These forecasts have been created through the amalgamation of preceding work undertaken by members of the broader consulting team. We note that that the initial base forecasts, submitted in prior reports, have been modified based on an initial review by the financial consultants retained to develop the investment model and business case. Most notable among these modifications are a change in the methodology used to assess the viability of mineral deposit traffic, the timing and volumes associated with mineral exports, and the estimates of market share capture and associated timing for intermodal traffic.

It is further noted that as of the writing of this report the financial and investment case analyses are ongoing. These analyses include the examination of so-called Tier 2 and Tier 3 revenues related to the shipment of refined metals and processed iron ore traffic from Alaska and Yukon origins to export markets. QGI Consulting has not undertaken this phase of the analysis and as it remains ongoing these tonnage and revenue values are not included in this report.

2.1 Forecast Scenarios

This report presents two traffic and revenue scenarios for the Alaska Canada Rail Link. The two scenarios are distinguished based on a single factor – the expected level of market share that the railway can capture for direct rail movement of intermodal traffic currently moving to the Alaska market via marine based transportation from the US Pacific Northwest.

This traffic segment is the principal revenue driver for the ALCAN railway over the course of the planning period accounting for 51% and 66% of total revenues in the conservative and optimistic forecasts respectively. The intermodal traffic contained in the forecasts consists of a number of distinct traffic flows including:

- truck traffic moving between Yukon / Western Canada and Alaska;
- truck traffic moving between Western Canada / Alaska and Yukon; and
- container traffic moving by barge and vessel from the US Pacific Northwest to Alaska.

It is this latter traffic flow that accounts for the majority of the intermodal traffic (97%) and that poses the largest single risk to the overall revenue forecast. It is assumed that this block of traffic is captured at 50% and 100% market share rates in the two forecast scenarios while the balance of the traffic has been held constant. Additionally the market capture rate in both scenarios has

been set at 20% per year growth over a five year period to capture the total achievable annual volumes.

Mineral Exports / Resource Projects

This traffic while substantial is reasonably assumed to be an all or nothing probability. It is logical that export mineral traffic would move via rail and it is unlikely that meaningful development will occur without the railway in place. We are of the opinion that the risk associated with this traffic lies not in whether or not the ALCAN railway, if in place, will capture all the available traffic in this segment but rather whether or not the traffic will materialize at the levels projected. A number of critical factors beyond the existence of railway infrastructure will determine the viability of these mines including world commodity prices, global supply demand balances, power generating and transmission infrastructure, and the strategic investment and development decisions to be made by the resource owners.

The inbound industrial traffic to construct and support the operations of these mines is tied directly to the specific mines to be developed and the rate at which they come into production. The types of commodities are conducive to rail transportation and will likely not be sourced from local markets.

Based on this rationale we have opted to hold the volumes and revenues associated with these two traffic segments consistent across both forecast scenarios.

Pipeline Traffic

Volumes and revenues associated with the movement of fuel, pipe, and equipment for the construction of the Alaska and Mackenzie Gas pipelines are held constant through the two forecast scenarios. The logistics options for movement of these commodities have been evaluated based on the assumed material sources and against the logistics options available. The forecast reflects only those volumes and revenues that reflect the movements where the rail or combination marine-rail logistics are feasible and provide for the best estimated transportation cost for the shipper.

As with the mineral exports traffic there are greater forces at play that will influence the appearance of this traffic. Timing is likely the single largest risk to the realization of these revenues with the risk being that the pipeline(s) would move forward on a schedule that would pre-date the construction and operation of the railway.

Rail Barge Traffic

Estimated rail barge traffic of some 300,000 tons per year has not been sensitized across the two scenarios. The competitive analysis of this existing traffic leads us to believe, with relative high confidence, that this traffic could be captured in its entirety by a direct rail link to the Alaska market. While it is assumed that all the traffic can be captured the market growth for the railway within this traffic segment has been, similar to the intermodal traffic, grown incrementally at a rate of 20% per year over a five-year period. With total estimated revenues of $8 million per year any variation in the achievable traffic level will not have a material effect on the overall financial performance of the railway as it represents but 5% of total revenues.

2.2 Summary

The ensuing forecast summary will discuss both forecast scenarios concurrently highlighting the impact of the varying level of intermodal traffic where appropriate.

It is estimated that over the 30 year planning horizon[4] that the ALCAN railway will transport between 174 and 200 million tons of freight generating revenues between $5.5 and $8.1 billion. The principal difference between these forecast scenarios is the assumed market share to be captured for intermodal traffic that currently enters the Alaska market using marine transportation from the U.S. Pacific Northwest, specifically the ports of Seattle / Tacoma. At the lower, or conservative end of the scale it is assumed that the railway will be successful in capturing 50% of this market whereas in the higher more optimistic scenario it is assumed that 100% of this market will shift to rail. The traffic forecast is segmented into three principal traffic types namely:

Originated: Traffic originating on the ALCAN railway and terminating either on its own lines or on another railway (intra-line versus interline).

Terminated: Traffic originating on another railway and terminating on the ALCAN network.

Bridge: Traffic originating on another railway that moves across some portion of the ALCAN railway and terminates on another railway.

Figure 4 below provides a high level summary of the forecast tons and revenues over the thirty planning horizon segmented along these lines.

Figure 4 – Forecast Summary

[4] The 30 year planning horizon actually reflects a 33 year period (Year 3 – 36) which provides for the capture of all mineral export traffic having a mine life of 30 years or more for a minimum 30 year period.

Optimistic

Traffic Type	Tons	Percent		Revenue	Percent
Terminated	41,512,275	20.7%	$	469,303,050	5.8%
Bridge	71,426,057	35.5%	$	5,905,157,144	72.5%
Originated	88,014,558	43.8%	$	1,774,849,444	21.8%
Total	**200,952,890**		**$**	**8,149,309,639**	

Conservative

Traffic Type	Tons	Percent		Revenue	Percent
Terminated	41,512,275	23.9%	$	469,303,050	8.5%
Bridge	44,157,991	25.4%	$	3,266,153,717	59.3%
Originated	88,014,558	50.7%	$	1,774,849,444	32.2%
Total	**173,684,824**		**$**	**5,510,306,211**	

2.3 Terminating Traffic

Freight destined to ALCAN served locations consists of two principal traffic types – industrial products to facilitate mine construction and operations and traffic related to the construction of the Alaska and Mackenzie Gas pipelines. This traffic accounts for an estimated 41.5 million tons and $469 million dollars in railway revenues over the thirty year planning horizon. While accounting for slightly more than 20% of total volumes this traffic represents only 6 - 9% of total revenues. This low level of revenue is attributable to the relatively short haul, as compared to other traffic segments, for movement of these commodities to ALCAN destinations.

Approximately ninety-five percent of all terminated traffic is made up of industrial commodities for construction and operation of mining operations. Based on the assumed timing for mine development and construction it is expected that 75% of this traffic would move in the initial twenty years of railway operations. In the longer term (20-30 years) this traffic, consistent with the forecasted decline in mineral export activities within the same timeframe declines significantly

reaching an annual volume of less than 200,000 tons per year in the latter stages of the planning period.

Pipeline construction traffic, representing 1.9 million tons and $39 million in railway revenues, is forecast to move over the course of the initial two years of railway operations. This timeframe (duration as opposed to timing) is consistent with the pipeline construction plans currently under development by the various producer groups and reflects information gleaned through direct discussions with these companies.

2.4 Originating Traffic

With the exception of very nominal freight volumes related to de-mobilization of pipeline construction equipment the outbound or originating traffic consists wholly of export mineral traffic originating in northern British Columbia, Yukon, and Alaska.

The export ores and concentrates through either the ports of Skagway or Prince Rupert represent 87 million tons and $1.76 billion in rail revenues over the thirty year planning period. These volumes are based on an estimated twenty-one (21) mines being constructed in the initial five years of railway operations. The forecast reflects the staggering of traffic accounting both for the timing of mine construction and the expected duration of shipments based on estimated mine life. It is estimated that minerals export traffic will peak at 5.7 million tons and $21 million dollars annually over a five-year period beginning in the 5th year of railway operations. Subsequently the traffic will, based solely on these mines[5], decline steadily as deposits are exhausted reaching annual shipments of less than 300,000 tons and revenues of $6.8 million per year in the latter stages of the planning period.

2.5 Bridge Traffic

Overhead or bridge traffic represents approximately 35% of total traffic but at 73% of estimated total railway revenues (25% and 60% in the conservative view) represents the most significant share of the forecasted revenue for the ALCAN railway. This traffic consists principally of intermodal and industrial products traffic moving from southern origins to the Alaska market. The length of haul as compared to other traffic segments drives the significant revenue weighting for this traffic. Nearly all of this traffic, with the exception of limited volumes destined to the Yukon, would traverse the entire length of the 1,295 mile ALCAN railway to connect with the Alaska

[5] There exist significant other base metal and coal deposits within these regions that are not included in the forecast, as the assessment methodology has deemed them not to be viable for production or shipment within the analytical framework used.

Railroad at Delta Junction for furtherance to the principal population centers of Fairbanks and Anchorage.

Detailed traffic forecasts are provided in the Appendices to this report.

3.0 Key Areas of Risk

The terms of reference for this work assignment called for the identification of key areas of risk and areas recommended for further special analysis. The following section provides a summary of areas of potential risk, a number of which have been previously identified by the various independent consultants in the completion of their preceding work assignments.

3.1 Revenue Estimation Methodology

Revenue forecasts for the Alaska Canada Rail Link are based on a number of inter-dependant variables and assumptions using the best information and data available to the consulting team. The methodology employed makes no explicit assumptions or allowances for commodity or market specific competitive and commercial issues that may be considered by the participating railways in the development of transportation rates for joint movement of traffic to and from the ALCAN railway. The introduction of specific competitive issues in this regard could have the effect of improving or degrading revenue levels either as a result of volume fluctuations or pricing action.

Furthermore, while capital investment analyses have been conducted within the technical feasibility phase of this project, the revenue estimates and rate assumptions for traffic have not been developed in consideration of any return on investment criteria that takes into account the capital costs associated with the construction and long-term maintenance of the railway.

3.2 Profitability

As noted earlier a core assumption used in the development of traffic and revenue forecasts for the ALCAN railway is that the railway would seek to maximize revenues. This assumption has been used due to the inability to assess the traffic on the basis of profitability as the operations costing modeling being conducted as part of the overall project follows the development of the traffic and revenue forecast.

Absolute profitability on rail traffic will be influenced by the assumed operating costs as compared to the assumed revenue levels. The nature of the railway operation assumed and the overall network density achievable will in turn influence operating costs across the railway as a whole as well as for individual route segments. These factors will, assuming network profitability as a governing principal, in turn influence the pricing latitude and strategies available to the ALCAN railway in the establishment of its rail rates for different traffic components.

3.3 Market Behaviour of Railways

A number of Class 1 railways, most notably CN, are currently involved in some respect in the movement of freight traffic to the Alaska market. In the case of CN they currently participate in the movement of primarily industrial commodities from Canadian origins to Alaska using their wholly owned Aquatrain service. Given their current investment in these transportation assets and their earnings on this traffic their view of a competitive transportation service, even one they participate in, may have a significant influence on the competitiveness of the transportation rates they would be prepared to offer for direct rail movement of these goods. Key issues likely to be considered by CN in examining the attractiveness of re-directing existing traffic from their existing barge service to a direct rail service would include:

- capital investment, both past and future, for barge service infrastructure to maintain the CN Aquatrain service in the long term;
- the profitability currently enjoyed on the barge traffic as compared to the expected profitability from participation in a multi-carrier direct rail routing;
- the potential for capturing incremental traffic or market share based on the existence of a direct rail route with improved service capability and potentially more competitive rate structure.

Similarly the views taken by the Burlington Northern Sante Fe (BNSF) and Union Pacific (UPRR) railways with respect to this issue will also be important. Like CN these two carriers currently enjoy the inland transportation movement of traffic originating from various regions in the United States to Seattle for subsequent movement to Alaska. Unlike CN these railways do not currently have investments in marine infrastructure but faced with a competitive transportation alternative will examine the comparable profitability of direct rail northward as compared to the existing east-west movement of traffic across their networks. The volume of traffic that could potentially shift is not significant enough, in our view, to have a negative impact on network density for these carriers and as such their examination of this opportunity is likely to be limited to comparing the profitability of each movement and ensuring they remain neutral via either scenario. Having said this the profitability of these movements and the rate structures put in place by these carriers have the potential to either enhance or degrade the traffic potential of the ALCAN railway on selected pieces of business.

3.4 Competitive Response

This issue is most critical as it pertains to the potential for intermodal traffic. Currently almost all this traffic moves via barge and vessel service from the Seattle / Tacoma region to Alaskan ports and consists principally of containerized general merchandise cargo. There are a number of transportation providers currently involved in this market, most notably Horizon Lines and Totem Ocean Express, who have made significant investments in both vessels and dockside

infrastructure. It is reasonable to assume that these operations are profitable as they have the freedom to price the traffic to the limits of what the market can bear with little regard to direct competition from other transportation services.

The risk to the Alaska Canada Rail Link lies with the potential response of these transportation companies if their current market position was threatened by the appearance of competitor in the form of a direct rail link between Alaska and Canadian / U.S. markets south of the 60th parallel. While it is reasonable to assume that these carriers would seek to protect their market share through pricing action the level of price discounts that can be achieved and how sustainable such action would be are unknowns. Key considerations for these companies in assessing such a competitive environment would include:

- the level of profitability of individual freight segments and the willingness to discontinue participation in selected markets while protecting others;
- the capacity utilization of existing transportation assets;
- the level of non depreciated capital investment in vessels and supporting infrastructure and how these costs might be treated in the short to medium term in a competitive pricing environment;
- the need for short to medium term capital investment in replacement infrastructure to maintain the existing level of services;
- opportunities for fleet re-deployment to other markets that offer comparable profitability to the existing transportation lanes;

3.5 Revenue Maximization versus Shipper Cost Minimization

The traffic forecast, as constructed, seeks to maximize revenues for the ALCAN railway as opposed to optimizing or minimizing transportation costs for shippers. This is only an issue with respect to the minerals export traffic where alternative port destinations are available – i.e. Skagway versus Prince Rupert.

The criterion of maximizing railway revenues on mineral export traffic over the planning period yields total revenue of $1.7 billion in rail revenues and results in 96% of the traffic routing to the Port of Skagway. Conversely a criterion that seeks to minimize shippers' total inland transportation costs[6] results in a shifting of 25% of traffic away from Skagway to Prince Rupert and a reduction in railway revenues of $ 0.386 million over the 30 year planning period.

The shifting traffic, that is to say the mines where the shipper's lowest cost is achieved by routing to a port that does not provide ALCAN with its highest revenue, consists principally of traffic

[6] The calculation of inland shipping costs from a shipper's perspective account for all costs including highway movement, rail transportation, and port terminal charges.

originating at northern BC mines that are in closest proximity to Prince Rupert. The one exception in this regard is asbestos traffic from the Slate Creek property in Alaska. In this instance the shipper's interests are best served by routing the traffic to Skagway whereas the railway's purpose is best served by hauling this traffic the full length of its railway to connect with CN at Hazelton for furtherance to Prince Rupert.

Appendix B of this report provides a more detailed view of this analysis.

3.6 Non Transportation Issues

The existence of viable rail transportation infrastructure establishes the capability to attract existing and new freight business to the Alaska Canada Rail Link. The magnitude, timing, and profitability of this business however will be influenced by a number of non-transportation related factors.

Pipeline Development

Timing on construction of the proposed Alaska and Mackenzie Gas pipeline projects present risk to the revenue forecast for the Alaska Canada Rail Link. The forecast assumes that significant volumes of pipe, fuel, and equipment can be captured on a direct rail or combination marine – rail basis during the initial 2-year construction phase of the project. The current traffic forecast calls for the movement of 2.1 million tons of traffic earning $49.8 million[7] in railway revenues during the initial two years of railway operations. This represents 55% and 27% of total volumes and revenues respectively during this period.

Both of these projects have been in the development and negotiation stages for many years and while there is strong consensus among industry and government that the projects will go ahead at some point in the future there remains significant uncertainty as to the specific timing of either project. The risk to the Alaska Canada Rail Link project lies in the timing of these projects being advanced such that the construction period pre-dates construction and operation of the railway.

An additional, although perhaps less significant, risk lies with the final sourcing decisions to be made by pipeline proponents for construction materials, most notably pipe. It is assumed that all pipe material (875,000 tons) will be sourced from Oregon steel mills and shipped by barge to Seward, AK or Skagway, AK for subsequent movement by rail to inland pipeline spreads. The decision to source from offshore origins or the inability of domestic producers to supply the

[7] This represents total pipeline related freight traffic including the originated (outbound) movement of 1119,000 tons for $10 million in revenue related to construction de-mobilization at the end of the construction period.

required pipe may alter the overall logistics of the pipe movement negatively impacting the level of traffic that moves over the ALCAN railway. Mitigating this risk to some extent is the fact that the traffic and revenue forecasts do not assume any direct rail routings for this traffic and whether the pipe is sourced from Oregon or offshore mills and arrives in Alaska by water there is a strong likelihood that it will utilize an Alaska Canada Rail Link for movement inland if the railway is in place.

Resource Industry Choices

Transportation is only one of the factors that will influence the viability of mineral resource development and rail based shipments of these commodities in the long term. Historical constraints on mineral resource development in these northerly regions are heavily influenced by general market conditions (ie. commodity prices) and other cost elements – most notably the cost of and access to power.

All other things being equal the behaviour of resource development companies will be the ultimate determinant of the rate and scope of resource development and production in this region. Many of these companies hold commercial interests in mineral deposits around the world presenting them, in a time of positive market conditions, with options as to where to invest their money. The forecast volumes and revenues do not reflect any assumptions regarding opportunity cost of development for the resource companies.

Power Generation

Mineral resource operations are energy intensive and require a consistent, reliable, and cost effective source of power. In the absence of fixed power generation facilities such as coal or gas fired power plants and suitable transmission infrastructure, northern mining operations have historically relied on site based power generation using diesel fuel powered generators. While the high cost of this power source can serve to constrain development if the economics of resource development can absorb these costs the need to transport significant quantities of diesel fuel into these regions is a positive development for the ALCAN railway.

The risk in this regard lies with the potential loss of traffic in the medium to long term planning horizon should significant development of fixed power generation and transmission infrastructure take place in the coming decade. Access to such cost effective sources of power may largely negate the need for shipment of diesel fuel from southern origins resulting in a negative impact on railway traffic volumes and revenues. The current forecast, based on assumed timing and viability of mineral deposit development, anticipates that during the peak resource production period

approximately 1 million tons per year of fuel generating $10 million dollars in annual revenue for the railway.

Two specific initiatives have the potential to negatively impact ALCAN volumes in this regard. First the construction of the Alaska pipeline will in the long term provide a significant supply of cost effective power for the State of Alaska and potentially, depending on the corresponding transmission infrastructure built, for the Yukon Territory. Secondly the British Columbia government's decision to proceed with the extension of the power transmission grid north along Highway 37 could simultaneously bring positive and negative ramifications to the ALCAN railway. The development of this infrastructure could positively influence the development of northern BC mines including Galore Creek, Red Chris, and Mt. Klappan coal. Concurrently this would negate the need for the shipment of large quantities of diesel fuel into these properties to fuel site based power generators.

Mineral Commodity Prices

International markets have always been, and continue to be, important outlets for mineral resource production in North America. Growing international consumption of base metals and coal are today being driven by the rapid economic growth of the emerging and transitional economies of the Asia Pacific region – more specifically China and India.

Metals and mineral commodity prices are cyclical in nature and until recently had been depressed for an extended period of time. Over the last two years prices for most base metals and coal have rebounded significantly as a result of increased demand in international markets with the growth of the Chinese and Indian economies being principal drivers. This most recent resurgence in mineral resource commodity prices has ignited renewed interest in the development of a number of mineral deposits in these regions.

The current forecast for the ALCAN railway includes an average 4 million tons per year of ores and concentrates over the initial 20 years of operation generating approximately $80 million per year in revenue[8]. Continued buoyancy in commodity prices will support continued development however a return to cyclical lows may place this traffic at risk. Given the long lead-time for railway construction it is near impossible to predict at which stage of the price cycle these commodities will be in and the impact this may have on mine development initiatives.

[8] Average revenue and tonnage figures based on assumed timing of mine operations start up and expected life of deposits.

Port Infrastructure

The traffic forecast currently assumes that the majority of mineral export traffic will be moved by rail for export through the Port of Skagway, AK. It is recognized that this port does not currently possess the necessary ore handling or railway infrastructure to handle these volumes although no constraints in this regard have been placed on the overall railway forecast. A viable port alternative exists at Prince Rupert, British Columbia, specifically the Ridley Island Terminal that currently handles significant volumes of coal today. Ridley Island has the capability to handle coal, petroleum coke, iron ore pellets having an annual shipping capacity of 26 million tons.

If required investment in infrastructure at the Port of Skagway is not undertaken commensurate with the development of the railway and the mining operations it will not be a viable outlet for these commodities. Should this situation arise it would result in a serious degradation of ALCAN revenues of approximately $ 1 billion (60%) over the 30 year planning horizon. This would be the result of shorter hauls for ALCAN on the majority of the traffic and the likely loss of Division Mountain coal due to increased transportation costs.

4.0 Issues For Further Analysis

In consideration of the key areas of risk identified it is recommended that the following areas be considered for more in depth examination in order to better understand and quantify these risks.

Pacific Northwest Container Operations

The capture of significant intermodal traffic for the ALCAN railway will be achieved through the capture of existing containerized cargo currently moving by container vessel and barge through the Port of Seattle to Alaska. As noted earlier a key area of risk in this regard is the potential, likely inevitable, competitive response these transportation companies will have when faced with direct competition into what is essentially now a captive market.

The flexibility and sustainability of such a competitive response will be driven by a number of factors including:

- the existing profitability of Alaska traffic;
- existing capacity utilization of both marine and dockside infrastructure;
- investment requirements for infrastructure replacement in the medium term; and
- market opportunities for asset re-deployment in other trades.

It would be advantageous to have a better understanding of the commercial flexibility of these operators and the level of confidence in the ALCAN railway's ability to redirect intermodal traffic away from water to direct rail routings. Doing so requires a more in depth understanding of the operating costs for marine operators, capacity utilization rates, existing infrastructure condition, possible infrastructure investment requirements in the medium term, external regulatory and commercial forces that may impact the competitiveness of water based services, and a broader view of the coastal marine industry along the western coast of the Americas to gauge overall demand for services and potential opportunities for asset re-deployment that may guide operators' competitive response.

Canadian National Railways

Canadian National Railways, as the principal southern connector to the proposed ALCAN railway, will be a key commercial partner of the ALCAN railway. Through the course of the market analysis phase of the Alaska Canada Rail Link study CN has had periphery involvement in the project through its participation in the stakeholder committee and through discussions with consultants examining specific industry segments. To date CN has been reluctant to provide meaningful data to facilitate the development of through rates for interline movements and has

maintained that it would be in a better position to evaluate its position in this respect if it were presented with specific scenarios or opportunities to evaluate.

With the market analysis and technical phases now drawing to a close the preliminary information and analysis is in place with which to re-approach CN for a definitive contribution to the project. Key areas for discussion with CN that can serve to mitigate or confirm the perceived risks to the ALCAN railway include:

- CN's long-term vision for continuation of the Aquatrain service from Prince Rupert and the key issues that will influence its decision to retain this relatively small business line in the long term (profitability, future investment requirements, market outlook, growth opportunities).
- Validation by CN of the rate assumptions in key transportation corridors where their participation would be required including:
    - ore and concentrate movements to the Port of Prince Rupert
    - interline intermodal movements from Canadian and United States origins across its network destined to the Yukon and Alaska; and
    - interline movements of industrial commodities from Western Canadian origins to Alaska and Yukon.

Given the varied nature of the traffic, the capital investment issues, and the long-term strategic issues this discussion is best held with CN's senior management personnel, likely within the corporate development function that can bridge the necessary internal discussions across the operating and marketing departments.

APPENDIX A – Detailed Traffic and Revenue Forecasts

Summary Tier 1 - Tonnage and Revenue Forecasts

Tonnage Forecast

			(First 5) Years 3 - 7	(Next 10) Years 8 - 17	(Next 11) Years 18 - 36	Total
Terminated	Pipeline	(Fuel, Equipment, Pipe)	1,645,200	-	-	1,645,200
	Mackenzie Gas Pipeline	(Fuel, Equipment, Pipe)	261,200	-	-	261,200
	Industrial Products	Mine Construction	837,485	-	-	837,485
		Mine Operations	1,818,079	18,747,196	18,203,115	38,768,390
		Sutotal Inbound Traffic Tons	**4,561,964**	**18,747,196**	**18,203,115**	**41,512,275**
Bridge	Regional Resupply	Rail Barge	927,738	3,092,460	4,638,690	8,658,888
		Industrial Products	571,350	1,904,501	2,856,752	5,332,603
		Intermodal	6,153,704	20,512,345	30,768,518	57,434,566
		Sutotal Inbound Traffic Tons	**7,652,792**	**25,509,306**	**38,263,959**	**71,426,057**
Originated	Minerals	Ores and Concentrates	5,399,205	46,768,372	35,688,602	87,856,178
	Pipeline	Equipment De-mobilization	119,000	-	-	119,000
	Mackenzie Gas Pipeline	Equipment De-mobilization	39,380	-	-	39,380
		Sutotal Outbound Traffic Tons	**5,557,585**	**46,768,372**	**35,688,602**	**88,014,558**
	Total Inbound / Outbound ALCAN Tonnages		**17,772,341**	**91,024,874**	**92,155,676**	**200,952,890**

Revenue Forecast

Terminated	Pipeline	(Fuel, Equipment, Pipe)	32,601,490	-	-	32,601,490
	Mackenzie Gas Pipeline	(Fuel, Equipment, Pipe)	6,715,078	-	-	6,715,078
	Industrial Products	Mine Construction	25,170,526	-	-	25,170,526
		Mine Operations	19,437,005	192,689,068	192,689,883	404,815,957
		Sutotal Inbound Traffic Revenue	**83,924,099**	**192,689,068**	**192,689,883**	**469,303,050**
Bridge	Regional Resupply	Rail Barge	32,322,392	107,741,306	161,611,960	301,675,658
		Industrial Products	15,830,418	52,768,061	79,152,092	147,750,571
		Intermodal	584,542,598	1,948,475,327	2,922,712,990	5,455,730,915
		Sutotal Bridge Traffic Revenue	**632,695,408**	**2,108,984,694**	**3,163,477,041**	**5,905,157,144**
Originated	Minerals	Ores and Concentrates	105,214,797	934,580,380	724,530,714	1,764,325,890
	Pipeline	Equipment De-mobilization	8,286,770	-	-	8,286,770
	Mackenzie Gas Pipeline	Equipment De-mobilization	2,236,784	-	-	2,236,784
		Sutotal Outbound Traffic Revenue	**115,738,351**	**934,580,380**	**724,530,714**	**1,774,849,444**
	Total Inbound / Outbound ALCAN Revenues		**832,357,858**	**3,236,254,142**	**4,080,697,639**	**8,149,309,639**

Summary Tier 1 - Tonnage and Revenue Forecasts (IM 50%)

Tonnage Forecast

			(First 5) Years 3 - 7	(Next 10) Years 8 - 17	(Next 11) Years 18 - 36	Total
Terminated	Pipeline	(Fuel, Equipment, Pipe)	1,645,200	-	-	1,645,200
	Mackenzie Gas Pipeline	(Fuel, Equipment, Pipe)	261,200	-	-	261,200
	Industrial Products	Mine Construction	837,485	-	-	837,485
		Mine Operations	1,818,079	18,747,196	18,203,115	38,768,390
		Sutotal Inbound Traffic Tons	**4,561,964**	**18,747,196**	**18,203,115**	**41,512,275**
Bridge	Regional Resupply	Rail Barge	927,738	3,092,460	4,638,690	8,658,888
		Industrial Products	571,350	1,904,501	2,856,752	5,332,603
		Intermodal	3,232,125	10,773,750	16,160,625	30,166,500
		Sutotal Bridge Traffic Tons	**4,731,213**	**15,770,711**	**23,656,067**	**44,157,991**
Originated	Minerals	Ores and Concentrates	5,399,205	46,768,372	35,688,602	87,856,178
	Pipeline	Equipment De-mobilization	119,000	-	-	119,000
	Mackenzie Gas Pipeline	Equipment De-mobilization	39,380	-	-	39,380
		Sutotal Outbound Traffic Tons	**5,557,585**	**46,768,372**	**35,688,602**	**88,014,558**
	Total Inbound / Outbound ALCAN Tonnages		**14,850,762**	**81,286,279**	**77,547,783**	**173,684,824**

Revenue Forecast

Terminated	Pipeline	(Fuel, Equipment, Pipe)	32,601,490	-	-	32,601,490
	Mackenzie Gas Pipeline	(Fuel, Equipment, Pipe)	6,715,078	-	-	6,715,078
	Industrial Products	Mine Construction	25,170,526	-	-	25,170,526
		Mine Operations	19,437,005	192,689,068	192,689,883	404,815,957
		Sutotal Inbound Traffic Revenue	**83,924,099**	**192,689,068**	**192,689,883**	**469,303,050**
Bridge	Regional Resupply	Rail Barge	32,322,392	107,741,306	161,611,960	301,675,658
		Industrial Products	15,830,418	52,768,061	79,152,092	147,750,571
		Intermodal	301,792,231	1,005,974,103	1,508,961,154	2,816,727,488
		Sutotal Bridge Traffic Revenue	**349,945,041**	**1,166,483,470**	**1,749,725,205**	**3,266,153,717**
Originated	Minerals	Ores and Concentrates	105,214,797	934,580,380	724,530,714	1,764,325,890
	Pipeline	Equipment De-mobilization	8,286,770	-	-	8,286,770
	Mackenzie Gas Pipeline	Equipment De-mobilization	2,236,784	-	-	2,236,784
		Sutotal Outbound Traffic Revenue	**115,738,351**	**934,580,380**	**724,530,714**	**1,774,849,444**
	Total Inbound / Outbound ALCAN Revenues		**549,607,491**	**2,293,752,918**	**2,666,945,802**	**5,510,306,211**

APPENDIX B – Potential Railway Revenue Attrition (Export Minerals)

	Total Cost to Shipper		Total Alcan Revenue		Optimal Port Selection		Railway Revenue
	Skagway	Rupert	Skagway	Rupert	Shipper	Railway	Attrition
Slate Creek	$ 122,794,986	$ 176,356,137	$ 72,706,014	$ 88,160,433	Skagway	Pr. Rupert	$ (15,454,418)
Division Mt.	$ 755,895,380	$ 755,895,380	$ 488,957,740	$ -	Skagway	Skagway	$ -
Finlayson L.D. (Minto)	$ 11,080,062	$ 15,017,118	$ 6,885,001	$ 6,171,290	Skagway	Skagway	$ -
Galore Creek	$ 519,865,986	$ 397,354,886	$ 293,869,488	$ 116,587,152	Pr. Rupert	Skagway	$ (177,282,336)
Red Chris	$ 120,437,001	$ 97,411,118	$ 91,908,245	$ 36,462,855	Pr. Rupert	Skagway	$ (55,445,390)
Shaft Creek	$ 215,264,540	$ 164,535,513	$ 121,684,592	$ 48,276,056	Pr. Rupert	Skagway	$ (73,408,535)
Cirque	$ 169,080,940	$ 167,786,506	$ 69,553,644	$ 32,001,364	Pr. Rupert	Skagway	$ (37,552,280)
Faro Camp (Grizzly / Dy)	$ 70,752,634	$ 91,318,537	$ 46,907,356	$ 39,548,330	Skagway	Skagway	$ -
Faro Camp (Grum)	$ 55,578,697	$ 71,733,941	$ 36,847,388	$ 31,066,613	Skagway	Skagway	$ -
Faro Camp (Swim)	$ 15,535,992	$ 20,051,891	$ 10,300,003	$ 8,684,095	Skagway	Skagway	$ -
Howard's Pass	$ 649,163,339	$ 726,930,376	$ 303,156,036	$ 228,183,635	Skagway	Skagway	$ -
Davey Creek Moly	$ 10,914,293	$ 9,795,744	$ 5,558,598	$ 2,203,631	Pr. Rupert	Skagway	$ (3,354,966)
Red Mountain	$ 4,657,047	$ 5,335,722	$ 2,192,031	$ 1,649,928	Skagway	Skagway	$ -
Finlayson L.D. (Fyre (Kona))	$ 26,255,856	$ 32,116,128	$ 15,256,335	$ 7,491,182	Skagway	Skagway	$ -
Finlayson L.D. (Kudz Ze Kayah)	$ 55,079,606	$ 71,678,534	$ 32,004,782	$ 15,715,021	Skagway	Skagway	$ -
Finlayson L.D. (Wolverine)	$ 50,259,130	$ 68,842,738	$ 29,203,777	$ 14,339,669	Skagway	Skagway	$ -
Kutcho Creek	$ 57,177,618	$ 52,316,082	$ 35,773,320	$ 15,167,306	Pr. Rupert	Skagway	$ (20,606,014)
Tulsequah Chief	$ 52,543,457	$ 57,974,792	$ 14,036,000	$ 13,308,680	Skagway	Skagway	$ -
Logtung	$ 10,809,170	$ 10,683,843	$ 6,734,208	$ 3,098,383	Pr. Rupert	Skagway	$ (3,635,825)
Mactung	$ 6,485,607	$ 7,423,337	$ 3,028,746	$ 2,279,718	Skagway	Skagway	$ -
Tom and Jason	$ 145,751,250	$ 167,586,966	$ 70,526,506	$ 53,157,228	Skagway	Skagway	$ -
	$ 3,125,382,591	**$ 3,168,145,288**	**$ 1,757,089,809**	**$ 763,552,569**			**$ (386,739,765)**

** Division Mountain Coal not deemed to be viable for transportation to Prince Rupert due to high cost of transportation relative to commodity value.

Estimated revenue attrition if shippers' transportation costs minimized as opposed to maximizing railway revenues.