



Government of Canada
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Canada

Canada's Impact on Alaska



September 2005

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Prepared for:



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Summary

Introduction

Alaska and Canada share a common border, direct transportation linkages, and cultural heritage.

- Canada's shared boundary with Alaska extends for approximately 1,500 miles from the Arctic Ocean to the tip of Southeast Alaska.
- Approximately 400,000 people cross into Alaska from Canada on the highway system every year. Four highways link the two regions: Alaska Highway, Top of the World Highway, Haines Highway, and Klondike Highway.
- Marine transportation links include the Alaska Marine Highway System, cruise ships, and the CN Aquatrain (which sails between Whittier and Prince Rupert). Two airlines fly directly between Alaska and Canada: Air North and Air Canada. The White Pass & Yukon Route railway connects Skagway with Canada.
- Five indigenous language groups stretch across the Alaska/Canada border: the Gwich'in, the Inupiaq, the Tlingit, the Haida, and the Tsimshian.



While many are familiar with these geographic and cultural connections, the economic linkages are not as readily recognizable because of the close integration of the Alaska and Canadian economies. In order to gain more understanding of the economic linkages between these two areas, the Consulate of Canada contracted with the McDowell Group, Inc., a research and consulting firm with offices in Juneau and Anchorage, to conduct a study of Canada's past and present economic impact on Alaska.

This report details the role of Canada in Alaska's transportation infrastructure, visitor linkages, international trade markets, and investment in various sectors of Alaska's economy. The report also presents four case studies, offering more detail on the business and investment relations between Canadian companies and Alaska. Finally, the report analyzes the direct, indirect, and induced employment, payroll, and investment impact of Canada on Alaska's economy.

The following table provides an overview of Canada's impact on Alaska.

Summary of Canada's Impact on Alaska

Mining	
Total Canadian investment in Alaska mining exploration and development, 1981–2004	\$2.3 billion
Number of mining projects in Alaska with Canadian involvement, 2004	40+ projects
Percentage of Alaska's total mining exploration and development expenditures incurred by Canadian companies in 2004	76 percent
Tourism	
Number of people entering Alaska from Canada on the highway system, October 2003–September 2004	403,812
Number of cruise visitors visiting both Canada and Alaska, 2004	884,406
Volume of Canadian visitors to Alaska, Summer 2004	102,600
Spending by Canadian visitors in Alaska, Summer 2004	\$81 million
Trade	
Alaska's exports to Canada, 2004	\$242 million
Alaska's imports from Canada, 2004	\$289 million
Direct Employment and Payroll	
Average annual employment in Alaska by Canadian companies, 2004	2,600
Payroll of Canadian companies operating in Alaska, 2004	\$134 million
Total Economic Impact (Including Direct and Indirect Impact)	
Total employment attributable to Canadian economic activity in Alaska, 2004	7,500
Total payroll attributable to Canadian economic activity in Alaska, 2004	\$330 million

Note: Dollar figures are in US currency.

Canadian Involvement in Alaska's Economic Sectors

Mining Industry

Alaska and Canada's mining industries have been linked since the Gold Rush days of 1898. Today mining represents the most significant economic connection between Alaska and Canada.

- In 2004, Canadian mining companies directly employed approximately 900 Alaskans. Mining jobs are typically year-round and well-paying – according to the Alaska Department of Labor and Workforce Development, the average mining industry employee in Alaska earned approximately \$5,800 per month in 2004 (or \$70,000 per year).¹
- At least 21 Canadian mining companies are operating in Alaska on more than 40 mining projects.
- Between 1981 and 2004, Canadian companies spent a total of \$2.3 billion on mining exploration and development in Alaska. In 2004 alone, they spent \$156 million.

¹ <http://almis.labor.state.ak.us>

- Canadian companies account for 76 percent of exploration and development expenditures in Alaska's mineral industry today.
- Canadian-owned Red Dog Mine, located in northwestern Alaska, is the world's largest zinc mine. According to Red Dog Mine, it employs 480 year-round workers and generates \$45.5 million in total wages annually. Total capital construction investment to date exceeds \$600 million. The mine has been in operation since 1989 and has an anticipated 40-year life span.
- Alaska's largest gold mine, Fort Knox, is owned by Toronto-based Kinross Gold. In 2004, the mine had an annual average employment of 411. Kinross plans to spend \$60 million on a three-year mine expansion project.
- The Pogo gold mine in eastern Alaska is being developed by a partnership that includes Teck Cominco, at a construction cost of \$250 million. Startup is planned for 2006. The mine will employ approximately 250 full-time workers for at least ten years.
- To date, Northern Dynasty Minerals has invested \$40 million in the Pebble gold and copper project in southwestern Alaska. It is estimated to contain 26.5 million ounces of gold and 16.5 billion pounds of copper.

Oil and Gas Industry

- A variety of Canadian companies are operating in Alaska's oil and gas industry, exploring, manufacturing, and providing oilfield services.
- Petro-Canada leases 322,500 acres in the NPR-A and 1.1 million acres in the Brooks Range Foothills. The company invested \$45 million in its Alaska and McKenzie River holdings in 2005.
- Fortuna Energy leases approximately 440,000 acres in the NPR-A and will have invested \$75 million in Alaska by the end of 2005.
- Oilfield services companies include Acuren, NANAColt Engineering, and ASRC Energy Services. These companies provide services such as engineering testing, nondestructive testing, inspection, construction management, and fabrication.
- In the manufacturing sector, Canadian-owned Agrium, Inc. is a leading global producer and distributor of fertilizers. They operate a plant in Nikiski and, according to the Alaska Department of Labor and Workforce Development, employ an annual average of 221 workers.

Transportation

- Canadian transportation companies are active in Alaska from the North Slope to Southeast.
- Northern Transportation Company provides on-demand shipping up the MacKenzie River to Kaktovik and Alaska's North Slope oilfield. NTCL hauls drilling rigs, oilfield modules, dry cargo, and fuel, among other materials.
- The CN Aquatrain provides a marine/rail link from Prince Rupert, B.C. to Whittier, Alaska via ocean tug. The Aquatrain ships materials such as lumber, chemicals, machinery, and vehicles. It provides an essential connection to the vast North American rail system.
- White Pass & Yukon Route Railway owns the only rail link between Alaska and Canada, as well as all of Skagway's cruise ship docks.

Other Industries

- Canadian firms are involved in other Alaskan industries such as retail, manufacturing, and seafood.
- Canadian-owned Alaska Commercial Company owns and operates 27 retail outlets across rural Alaska, serving populations from 500 to 5,000. The stores sell food and general merchandise such as apparel, housewares, appliances, and outdoor products. According to ACC, it has more than 750 employees in Alaska and an annual payroll of \$16.5 million.
- The Canadian firm Capitol Glass/Northern Windows has been manufacturing and distributing window products in Alaska since 1989. It has a staff of 45 and an annual business volume of more than \$6 million.
- According to trade statistics, \$83.5 million worth of Alaska seafood was exported to Canada in 2004. Of this amount, two-thirds was in unprocessed form; the remaining third was processed in Alaska before being exported.
- One of the state's largest seafood processing firms, Alaska General Seafoods, is Canadian. They operate processing plants in Ketchikan, Naknek, and Egegik.

Alaska-Canada Visitor Linkages

Alaska and Canada's visitor industries are inextricably linked, primarily through the cruise industry and independent visitor highway travel.

- Alaska's 880,000 annual cruise passengers all pass through Canada at some point on their journey. About 60 percent use Vancouver as a point of embarkation and/or disembarkation. Many ships make stops in Prince Rupert or Victoria on their way to or from Alaska.
- Passengers also visit Canada by taking day tours from Skagway (such as the White Pass & Yukon Route Railway); by taking overnight tours through the Yukon on a land tour package; and by taking pre- or post- tours of British Columbia.
- Nearly all of Alaska's highway travelers pass through Canada at some point. For many, the Yukon and British Columbia are essential elements of their trip. Alaska's highway/ferry market totals about 180,000 visitors annually.
- Canadian visitors to Alaska represent more than 100,000 visitors annually and more than \$80 million in spending.
- The White Pass & Yukon Route Railway is the most prominent Canadian-owned company in Alaska's tourism industry. It carries more than 400,000 passengers annually on its Skagway-based railway, and more than 800,000 cruise passengers transit its docks in Skagway every year. The company employs 153 seasonal workers and 17 year-round workers in Alaska.
- Tourism industry organizations of Alaska and Canada frequently collaborate on marketing and research. Tourism North, comprised of tourism associations of Alaska, Alberta, British Columbia, and the Yukon, publishes the *North! To Alaska* brochure and maintains a website. The group also leads highway visitor research efforts and assists travel writers and editors with stories about driving through Canada and into Alaska. In addition, a Tourism Yukon representative serves on the marketing committee of the Alaska Travel Industry Association.

Alaska-Canada Trade

- Canada has been Alaska's third-largest export market since 1990, with \$242 million in exports reported for 2004. Exports grew by 7 percent from 2003 to 2004.
- Metal commodities represent 47 percent of total exports from Alaska to Canada. Lead and zinc ore concentrates have been Alaska's top export commodity to Canada since the late 1980s, when Red Dog Mine opened.
- In 2004, Alaska imported \$289 million worth of Canadian products. The largest import was refined petroleum (\$59 million).

Total Employment and Payroll Impact

Canada has a broad range of direct impacts on the Alaska economy. Spending in Alaska by Canadian mining companies on mineral exploration, development and production; spending by visitors from Canada; Canadian purchases of Alaska exports; and, employment of Alaskans in Alaska by Canadian companies all account for direct, measurable contribution to local, regional, and statewide economies.

In 2004, Canadian companies operating in Alaska directly employed an estimated 2,600 workers. The payroll for these workers is estimated at \$134 million.

The economic impact of Canada on Alaska goes beyond these direct effects, however. Money that enters Alaska's economy as a result of Canadian investment or operational spending creates multiplier effects as that money circulates through the economy. Multiplier effects include indirect impact – the result of Canadian companies purchasing goods and services from Alaska vendors, resulting in additional employment and income opportunities. Multiplier effects also include induced impacts, which are the result of Alaskan employees of Canadian companies spending their payroll dollars in Alaska.

This study has identified a total of 5,400 jobs and \$285 million in annual payroll that are directly or indirectly linked to Canadian investment or other Canadian business activity in Alaska. Not included in this total are jobs and income associated with the spending by Canadian visitors to Alaska. Canadians spent an estimated \$81 million in Alaska in 2004. The direct, indirect, and induced employment and payroll associated with that spending is estimated at 2,100 jobs and \$45 million in payroll.

In total, 7,500 Alaska jobs and \$330 million in annual payroll can be attributed to Canadian interests in Alaska.

Methodology

Several methodologies were used to produce this study, including primary research, secondary data collection, interviews with Canadian and Alaska business representatives and government officials, and the use of predictive econometric models.

Information about Canadian companies' involvement in Alaska was gathered through multiple executive interviews with Alaska and Canadian businesses, industry associations (such as the Alaska Miners Association and Alaska Support Industry Alliance), and state and federal government officials. Each of the case studies employed secondary and executive interview research methods.

Secondary data sources included: the U.S. Department of Commerce and Statistics Canada for international trade statistics; and Alaska Department of Labor and Workforce Development for direct employment and payroll numbers. McDowell Group also conducted research of Canadian firms using the Internet and recent articles found in the Alaska Business Monthly, Alaska Journal of Commerce, and various local Alaska newspapers. The study team used the McDowell Group's own research on the impacts of Agrium, Inc. as well as its visitor statistics database for the description of Alaska-Canada visitor linkages.

The study team used the IMPLAN econometric models to estimate the indirect impact from Canadian companies at the statewide level. To verify the relevancy of the IMPLAN model, the study team used the known direct employment, payroll, and investment figures available through its executive interviews, and primary and secondary data sources to evaluate the Canadian-related economic activities in Alaska. The direct, indirect, and induced impacts on employment and payroll were aggregated to obtain total impact. Dividing total impact by direct impact produces a multiplier.

Background

Alaska and Canada share rivers, mountain ranges, highways, history, economies, industries, and cultures, in addition to more than 1,500 miles of border. In order to understand today's economic relationship between Alaska and Canada, it is useful to review the historical and geographic links between the two regions. A map at the end of this chapter details the geographic ties.

Cultural, Native, and Historical Linkages

Alaska Native/First Nations²

Economic and social linkages between Canada and Alaska existed long before any borders were established. Indigenous peoples have populated the region for at least 12,000 years.³ Language groups that stretch across the modern border include:

Gwich'in: Gwich'in (Kutchin) is the Athabascan language spoken in the northeastern Alaska villages of Arctic Village, Venetie, Fort Yukon, Chalkyitsik, Circle, and Birch Creek, as well as in a wide adjacent area of the Northwest Territories and the Yukon Territory. There are about 9,000 Gwich'in people who are currently living in this region.

Inupiaq: Inupiaq is spoken throughout much of northern Alaska and is closely related to the Canadian Inuit dialects, which may collectively be called "Inuit" or Eastern Eskimo. Alaskan Inupiaq includes two major dialect groups: North Alaskan Inupiaq and Seward Peninsula Inupiaq. Alaska is home to about 13,500 Inupiat. The Canadian Inuit population is approximately 31,000.

Tlingit: Tlingit is the language of coastal Southeastern Alaska from Yakutat south to Ketchikan. Tlingit people have also occupied the area to the east inside the Canadian border. The total Tlingit population in Alaska is about 10,000 in 16 communities with about 500 speakers of the language.

Haida: The original homeland of the Haida people is the Queen Charlotte Islands in British Columbia, Canada. Prior to contact with Europeans, a group migrated north to the Prince of Wales Island area within Alaska. This group is known as the "Kaigani" or Alaska Haidas. Today, the Kaigani Haida live mainly in two villages, Kasaan and the consolidated village of Hydaburg.

Tshimpshian: The original homeland of the Tshimpshian is between the Nass and Skeena Rivers in British Columbia, Canada. The Tshimpshian currently live in Metlakatla, Alaska in addition to settlements in Canada.

There is continued contact between the trans-border cultures, including business development between Alaska's Native corporations and Canada's First Nations, cultural and sporting events, and family ties.

² www.uaf.edu/anlc/languages.html and www.alaskanative.net

³ www.nps.gov/bela/

Gold Rush⁴

The Klondike Gold Rush of 1898-99 is one of the most important historical connections between Canada and Alaska. The main goldfield (discovered in August 1896) was in the Yukon Territory, but most goldseekers had to travel through Alaska to access it. This helped open up the relatively new U.S. possession of Alaska to exploration and settlement. The Klondike Gold Rush involved one of the largest mobilizations of goldseekers in history. Most prospectors landed at Skagway at the head of Lynn Canal and crossed by the Chilkoot Trail or White Pass to Bennett Lake. Here, prospectors built boats that would take them the final 500 miles down the Yukon River to the gold fields. Stampeders had to carry one ton of goods over the pass to be allowed to enter Canada. Although 100,000 are estimated to have started the journey, only about 30,000 reached what was to become Dawson City.

The Alaska Highway⁵

The Alaska Highway is both a geographic and historical link between Alaska and Canada. Following the bombing of Pearl Harbor, the U.S. government decided an overland link to Alaska was necessary for defense purposes. The formal agreement between Canada and Alaska stipulated that the U.S. pay for construction and turn over the Canadian portion of the highway to the Canadian government after the war ended. In exchange, Canada furnished the right-of-way, waived taxes and import duties, and provided construction materials. Construction began in March of 1942 and was completed by November that same year. More than 10,000 American troops participated in the construction. It opened to the public in 1948 and is now a major transportation link for both commercial and non-commercial traffic.

Geographic and Transportation Connections

Alaska and Canada share approximately 1,500 miles of border from the Arctic Ocean to the tip of Southeast Alaska. Major rivers linking the two regions include the Yukon, Taku, and Stikine. Major mountain ranges include the Wrangell, St. Elias, and Coast ranges.

Canada and Alaska also have many thousands of square miles of national parks and refuges that share borders. Glacier Bay National Park, Wrangell St. Elias National Park, Tatshenshini-Aleek Wilderness Park, and Kluane National Park form the largest internationally protected area in the world, at 24 million acres – a UNESCO World Heritage Site. In the north, the Arctic National Wildlife Refuge shares a border with the Ivavik and Vuntut National Parks.

In terms of transportation, highways include the Alaska Highway, Haines Highway, Klondike Highway, and Top of the World Highway. Marine links include the Alaska Marine Highway System, cruise ships, and one freight service. Two airlines link Alaska with Canada. One railroad (White Pass & Yukon Route) travels between the two areas. These linkages are discussed in more detail below.

Rivers

Yukon

The Yukon River is a primary geographical feature connecting Alaska and Canada. It is one of North America's longest rivers at 2,300 miles, stretching from Atlin Lake in British

⁴ www.wikipedia.com

⁵ *The Milepost 2005*, published by Morris Communications Company, 2005.

Columbia through the Yukon to the Alaskan border at Eagle, then across Alaska to the Bering Sea. The river passes through the communities of Whitehorse, Carmacks, and Dawson City in the Yukon Territory; and Circle, Fort Yukon, Stevens Village, Tanana, Ruby, Galena, Naruto, Grayling, Holy Cross, Russian Mission, and Ohogamut in Alaska. Though it is now less essential as a transportation link between Alaska and Canada, it was one of the principal means of transportation during the Klondike Gold Rush.⁶

Taku

The Taku River runs 180 miles from Dease Lake in British Columbia through Atlin Lake to Taku Inlet, about 25 miles northeast of Juneau. After the Fraser and Skeena Rivers, the Taku is the largest salmon-producing river in Canada. It is also the traditional home of the Taku River Tlingits.⁷

Stikine

The Stikine River runs 335 miles from the Stikine Mountains in northwestern British Columbia to Southeast Alaska, emptying into the Pacific north of Wrangell Island. The Stikine was one of the routes during the Klondike Gold Rush. It is now a chief route to the Cassiar mining region of northern British Columbia.

Highways

Four different highways connect Alaska with Canada (not including the Alaska Marine Highway System). The following table shows border crossings at each station between October of 2003 and September of 2004.

US Customs Arrival Data by Border Crossing, Fall 2003-Summer 2004

Border Station	Fall/Winter 2003-2004	Summer 2004	Full Year Traffic
Alcan (Tok/Beaver Creek)	27,081	85,613	112,694
Dalton Cache (Haines)	12,517	31,499	44,016
Poker Creek (Top of the World Hwy)	579	22,598	23,177
Skagway (Klondike Hwy)	16,145	207,780	223,925
Total border traffic	56,322	347,490	403,812

Source: *Alaska Visitor Arrivals, Summer 2004 and Fall/Winter 2003-2004*, prepared for the Alaska Department of Commerce Community and Economic Development by Northern Economics, Inc., 2004.

Alaska Highway

The Alaska Highway stretches 1,390 miles from Dawson Creek, B.C. to Delta Junction, Alaska. The route includes 613 miles in British Columbia, 577 miles in the Yukon, and 200 miles in Alaska. The Alaska Highway is a popular route for visitors driving from the Lower 48 to Alaska.

Top of the World Highway

The Top of the World Highway connects Dawson City, Yukon to the Taylor Highway in Alaska, which runs north from the Alaska Highway to the communities of Eagle and Chicken. Both highways are closed in the winter. Due to steep grades and unpaved road, this border crossing sees relatively little visitor or commercial traffic.⁸

⁶ http://en.wikipedia.org/wiki/Yukon_River

⁷ <http://reference.allrefer.com>

⁸ *The Milepost 2005*, published by Morris Communications Company, 2005.

Haines Highway

The Haines Highway connects Haines, Alaska with Haines Junction in the Yukon. It is 146 miles long. Haines is a northern terminus for the Alaska Marine Highway System, resulting in significant ferry-related traffic using the Haines Highway.

Klondike Highway

The Klondike Highway connects Skagway, Alaska with the Alaska Highway in the Yukon. It is 99 miles long. Like Haines, Skagway is a northern terminus for the Alaska Marine Highway System; the Klondike Highway receives significant traffic from this source. In addition, many of Skagway's more than 700,000 annual cruise passengers take day trips into the Yukon using this highway.⁹

Marine Links*Alaska Marine Highway System*

The Alaska Marine Highway System (AMHS) connects Alaska to British Columbia with ferries that run between Prince Rupert and Southeast Alaska. The AMHS is operated by the State of Alaska's Department of Transportation and Public Facilities. The ferries currently run between Prince Rupert and Ketchikan between two and four times a week depending on the time of year. In addition to Ketchikan, the "main line" ferries also visit the communities of Wrangell, Petersburg, Juneau, Haines, Skagway, Sitka, Valdez, and Whittier. From Prince Rupert, the Yellowhead Highway leads west to Prince George, and the Cassiar Highway leads north to connect with the Alaska Highway.

Cruise Ships

Approximately 40 cruise ships travel to Alaska each summer, nearly all of them either starting from Vancouver or stopping in Victoria or Prince Rupert along the way. In 2004, over half of Alaska's cruise fleet used Vancouver as an embarkation port. Cruise traffic included nearly 900,000 passengers in 2004. More details on the cruise industry can be found in the Visitor Linkages chapter.

Freight

There is one major freight link between Alaska and Canada besides the Alaska Marine Highway System: the CN Aquatrain, operated by CN (a rail company that operates throughout North America). The CN Aquatrain is a railcar barge towed by an ocean tug that runs between Prince Rupert and Whittier around 30 times a year. From Prince Rupert the railroad connects with the North American rail network. The Aquatrain carries a wide variety of materials, including machinery and equipment, lumber, vehicles, and steel products, among other items.

Air

Only two airlines offer regularly scheduled service directly between Alaska and Canada. Air North connects Fairbanks with Dawson City and Whitehorse three days a week, year round. Air Canada flies between Vancouver and Anchorage once daily during the summer.

Railroad*White Pass & Yukon Route*

There is one railroad linking Canada with Alaska: the White Pass & Yukon Route (WP&YR), a narrow-gauge privately owned railroad built during the Klondike Gold Rush. While originally built for gold seekers, the vast majority of the line's current business comes from

⁹ *The Milepost 2005*, published by Morris Communications Company.

visitors. From Skagway, trains run to Fraser, White Pass Summit, and Lake Bennett. (More detail on the WP&YR can be found in the Visitor Linkages chapter.)

Alaska and Canada Geographic and Transportation Links



Canada's Involvement in Alaska's Economic Sectors

For decades, Canadian companies have been investing in Alaska projects, opening Alaska-based offices, collaborating with Alaska companies, and otherwise getting involved in Alaska's economy. Canadian companies are particularly active in Alaska's mining sector; however, they are also involved in Alaska's oil and gas, transportation, communication, manufacturing, retail and service sectors.

Mining

In 2004, Canadian mining companies directly employed approximately 900 Alaskans. Mining jobs are typically year-round and well-paying. According to the Alaska Department of Labor and Workforce Development, the average mining job in Alaska earned approximately \$5,800 per month in 2004 (or \$70,000 per year).¹⁰ Canadian mining companies are committed to working in an environmentally responsible manner in Canada, Alaska, and abroad.

Historical Background

The history of mining in Alaska is interwoven with that of mining in Canada. In 1886 the discovery of rich gold deposits on the Fortymile River, across the Alaska/Yukon border, led to the first large rush into the Interior.¹¹ Mining was Alaska's largest industry until World War II, when a presidential order closed nearly all precious metal mines in the U.S.¹² Mining in Alaska resumed slowly after the war. Alaska's "modern era" of mining started in 1989, with the operation of the Greens Creek Mine and the Red Dog Mine.

Today at least 21 Canadian mining companies are operating in Alaska on more than 40 mining projects statewide. While most of the projects are in the exploration or construction phase, Teck Cominco's Red Dog zinc and lead mine and Kinross Gold's Fort Knox gold mine are in full production. Recent increases in metal prices, especially gold, have benefited large and small mining operations in every stage of development.¹³

Exploration and Development

Based on yearly averages of Canadian investment, Canadian companies account for an astounding 76 percent of exploration and development expenditures in Alaska's mineral industry today. Over the past 24 years, approximately \$2.3 billion has been invested by Canadian mining companies in Alaska.

(See table next page)

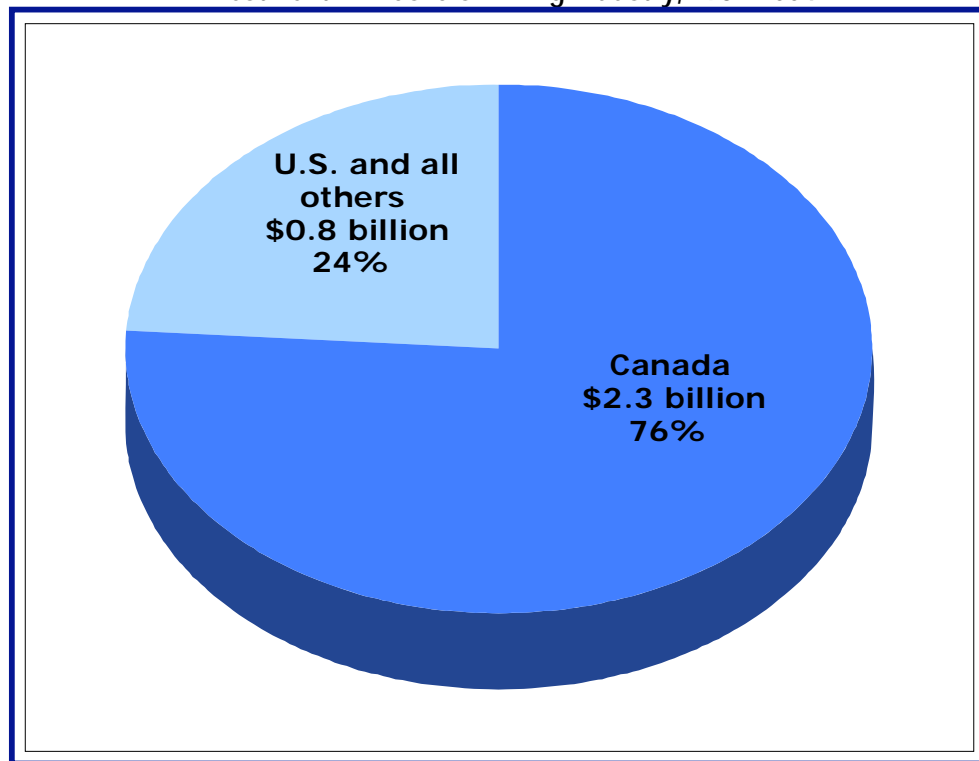
¹⁰ <http://almis.labor.state.ak.us>

¹¹ www.explorenorth.com/library/yafeatures/bl-dates3.htm.

¹² Ibid.

¹³ "The Alaska Mineral Industry in 2004", *Alaska Business Monthly*, November 2004, p. 28.

Investment in Alaska's Mining Industry, 1981-2004



While the amount that individual companies invest in exploration and development is confidential, it is estimated that in 2004, Canadian firms invested approximately \$52 million in exploration and \$104 million in development of mining projects in Alaska. In 2004, the following Canadian firms made exploration expenditures in Alaska:

- *Bravo Venture Group Inc.*
- *CanAlaska Ventures Ltd.*
- *Copper Ridge Explorations Inc.*
- *Diamond Gold Corp.*
- *Freegold Ventures Ltd.*
- *Full Metal Minerals Ltd.*
- *Furio Resources Inc.*
- *Geoinformatics Exploration Inc.*
- *Golconda Resources Ltd.*
- *Kinross Gold Corp.*
- *Linux Gold Corp.*
- *Max Resource Corp.*
- *Mines Trust Co.*
- *Northern Dynasty Minerals Ltd.*
- *NovaGold Resources Inc.*
- *Pacific North West Capital Corp.*
- *Placer Dome Inc.*
- *Quaterra Resources Inc.*
- *Rimfire Minerals Corp.*
- *Shear Minerals Ltd.*
- *Silverado Gold Mines Ltd.*
- *St. Andrew Goldfields Ltd.*
- *Teck Cominco Ltd.*
- *Teryl Resources Corp.*
- *Toquima Minerals Corp.*
- *TNR Gold Corp.*
- *Western Warrior Resources Inc.*

In 2004, the Canadian firms of Kinross (Fort Knox), Teck Cominco (Red Dog Mine and 40 percent of Pogo Mine), and NovaGold (Rock Creek) invested \$104 million in the development of their mines.

Exploration and Development Investment in Alaska, 1981-2004
(\$US Millions)

Year	Total Exploration Investment	Total Development Investment	Total Investment	Estimated Value of Canadian Investment*
1981	\$76.3	\$24.7	\$101.0	\$68.7
1982	45.6	41.6	87.2	59.3
1983	34.1	27.9	62.0	42.2
1984	22.3	53.4	75.7	51.5
1985	9.2	34.1	43.3	29.4
1986	8.9	24.3	33.2	25.2
1987	15.7	100.3	116.0	88.2
1988	45.5	275.0	320.5	243.6
1989	47.8	134.3	182.1	138.4
1990	63.3	14.3	77.6	59.0
1991	39.9	25.6	65.5	49.8
1992	30.2	29.6	59.8	45.4
1993	30.3	27.7	58.0	44.1
1994	31.1	45.0	76.1	57.8
1995	34.3	148.6	182.9	139.0
1996	44.7	394.0	438.7	333.4
1997	57.8	168.4	226.2	171.9
1998	57.3	55.4	112.7	85.7
1999	52.3	33.8	86.1	65.4
2000	34.9	141.7	176.6	134.2
2001	23.8	81.2	105.0	79.8
2002	26.5	34.0	60.5	46.0
2003	27.6	39.2	66.8	50.8
2004	69.8	204.9	272.7	156.0
TOTAL	\$929.2	\$2,159.0	\$3,086.2	\$2,318.0

Source: *Mineral Industry 2004: A Summary*, Information Circular 51, Division of Geological & Geophysical Surveys, March 2005.

*McDowell Group extrapolations based on research and information provided by mining industry representatives.

The settlement of Alaska's aboriginal land claims in 1971 through the passage of the Alaska Native Claims Settlement Act (ANCSA) is considered the single most important event in modern mining in the state.¹⁴ The twelve statewide native corporations are private companies that can lease their lands without the involvement of the U.S. Bureau of Indian Affairs. Teck Cominco's Red Dog Mine exemplifies the potential of this relationship. The mine was developed in partnership with Northwest Arctic Native Association (NANA) Regional Corporation.

Red Dog has shown what high quality, local jobs can mean for families and communities.¹⁵ (A more detailed description of Canada's involvement in Red Dog Mine can be in the case study on page 16.)

¹⁴ "Regulatory changes improve Alaska's mining climate", *Mining Engineering*, March 2004, p. 23.

¹⁵ *Ibid.* p. 23.

Alaska Native regional and village corporations now have more than 30 years of experience with mining companies. Currently Full Metal Minerals is exploring on Bristol Bay Native Corporation land in Southwest Alaska and on Aleut Corporation lands on the Alaska Peninsula. Headquartered in Vancouver, B.C., Full Metal Minerals has invested \$2.5 million in Alaska since 2003 in acquisition and exploration.

As of March 2005, Northern Dynasty Minerals had spent \$40 million on its Pebble gold and copper project in southwestern Alaska to explore and delineate the deposit, carry out baseline environmental and socio-economic studies, and perform geotechnical work and project engineering. Northern Dynasty, based in Vancouver, B.C., estimates the project contains 26.5 million ounces of gold and 16.5 billion pounds of copper. The project also contains silver and molybdenum.

Two Canadian companies, NovaGold and Placer Dome, are partners in the 27.8 million ounce Donlin Creek gold project in western Alaska. Placer Dome owns 30 percent of the project and is exercising the option to earn an additional 40 percent by funding \$32 million (\$11.5 million in 2005) in exploration and development, completing a feasibility study, and making the decision to build a mine to produce at least 600,000 ounces of gold per year.

Meanwhile NovaGold has focused on the Rock Creek project, seven miles from Nome. Rock Creek, estimated to contain more than 1 million ounces of gold, is the company's first foray into gold production.¹⁶ When operational, the mine is expected to provide 120 year-round jobs and bring \$22 million in expenditures (including \$8 million in payroll) a year to the Nome area.

Golconda Resources Ltd., a mining company based in Calgary, is the first to explore for diamonds in Alaska. Their Shulin Lake property in Southcentral Alaska is the first documented lode diamond discovery in the state's history.

Production

Toronto-based Kinross Gold acquired Fort Knox, Alaska's largest gold mine, in 1998. In 2003 gold equivalent production for the open pit mine was 391,831 ounces. The company announced plans to spend \$60 million on a three-year mine expansion project in 2004.¹⁷ In addition, the company invested \$28 million in earth-moving equipment, increasing dirt-moving capacity by thirty percent. Fort Knox has an annual average employment of 411. It was 59th on the list of top 100 private sector employers in Alaska for 2004.¹⁸

Teck Cominco, owner and operator of the Red Dog Mine, is also developing the Pogo gold property in eastern Alaska. Construction of the mine, estimated at over \$250 million, currently involves development of the underground mine and mill operation. Startup is planned for the first quarter of 2006. The mine will employ approximately 250 full-time workers for at least ten years, with expected production of 400,000 ounces of gold per year.

The following case study provides more detail of Canada's involvement in Red Dog Mine, the largest lead and zinc deposit in the world.

¹⁶ Rock Creek: Nome Mine Moves Into Next Stage of Development, *Alaska Business Monthly*, November 2004, p. 30.

¹⁷ "Fort Knox Moves forward to Keep Production on Target," *Alaska Business Monthly*, November 2004, p. 34.

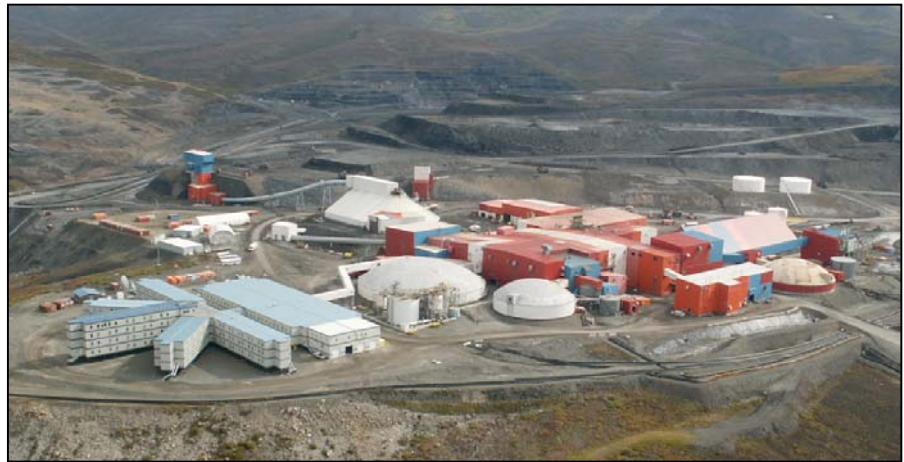
¹⁸ "The Trends 100," *Alaska Economic Trends*, August 2005, p. 10-11.

Case Study: Red Dog Mine

Red Dog, the world's largest zinc mine, is owned and operated by Vancouver-based Teck Cominco. Situated in the DeLong Mountains of Alaska's Brooks Range, Red Dog is open-pit zinc, lead, and silver mine 90 miles north of Kotzebue and 55 miles from the Chukchi Sea. Proven and probable reserves total approximately 90 million tons grading 17.9 percent zinc and 4.7 percent lead, with 2.8 ounces of silver per ton.

The Red Dog Mine is located on property owned by NANA Regional Corporation, an Alaska Native corporation.¹⁹ NANA and Cominco signed a unique agreement in 1982 that focused on creating a world-class zinc mine, providing employment for NANA shareholders while protecting their subsistence lifestyle.

Under the agreement, Cominco has the responsibility for training NANA shareholders, and first preference for all jobs at Red Dog goes to qualified Natives. In 2004, Red Dog Mine reported 480 year-round workers of which 56 percent are NANA shareholders. The mine generates \$45.5 million in total wages annually. According to the Alaska Department of Labor and Workforce Development, Red Dog Mine was listed in the top 100 private employers in Alaska for 2004, coming in at No. 73.²⁰



Construction of Red Dog began in 1986 and involved a third party, the State of Alaska. Due to its remote location, the mine required construction of a 60-mile access road and port site. The Alaska Industrial Development and Export Authority (AIDEA) agreed to finance the road and port as public facilities, with Red Dog paying user fees.

Production at the mine started in December 1989. While ore is mined year-round, it is stored for shipment at the port on the Chukchi Sea coast and shipped during the summer months when waters are ice-free and navigable. Mine facilities were expanded in 1998 and again in 2001.²¹ Sharp increases in metal prices brought the mine back to profitability in 2003 and 2004, after a loss in 2002.²²

Total capital construction costs of Red Dog to date exceed \$600 million. Teck Cominco has paid \$79.2 million in total royalties to NANA from 1982 to 2003. In addition, payments in lieu of taxes to the Northwest Arctic Borough from 1988 to 2003 have been \$38.1 million.²³

"Recognizing their good investment, state officials continually point to Red Dog as a model of cooperation between government, Alaska Natives and industry in developing natural resources responsibly, building a strong economic base and providing jobs with high wages."²⁴

In April 2004, Red Dog joined an elite group of less than half a dozen metal mines in the United States certified under ISO 14001 Environmental Management System (EMS). Certification was particularly challenging at Red Dog because of the associated non-mining activities necessary for operations at the remote mining site.

¹⁹ "Shared Values, Common Goals, Exceptional Results, The Red Dog Mine Story," Northwest Alaska Native Association, Cominco LTD., p. 7.

²⁰ "The Trends 100," *Alaska Economic Trends*, August 2005, p. 10-11.

²¹ www.teckcominco.com/operations/reddog/index.htm.

²² www.mining-technology.com/projects/red_dog/

²³ www.nana.com/businesses/mining.htm

²⁴ "Shared Values..." p. 8.

Oil and Gas

A wide variety of Canadian companies are operating in Alaska in the oil and gas industry, exploring for oil, providing essential oilfield services, and adding value through manufacturing.

Oil and Gas Exploration

State oil and gas lease and sales records show some activity by Canadian companies as early as the mid-seventies, but no real investment likely occurred before 2000. Currently Petro-Canada and Fortuna Energy hold leases on Alaska's North Slope. Teck Cominco, owner and operator of the Red Dog Mine, has 23,000 acres in shallow natural gas leases in the vicinity of the mine. The company is drilling test wells on NANA Regional Corporation property and hopes to support the mine with development of the natural gas.

Petro-Canada (Alaska) started assembling North Slope acreage in 2001. It now holds 322,500 acres in the National Petroleum Reserve-Alaska (NPR-A) and 1.1 million net acres in the Brooks Range Foothills. Both areas are in the early stages of exploration. Anadarko Petroleum Company, Petro-Canada's partner in the Foothills property, expects to lay out a joint seismic program in the region in the winter of 2005. A final decision on development in this area is dependent on construction of a gas line from the North Slope. Petro-Canada invested \$45 million in its Alaska and Mackenzie River Delta holdings in 2005.

Fortuna Energy Inc., a wholly owned subsidiary of Talisman Energy, Inc., has approximately 440,000 acres leased in the National Petroleum Reserve-Alaska. The company has been in Alaska since 2003 and expects to have a total of \$75 million invested in the state by the end of 2005. Fortuna has identified four significant prospects on its acreage and is planning to drill two wells in the winter of 2005/2006. Results of their first well, drilled with the French company Total, in the winter of 2003/2004, have not been made public.

EnCana Corporation, formed in 2002 with the merger of PanCanadian Energy Corporation and Alberta Energy Company Ltd., has deemed its assets in Alaska to be "non-core." The company is currently in the process of transferring leases to 77,800 acres on Alaska's North Slope.

Oilfield Services

Alaska's oil and gas support industry is a tight market with a limited number of producers as clients. Yet Canadian experience and cold-weather technology is well suited to Alaska and several Canadian companies are offering a variety of services.

Acuren, a Rockwood company, has offices in Anchorage and 110 employees working from Kenai to the North Slope. The company provides materials engineering testing, nondestructive testing, and related services to the oil and gas industry in Cook Inlet and the North Slope, where aging pipelines are in continuous need of ultrasonic detection.

Acuren has more than \$1 million of equipment in the state, from digital radiology and automated ultrasonic equipment to pipeline crawlers, vehicles, and dark room equipment. The company also supports the construction, marine, and aviation industries. In the power sector Acuren works on turbines and stacks, and inspects tank farms and bulk fuel storage facilities.

Canadian engineering firms have made their mark on Alaska, in successful joint ventures with regional Native corporations.

NANAColt Engineering, LLC is a multi-disciplinary firm providing engineering and procurement and construction management services, managing projects from conception to

operations support. Formed in November 1997, the company serves Alaska's petroleum, mining, government, and utility industries. NANAColt is a subsidiary of NANA Development, an Alaska Native corporation, and Colt Engineering Corporation, which has offices in Calgary, Edmonton, and Toronto. The company has 210 employees in Alaska, with approximately 160 working in Anchorage and the remainder working projects on the North Slope. NANAColt has between \$200 million and \$300 million in projects a year, with 90 percent of their work coming from Alaska's oil and gas companies. Other clients include mining, government, and utility interests.

In 2005, New Brunswick-based Major Drilling Group purchased Dynatec Corporation's Drilling Services Division, assuming the position of Dynatec in the NANA Dynatec LLC. This company provides diamond drilling services throughout Alaska and also participates in shallow gas drilling programs.

In the early 1980s, Roll'n Well Servicing of Red Deer, Alberta began work in Alaska. In 1991, Roll-n Alaska Inc. formed a joint venture with Calista Corporation and renamed the company Nordic-Calista Services No. 1. The firm provides workover, completion and coil tubing services on the North Slope, Prudhoe Bay, and Kuparuk. In 2004, Nordic-Calista Services employed 60 people.

Calgary-based Tri Ocean Engineering, Ltd. became a subsidiary of ASRC Energy Services, Inc. in 2000. ASRC Energy Services companies combined to provide global engineering, procurement, construction management, and fabrication services. Tri Ocean provides engineering, procurement, construction management, and project management services to the drilling and production sectors of the energy industry. Tri Ocean operates out of ASRC's offices in Anchorage and expects to have 50 employees by August of 2005. The company is projecting approximately \$10 million in projects for 2005 and expects growth to continue to meet the needs of the oil and gas industry.

In Interior Alaska, two Canadian companies are working with Alyeska Pipeline Service Company on the strategic reconfiguration project for the Trans Alaska Pipeline System (TAPS), estimated at \$250 million. SNC-Lavalin Inc. and Hinz Automation Inc. both have staff in Fairbanks providing electrical and automation engineering for the TAPS pump stations. The project is expected to extend into 2006.

Other Technical and Professional Services

Along with the firms offering technical services in the mining, and oil and gas sector, there are additional examples of Canadian expertise being applied in Alaska. Toronto-based Golder Associates provides geotechnical and environmental engineering, groundwater resource development, and site investigation and remediation. In 2004, the company employed 18 Alaskans.

Alaska-Canada Gas Pipeline

Alaska has waited more than 30 years to develop its vast reserves of North Slope natural gas, estimated by the U.S. Geological Survey at 35 trillion cubic feet. Recent high energy prices and increased demand have revitalized negotiations to build a pipeline, necessary to bring the gas to market. Canada shares Alaska's desire to develop northern natural gas resources and, by nature of geography, Canada has a role in any pipeline that would run through Canada to the Lower 48. The federal government's objective is to provide a stable and predictable policy environment in which investment decisions can be made. Two Canadian companies, Enbridge, Inc. and TransCanada, are in separate negotiations to be involved in the pipeline construction. If this moves forward, this project would be one of the largest private energy projects undertaken anywhere in the world.

Value-Added Manufacturing

Calgary-based Agrium Inc., a leading global producer and distributor of fertilizers, operates a plant in Nikiski with a net book value of \$14 million (December 2004). Located on the east side of Cook Inlet on the Kenai Peninsula, the 170-acre facility features a tidewater terminal and four plants that produce urea and anhydrous ammonia. Agrium had considered closing the plant in the fall of 2005 but successfully negotiated contracts with local Cook Inlet gas producers and now expects to operate through November of 2006, with net ammonia sales of approximately 280,000 tons per year.

Agrium's Nikiski operation is one of Alaska's few major manufacturing and value-added operations and contributes significantly to the region's economy. In 2004, the company provided 221 year-round manufacturing jobs, with an annual payroll of \$16 million. In 2004 the Kenai Peninsula Borough received \$1.5 million in industrial property tax from Agrium.²⁵

Transportation and Communication

Transportation

Canadian transportation companies are represented in Alaska from the North Slope to Southeast. Northern Transportation Company Limited (NTCL), a NorTerra Inc. company, provides on-demand shipping up the Mackenzie River to the Native village of Kaktovik and Alaska's North Slope oilfield. NTCL has hauled drilling rigs and oilfield modules north, along with dry cargo and fuel.

To the south, CN AquaTrain provides a marine/rail link from Prince Rupert, B.C. to Whittier, Alaska via ocean tug. CN's AquaTrain ships materials that support Alaska's mining, oil and gas, and construction industries, including lumber, methanol and specialty chemicals, machinery, equipment, and vehicles. Approximately 85 percent of products shipped are Canadian, with the balance coming from the Lower 48.

Canadian-owned White Pass & Yukon Route Railway owns the railroad between Skagway and Whitehorse; however, it only operates a train between Skagway and Lake Bennett. The company also owns three docks in Skagway. The docks primarily serve cruise ships. More than 800,000 cruise passengers transited the WP&YR docks in 2004. WP&YR is in the midst of negotiating with Cash Minerals and Alaska Industrial Development and Export Authority for use of WP&YR docks for loading coal. More information on WP&YR can be found in the Visitor Linkages chapter.

Communications

Alaska Native-owned Arctic Slope World Services (another subsidiary of ASRC) partnered with Canadian ATCO Frontec to form joint venture company ARCTEC Alaska. In May of 2004, ATCO Frontec was selected by the U.S. Air Force to maintain and manage the Alaska Radar system for up to ten years. The electronics system consists of 15 long-range radars and three short-range radars spread over 590,000 square miles of Alaska, including ten radar sites above the Arctic Circle. The estimated value of this contract over the ten years is approximately \$400 million.

In May 2005, Glentel, a Burnaby, B.C.-based wireless voice and data communications company, purchased the Remote Telecom business unit from Wireless Matrix Corporation.

²⁵ *The Economic Impact of Closing Agrium Kenai Nitrogen Operations* prepared for Agrium U.S. Inc. by the McDowell Group, Inc., April 2004.

With this acquisition, Glentel is now the owner and operator of AlaskaNet, a well-established mobile satellite dispatch talk group with up to 1,000 members in the fishing industry from Oregon to Alaska. The service also provides point-to-point, two-way voice communication, increasing efficiency and production.

Seafood

Canada is a major player in Alaska's seafood industry. According to trade statistics, \$83.5 million worth of Alaska seafood was exported to Canada in 2004. Of this amount, two-thirds was in unprocessed form; the remaining third was processed in Alaska before being exported. According to a Homer-based off-loading company, about half of the 10–13 million pounds of halibut landed in Homer annually gets trucked to Canada for processing.

One of the state's largest processing firms, Alaska General Seafoods, is Canadian. Alaska General Seafoods operates three processing plants in the state: Ketchikan, Naknek, and Egegik. It has been operating in Alaska since 1986. Although it is based in Kenmore, WA, it is the US affiliate company for Canfisco (Canadian Fishing Company). Its parent company, the Jim Pattison Group, is the third-largest privately-held company in Canada. In 2004, Alaska General Seafoods had an annual average of 100 jobs, peaking in July with 625 workers.

Manufacturing

Other than seafood processing, the manufacturing sector in Alaska's economy is relatively small; however, there are some examples of Canadian investment in this sector.

Below is a brief case study of Capitol Glass/Northern Windows, a manufacturer born in Canada's North and now making windows and doors suited to Alaska's climate.

Case Study: Capitol Glass/Northern Windows

Capitol Glass/Northern Windows (CGNW) is an Alaska manufacturer and distributor of residential and commercial fenestration products. The company is owned by Whitehorse-based RAB Energy Group Inc., which operates in Alaska as RAB Energy Alaska. The Alaska company is 90 percent owned by Yukon First Nations corporations and 10 percent by Alaska General Manager Walt Murphy.

RAB Energy Alaska first started manufacturing high quality vinyl windows in Anchorage in 1989, after six years of operation in Canada. In 2000, the company bought the assets of long-time Alaska business Capitol Glass, and is now known as Capitol Glass/Northern Windows. Co-owner Walt Murphy started with the company in 1995 and is now the sole Canadian working for the company in Alaska.

CGNW has a staff of 45 in Anchorage manufacturing and installing tub and shower enclosures, patio doors, stained glass, auto glass, aluminum curtain wall systems, insulated thermal glass units, and upper-end vinyl windows. The company supplies manufactured products from Barrow to the Alaska Peninsula, for medical clinics, Native housing, and rural and local schools. CGNW's business volume has grown to over \$6 million a year.

Earlier this year, CGNW moved into its own building in Anchorage, featuring 32,000 square feet for offices and product manufacturing.



In addition to the \$2.5 million investment of the building, the company has \$2 million invested in equipment and machinery in Anchorage. In 2004 the company paid \$31,000 in property tax on the building and 70,000 square feet of land to the City of Anchorage, and \$10,000 in business inventory tax.

CGNW contributes \$10,000 a year to support statewide nonprofits such as the Civil Air Patrol, the Alaska State Troopers, and Native housing corporations. General manager Walt Murphy is also participating in the University of Fairbanks Cold Climate Housing Research Center. Groundbreaking ceremonies were held this summer for the center's building and infrastructure research and testing facility on UAF's campus.

Retail

Canadian retail investment in Alaska is largely evident by examining the Canadian company, Alaska Commercial Company, which owns 27 retail outlets across rural Alaska.

Case Study: Alaska Commercial Company

Alaska Commercial Company (ACC) is a wholly owned subsidiary of The North West Company (NWC). NWC has 181 retail outlets in the United States and Canada, with its Alaska stores operating as AC Value Centers. ACC operates 27 stores statewide, serving rural communities with populations ranging from 500 to 5,000. Sites range from Barrow, on Alaska's North Slope, to the most recently opened store in Yakutat. The majority of ACC's stores are in western Alaska villages.

The stores sell food and general merchandise from apparel, to housewares and appliances, to outdoor products. Special services such as ATMs, hunting and fishing licenses, and an in-house consumer credit program may also be offered.

According to ACC, it has more than 750 employees in Alaska. Alaska Department of Labor and Workforce Development listed the firm as No. 31 in the Department's top private sector employers in Alaska for 2004.²⁶ An annual payroll of over \$16.5 million makes ACC one of the largest private sector employers in rural Alaska. The company hires locally, with an emphasis on Native hire, and promotes from within. The Alaska operation is run by a president and COO in Anchorage, while NWC's chairman and CEO is based in Winnipeg. The company has no Canadian citizens working in Alaska.

Each year ACC spends more than \$4 million on local goods and services, from rent to local Native corporations to freight hauling and store repair. An additional \$4.8 million is paid in local utilities. Since 1993 the company has spent over \$45 million building and renovating stores in rural Alaska, and it continues to grow. In addition to their new store in Yakutat, AC opened a store in Sand Point this year, and two more stores are slated to open in the fall of 2005.



The Alaska operation is unique in NWC's portfolio, as it has no other operations in the United States. NWC has stores in rural Canada that operate under the chain name Northern. According to ACC employee Heidi Brown, that made Alaska Commercial Company a perfect fit to complement NWC's Canadian operations. "We operate like stores in like markets that service a unique population. We both share the same challenges in operating in rural markets from logistics to staffing."

²⁶ "The Trends 100," *Alaska Economic Trends*, August 2005, p. 10-11.

Canada-Alaska Visitor Linkages

Canada and Alaska have long shared their visitors, primarily through two travel markets: cruise passengers (who visit Canadian ports on their Alaska cruise and participate in pre- and post-cruise land tours in Canada) and highway travelers (who pass through Canada on their way to and from Alaska). Canadians traveling to Alaska represent a third way that Canada impacts the Alaska economy in the context of the visitor industry. These three travel markets are discussed in more detail below.

Cruise Ship Market

The Alaska cruise industry consists of six major lines (Princess, Holland America, Royal Caribbean, Celebrity, and Norwegian) in addition to several smaller lines, such as Crystal Cruises and Cruise West. In 2005, they will bring an estimated 915,000 passengers to Alaska – all of whom will also stop in or tour parts of Canada during their trip. The cruise industry links Alaska and Canada in two important ways: ports-of-call and overnight land tours.

Ports-of-Call

Virtually all cruises to Alaska include at least one stop in a Canadian port. As a popular port of embarkation, Vancouver, B.C., plays a particularly important role in the Alaska cruise industry. In 2004, approximately 60 percent of all Alaska cruise passengers began and/or ended their voyage in Vancouver. Victoria and Prince Rupert serve as ports of call for ships originating in Seattle. U.S. law requires that foreign-flagged cruise ships sailing between U.S. ports must call at a “far foreign” port; Victoria and Prince Rupert satisfy this requirement for those ships not using Vancouver as their embarkation port.

(The Vancouver cruise passenger volume in the table below counts round-trip passengers twice, as they visit the port twice, once at embarkation and once at disembarkation.)

Day tours from Skagway are another way in which Alaska cruise passengers spend time in Canada while on their cruise package. In 2004, out of the 884,000 Alaska cruise passengers, more than 400,000 rode the White Pass & Yukon Route railway, and others took tours to the Yukon.

Cruise Ship Passenger Volume by Port, 2004

Total Volume	
Alaska Ports	
Juneau	884,406
Ketchikan	866,882
Skagway	723,924
Sitka	233,396
Whittier	187,233
Seward	142,277
Wrangell	47,942
Canada Ports	
Vancouver	833,101
Victoria	246,669
Prince Rupert	64,686

Source: Cruise Line Agencies of Alaska

Land Tours

Holland America is the only major cruise line with a land tour program that includes significant time in the Yukon. Tours run from Skagway north through the Yukon, then west to Denali, and the reverse. Yukon destinations include Whitehorse, Dawson City, Beaver Creek, Kluane National Park, and Tombstone Territorial Park. The number of cruise passengers participating in these tours is approximately 15,000 annually.

Princess, Holland America, and Royal Caribbean offer pre- and post-tours to the Canadian Rockies. One of Princess' land tours offers a two-night visit to Dawson City.

Economic Impacts of the Cruise Industry

A 2004 McDowell Group study conducted for the North West Cruiseship Association found that cruise passengers spent an estimated \$393 million in Alaska in 2003. Total direct cruise industry spending, including passenger spending, cruise line spending on goods and services, and cruise line spending on payroll, was estimated at \$633 million. Counting both direct and indirect employment and payroll, the cruise industry generated 12,430 jobs (annual-equivalent) in 2003. The industry accounted for \$384 million in total payroll.²⁷

Total Statewide Employment and Payroll Impacts of the Cruise Industry, 2003 (Including Direct, Indirect, and Induced Impacts)

	Jobs	Payroll (\$US Millions)
Cruise line employment and spending	4,830	\$152.7
Passenger and crew spending	7,600	231.4
TOTAL	12,430	\$384.1

Source: *The Economic Impacts of the Cruise Industry in Alaska, 2003*, prepared for North West Cruiseship Association by the McDowell Group, Inc., 2004.

Although these impacts are not directly attributable to Canada, the connections of Alaska's cruise industry to Canadian ports and tours facilitates and strengthens the overall industry.

²⁷ *The Economic Impacts of the Cruise Industry in Alaska, 2003*, prepared for North West Cruiseship Association by the McDowell Group, Inc., 2004.

Case Study: White Pass & Yukon Route Railway

The White Pass & Yukon Route Railway (WP&YR), based in Skagway, operates a railway that carries over 400,000 passengers annually, as well as the community's dock facilities. WP&YR is a wholly-owned subsidiary of Tri-White Corporation.

The WP&YR originally connected Skagway to Whitehorse, Yukon by rail. Construction started on the WP&YR in 1898 during the Klondike Gold Rush. It was considered an impossible task at the time due to the steep grades and sharp turns. It was completed in 26 months, finished in July 1900. WP&YR became a fully integrated transportation company, operating docks, trains, stage coaches, sleighs, buses, paddlewheelers, trucks, ships, airplanes, hotels, and pipelines. It provided the essential infrastructure servicing the freight and passenger requirements of Yukon's population and mining industry. Over the years many of these operations were sold or discontinued. The railroad suspended operations in 1982 and was reopened in 1988 as a seasonal tourism operation.

The WP&YR is the Alaska cruise industry's most popular shore excursion, with nearly half of all passengers participating. Most opt for the 3.5-hour, 40-mile summit tour to the White Pass Summit. As cruise ship passenger traffic to Alaska has increased steadily, so has ridership on the WP&YR. In 2004 the company celebrated another record year with 404,722 revenue passengers – an increase of over 50,000 compared with 2003.

The WP&YR rail fleet consists of 20 diesel-electric locomotives, 70 restored and replica parlor cars, and two steam locomotives. The company invested in eight new coaches for the 2004 season. A refurbished steam locomotive was added to the fleet in July 2005.

As the third-largest Alaska cruise port in terms of passenger volume, Skagway receives significant cruise vessel traffic to its docks. The WP&YR operates all three cruise ship docks in the community.

The WP&YR employs 17 people year-round and 153 people on a seasonal basis, with an annual average of 92 (according to the Alaska Department of Labor and Workforce Development).

The City of Skagway reports that WP&YR's subsidiary the Pacific and Arctic Railway Navigation Company owns property valued at \$11.7 million, with improvements of \$43.5 million. The Skagway Terminal Company's property is valued at \$3.6 million, with improvements of \$19.6 million. According to WP&YR, the company paid \$1.1 million in city sales tax in 2004 and \$498,000 in property taxes.

WP&YR is pursuing projects that may serve to further strengthen the company. The Broadway dock is undergoing an expansion for the 2006 season that will allow it to accommodate large cruise ships, making Skagway the first port in Southeast Alaska that can accommodate four large cruise ships at once. Recently authorization was granted to WP&YR to carry passengers an additional 25 miles past Lake Bennett to Carcross. WP&YR is negotiating with Cash Minerals and Alaska Industrial Development and Export Authority for use of WP&YR docks for loading coal. A new coal mining operation in the Yukon (Division Mountain) has led to this development.



Highway Travel Market

The highway travel market encompasses a wide range of market segments: RV travelers, ferry travelers, and motorcoach travelers, among others. On their journeys to and around Alaska, nearly all of them pass through Canada at some point. (Some ferry travelers stay within the state by sailing between Bellingham and Southeast Alaska.) For many highway travelers to Alaska, the Yukon and/or British Columbia are essential elements of their trip.

Highway and ferry visitors use a variety of routes and itineraries on their Canada/Alaska journey. The most popular route is the Alaska Highway, which stretches from Dawson Creek in British Columbia to Delta Junction, Alaska. Two access routes are used to reach the Alaska Highway. The West access route runs from Seattle/Bellingham through Vancouver, north through the center of British Columbia. The East access route starts in Great Falls, Montana, leading north to Calgary. Travelers can reach Dawson Creek either by traveling through Lake Louise and Jasper, or through Edmonton. A third access route is the ferry: highway drivers on the West access route can use the Yellowhead Highway to reach Prince Rupert, where ferries run to Ketchikan and other Southeast Alaska communities.

The table below shows the number of visitors that arrived into Alaska via highway or ferry between October 2003 and September 2004.

Visitor Arrivals into Alaska via Highways and Ferry, 2004

	Fall/Winter 2003-2004	Summer 2004	Full Year Traffic
Highways – personal vehicle	11,300	123,900	135,200
Highways – motorcoach	300	13,400	13,700
Highways – other	2,300	4,000	6,300
Ferry	1,700	22,800	24,500
Total highway/ferry visitors	15,600	164,100	179,700

Source: *Alaska Visitor Arrivals, Summer 2004 and Fall/Winter 2003-2004*, prepared for the Alaska Department of Commerce Community and Economic Development by Northern Economics, Inc., 2004.

Canadian Travel to Alaska

Canadians traveling to Alaska represent a direct economic impact to the state. They can be broken into two markets: regional visitors (residents of the Yukon and British Columbia who make short trips to nearby Alaska communities) and other Canadians (who are traveling from further away, and thus resemble the overall Alaska travel market).²⁸ Canadian travelers spent an estimated \$81 million in Alaska between May and September 2003 (see next table).

Regional Visitation

Regional travel is an important part of the visitor industry in several Alaska (and Canada) communities. Whitehorse residents, for example, often travel to Haines and Skagway to access fishing and other recreational opportunities. Festivals and sporting events help

²⁸ *Statistical Note:* The statistics cited in the visitor linkages section of this report come from a variety of resources, but are ultimately derived almost entirely from two principal sources: McDowell Group's Alaska Traveler Survey research, and Alaska Visitors Arrival data developed for the Alaska Department of Commerce, Community and Economic Development. Although Statistics Canada and U.S. Department of Commerce collaborate to improve data comparability, there are minor differences in their estimates with data derived directly by Alaska sources because of varying statistical concepts and methods.

facilitate regional traffic; these include hockey tournaments, softball tournaments, the Haines Kludane Bike Relay between Haines and Haines Junction, the Klondike Road Relay between Skagway and Whitehorse, the Yukon Quest sled dog race between Fairbanks and Whitehorse, the Alaska Folk Festival in Juneau, and other events.

A 2002 McDowell Group survey found that Whitehorse residents make an average of 1.5 annual trips to Skagway, and 1 annual trip to Haines. Their average party size is 2.6 people, and they most often travel for vacation or recreation.²⁹ Travel elsewhere in Alaska was not recorded. Applying the 2.5 average annual trips to the total Whitehorse population of 23,000 results in an estimated 55,000 trips made by Whitehorse residents to Haines or Skagway.

Other Canadian Travel

The McDowell Group's 2003 *Alaska Travelers Survey* found that 3.5 percent of non-cruise visitors exiting Alaska by air during the summer were from Canada.

The report *Alaska Visitor Arrivals, Summer 2004* found that 635,600 visitors to Alaska entered the state by air. Approximately 160,000 of these visitors were cruise passengers, accounted for in the cruise market (below). This leaves approximately 475,000 non-cruise air visitors. Applying the 3.5 percent figure results in an estimated 17,000 air visitors to Alaska from Canada in the summer of 2004. Average per-trip spending by all Alaska visitors exiting the state by air was \$1,220. Assuming that Canadians exiting by air spent the same amount as other passengers, they spent approximately \$20 million in Alaska in the summer of 2003.

The 2003 *Alaska Travelers Survey* also found that 9 percent of all cruise passengers to Alaska were from Canada, for an estimated 70,000 Canadian passengers. Average per-person expenditures in Alaska among all cruise passengers was \$511 (not including the price of the cruise or cruisetour package). Applying the per-passenger spending figure to the estimated number of Canadian cruise passengers results in a total spending figure of \$36 million.

The 2003 survey found that Canadians represented 10 percent of travelers exiting the state by highway. Applied to the 2004 DCCED summer arrival count figures (above) results in an estimated 14,000 Canadian visitors to Alaska via highway. Average expenditures in Alaska was \$1,641 per person among highway travelers. Applying these figures to traffic numbers results in total spending of \$23 million by highway travelers.

The 2003 survey found that 7 percent of travelers exiting Alaska by ferry were from Canada. Applied to the 2004 DCCED summer arrival count figures, this translates into about 1,600 Canadian visitors to Alaska via ferry. Average expenditures in Alaska among ferry travelers was \$1,182 per person. Assuming that Canadian visitors spend the same as other ferry visitors, Canadians exiting the state by ferry spent approximately \$2 million in Alaska.

²⁹ *Juneau Access Household Survey Results*, prepared for the Alaska Department of Transportation and Public Facilities by the McDowell Group, Inc., 2003.

Volume and Spending of Canadian Visitors to Alaska, Summer 2004 (\$US)

	Number of Canadian Visitors	Estimated Spending
Cruise	70,000	\$36 million
Air	17,000	\$20 million
Highway	14,000	\$23 million
Ferry	1,600	\$2 million
TOTAL	102,600	\$81 million

Source: Data extrapolated from *Alaska Travelers Survey, 2003*, McDowell Group, Inc. and *Alaska Visitor Arrivals, Summer 2004*, prepared for the Alaska Department of Commerce Community and Economic Development by Northern Economics, Inc., 2004.

Marketing and Research Collaboration

Collaboration between Canadian and Alaskan visitor industry associations further demonstrates the strength of the ties between the two areas. Tourism North, comprised of tourism associations of Alaska, Alberta, British Columbia, and the Yukon, publishes the *North! To Alaska* brochure and maintains the northtoalaska.com website. The group also leads highway visitor research efforts and assists travel writers and editors with stories about driving through Canada and into Alaska. Because the Yukon is the primary gateway into Alaska, a Tourism Yukon representative serves on the marketing committee of the Alaska Travel Industry Association. This participation has led to collaborative programs that benefit potential highway visitors and provides a forum to share information that will strengthen the overall marketing effort.

Canada's Trade with Alaska

The trade relationship between Canada and United States is tremendously important to the vitality of both economies. In 2004, total Canada-U.S. merchandise trade was \$411 billion. From this broader national trade perspective, it is estimated that this trade volume supports 5.2 million U.S. jobs, including 13,000 jobs in Alaska.³⁰

In 2004, Canada was Alaska's third largest export market (after Japan and South Korea). Canada has consistently held the number three export ranking since 1990. Statistics Canada reports \$242 million in Alaska exports to Canada in 2004.³¹ U.S. Department of Commerce reports similar trade figures, with Alaska exporting \$247 million worth of goods to Canada, representing 6 percent of Alaska's total exports. Exports to Canada grew by 7 percent from 2003 to 2004.

Alaska's Top Five Export Markets, 2002-2004 (\$US Millions)

Rank	Country	2002	2003	2004	% Change 2003/2004
1	Japan	\$1,105	\$1,032	\$1,190	+15.3%
2	Korea	417	567	580	+2.3
3	Canada	155	231	247	+7.0
4	China	148	155	242	+57.0
5	Germany	118	113	147	+30.1

Source: U.S. Department of Commerce

According to Statistics Canada, Alaska imported \$289 million in Canadian goods for a combined trade impact of \$531 million.

Alaska Exports to Canada

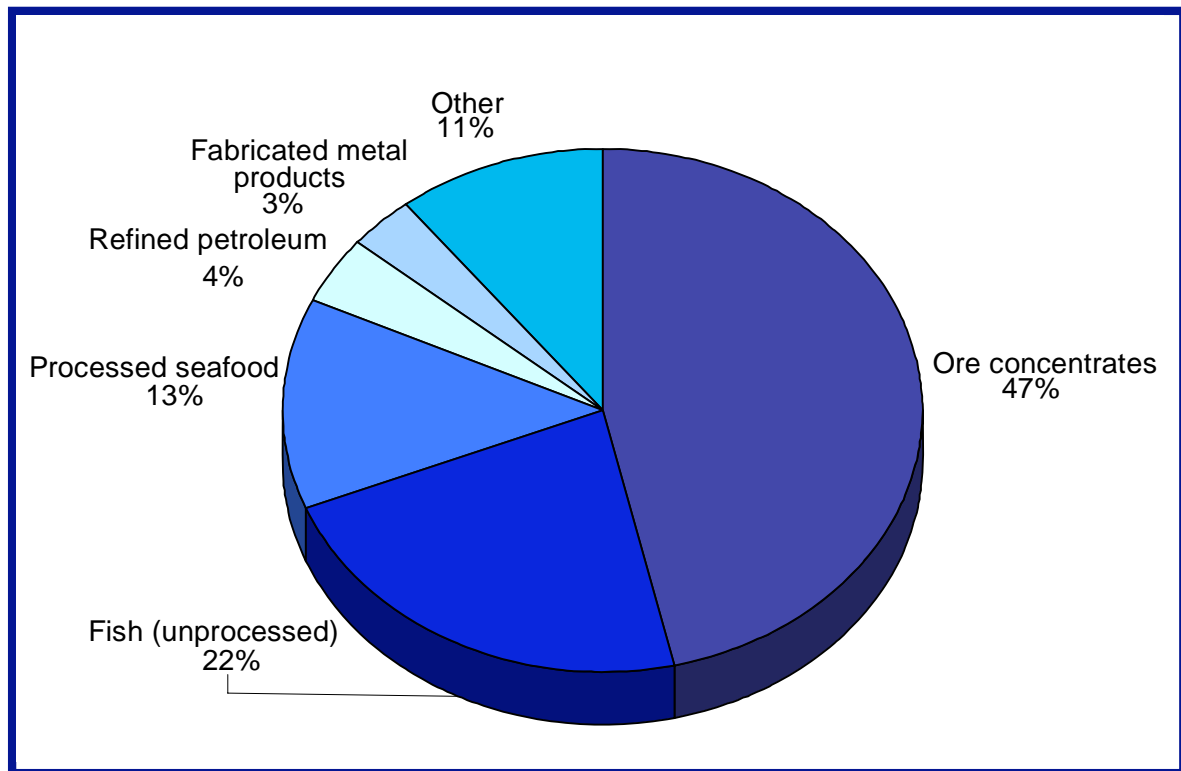
Metal commodities dominate Alaska's exports to Canada, representing 47 percent of total exports. In 2004, \$113 million in lead zinc ore concentrate and an additional \$2 million in other precious metals, silver and gold ore were exported. Since Red Dog Mine began operation in the late 1980s, lead and zinc concentrate destined for the smelter in Trail, B.C., has been Alaska's top export commodity to Canada. Ore concentrates and precious metals exports have fluctuated dramatically over the past several years, a reflection of the dips and peaks in world commodity pricing.

After Japan and South Korea, the largest export market for Alaska's seafood is Canada. Unprocessed fish (\$54 million) and processed seafood (\$31 million) accounted for the second and third largest exports to Canada.

³⁰ Joseph Francois, U.S.-Canadian Trade and U.S. State-Level Production and Employment, March 2004.

³¹ U.S. export data (US Department of Commerce) and Canadian import data (Statistics Canada) yield slightly different estimates of the value of Alaska's trade with Canada. Since import data is usually more accurate than export data, the US government uses Canadian import statistics as the basis for its own export data. State export data (but not import data) is estimated separately by the Massachusetts Institute for Social and Economic Research. For purposes of this report, Statistics Canada trade figures will be used, except when making comparisons to other trade markets. In that case, U.S. Department of Commerce data is used.

Alaska's Exports to Canada by Product, 2004



Source: Statistics Canada

As noted in other sections of this report, trade between Alaska and Canada has long historic roots. However, major trade agreements, such as the Canada-U.S. Free Trade Agreement (FTA) and the North American Free Trade Agreement (NAFTA) contribute to the increasing integration of the Canadian and Alaskan economies. This integration can be seen in the level of inter-industry trade patterns of Alaska's trade with Canada. For instance, 12 of Alaska's top 25 export categories are also in the top 25 list of imports from Canada. Samples of products that flow both ways over the border include:

- refined petroleum
- aircraft parts
- navigational and other measuring equipment
- mining, oil and gas field machinery
- construction machinery
- heavy duty trucks
- electrical equipment

(see table next page)

Alaska's Top 25 Exports to Canada, 2000-2004 (\$US Millions)

Category	2000	2001	2002	2003	2004
Copper, lead and zinc ore	\$40.00	\$40.82	\$54.60	\$105.43	\$112.70
Fish (unprocessed)	20.55	32.34	44.27	47.69	54.22
Processed seafood	20.76	24.68	20.34	30.85	31.33
Refined petroleum	14.40	11.49	7.65	8.14	10.34
Fabricated metal products	0.14	0.39	0.20	0.36	8.16
Aircraft parts, excluding engines	3.54	4.07	4.55	5.50	3.38
Navigational, measuring, medical and control instruments	3.16	1.33	3.51	2.94	2.63
Crude wood materials	9.59	5.70	2.75	1.90	2.07
Mining, oil and gas field machinery	0.26	0.13	0.35	0.58	1.68
Gold and silver ore	21.15	10.55	1.41	2.66	1.68
Logging	21.61	17.57	14.76	11.52	1.26
Construction machinery	0.31	0.17	0.22	0.12	1.26
Heavy-duty trucks	0.05	0.15	0.40	0.34	1.18
Electrical equipment	0.23	0.17	0.20	0.18	1.07
Engine, turbine and power transmission equipment	0.40	0.78	1.95	0.72	0.94
Material handling equipment	0.10	0.48	0.14	0.08	0.52
Iron and steel mills and ferro-alloy	0.32	0.46	0.17	0.21	0.50
Plastic pipe, pipe fitting and unsupported profile shape	0.32	0.04	0.02	0.57	0.48
Pumps and compressors	0.08	0.09	0.38	0.20	0.45
Iron and steel pipes and tubes	0.35	0.32	0.56	0.71	0.43
Industrial machinery	0.67	0.59	0.31	0.25	0.37
Motor vehicle body and trailer	0.44	0.21	0.22	0.15	0.32
Motor vehicle steering and suspension components	0.04	0.10	0.08	0.14	0.32
Organic chemicals	0.03	0.01	0.07	0.02	0.29
Sand, gravel, clay, ceramic, and refractory minerals	0.00	0.00	--	0.00	0.25
All others	6.84	12.36	7.62	6.61	4.49
TOTAL	165.31	164.97	\$166.74	\$227.87	\$242.30

Source: Statistics Canada

Note: Due to rounding, columns may not total.

Given its geographic proximity, it is not surprising that two-thirds of Alaska's exports to Canada are destined for the province of British Columbia (\$159 million); of this, an estimated 70 percent is ore concentrate heading to the Trail smelter. The Yukon Territory is the second largest importer of Alaska products (\$54 million), followed distantly by New Brunswick (\$16 million), Ontario (\$5 million), and Quebec (\$3 million).

Alaska Exports, by Canadian Province, 2000-2004 (\$US Millions)

Rank	Province	2000	2001	2002	2003	2004
1	British Columbia	\$123.57	\$114.00	\$114.31	\$160.52	\$158.80
2	Yukon	26.12	28.84	32.80	42.56	54.35
3	New Brunswick	2.53	2.99	6.93	9.60	16.10
4	Ontario	2.62	3.34	3.08	1.95	4.47
5	Quebec	0.55	6.27	1.49	0.52	2.54
6	Nova Scotia	5.67	5.23	1.60	3.75	2.42
7	Alberta	2.74	3.13	5.80	4.45	2.00
8	Manitoba	1.09	0.87	0.60	1.89	1.17
9	Saskatchewan	0.18	0.04	0.12	0.29	0.43
10	Newfoundland	0.09	0.08	--	2.34	0.00
11	Northwest Territories	0.15	0.17	0.00	0.00	0.00
12	Prince Edward Island	--	0.00	--	--	--
13	Nunavut	--	--	--	--	--
	TOTAL	\$165.31	\$164.97	\$166.74	\$227.87	\$242.30

Source: Statistics Canada

Note: Due to rounding, columns may not total.

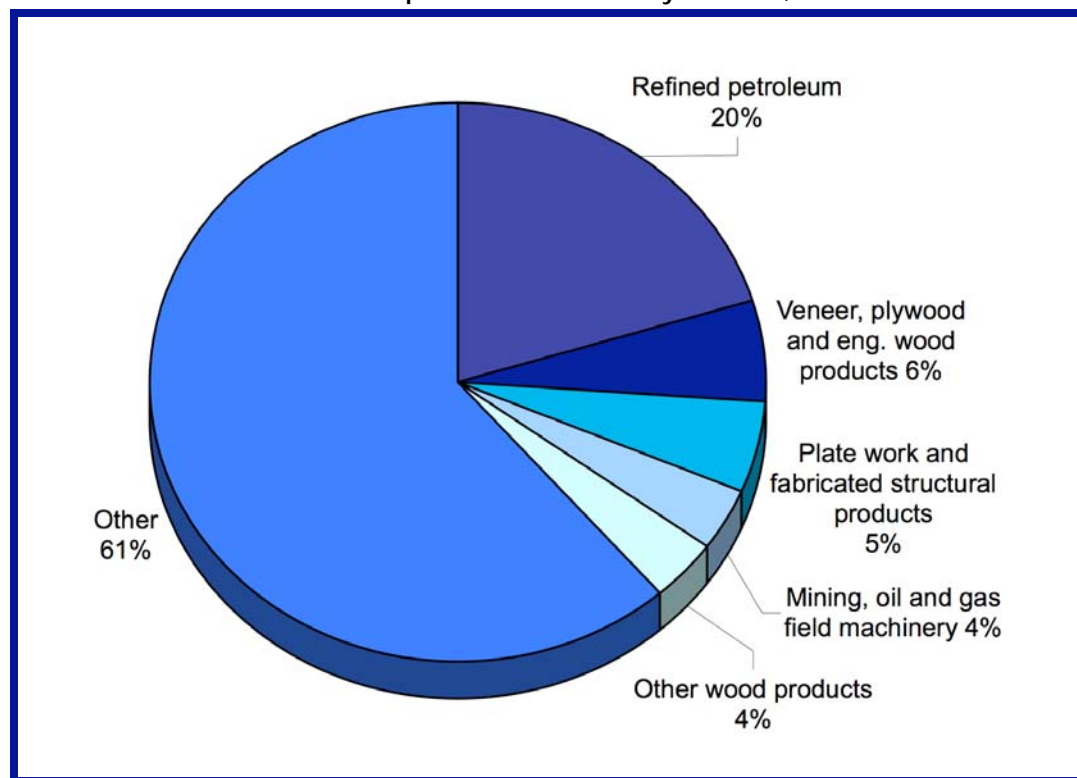
Alaska Imports from Canada

In 2004, Alaska imported \$289 million worth of Canadian products. The largest import was refined petroleum (\$59 million), representing one-fifth of Alaska's total imports from Canada.

Canada is also an important source for Alaska's wood products and pre-fabricated buildings and structures. In 2004, Alaska imported \$17 million in veneer, plywood, and engineered wood products. Additionally, other types of wood products were imported, valued at \$10 million. Pre-fabricated structures (such as ATCO trailers and manufactured homes) accounted for \$16 million in imports.

Considering Canada's dominance in Alaska's mining industry and involvement in oilfield services, it is understandable how mining and oilfield machinery round out Alaska's top five list of Canadian imports.

Alaska's Imports from Canada by Product, 2004



Source: Statistics Canada

Alaska's Top 25 Imports from Canada, 2000-2004 (\$US Millions)

Category	2000	2001	2002	2003	2004
Refined petroleum	\$29.76	\$22.80	\$22.53	\$40.83	\$58.80
Veneer, plywood and engineered wood products	4.21	6.00	7.00	11.32	16.68
Plate work and fabricated structural products	5.08	6.02	6.35	8.11	15.49
Mining, oil and gas field machinery	4.20	6.67	18.40	8.55	10.25
Other wood products	4.74	5.90	5.12	6.51	10.25
Iron and steel mills and ferro-alloy	1.49	5.18	6.17	7.34	9.40
Ornamental and architectural metal products	2.17	2.13	3.32	5.06	8.62
Aircraft parts, excluding engines	9.19	4.66	6.39	4.80	6.90
Navigational, measuring, medical and control instruments	2.48	3.70	3.80	14.57	6.77
Heavy-duty trucks	2.09	10.04	9.31	3.56	6.48
Organic chemicals	4.88	5.38	4.54	5.68	6.26
Sawmills and wood preservation	4.45	5.51	5.50	4.93	6.15
Plastic products	3.51	4.02	4.98	5.63	5.70
General purpose machinery	1.44	1.75	5.82	2.29	5.25
Material handling equipment	2.84	6.38	2.98	3.49	4.96
Pumps and compressors	1.24	6.72	4.15	2.04	4.24
Ventilation, heating, air-conditioning and commercial refrigeration equipment	3.16	3.08	2.59	1.09	3.65
Paper mills	1.42	3.04	2.70	2.83	3.62
Fertilizer	1.76	2.24	2.33	2.77	3.56
Electrical equipment	2.41	1.84	2.66	2.82	3.52
Motor vehicle body and trailer	6.60	6.29	6.04	3.48	3.20
Engine, turbine and power transmission equipment	3.72	5.47	5.64	3.37	3.12
Construction machinery	4.12	3.23	48.1	7.27	4.53
Other industrial machinery	2.02	3.69	5.91	4.39	2.82
Animal food	0.91	1.18	1.38	1.45	2.78
All Others	67.40	82.30	70.91	75.53	77.64
TOTAL	\$175.26	\$213.78	\$219.91	\$234.93	\$289.17

Source: Statistics Canada

Note: Due to rounding, columns may not total.

Three-quarters of Alaska's imports from Canada are from the western provinces of British Columbia (\$140 million) and Alberta (\$78 million). The larger manufacturing centers of Ontario (\$32 million) and Quebec (\$18 million) make up the third and fourth largest originators of Alaska's imports from Canada.

Alaska Imports, by Canadian Province, 2000-2004 (\$US Millions)

Rank	Province	2000	2001	2002	2003	2004
1	British Columbia	65.85	67.91	73.22	101.95	140.07
2	Alberta	45.84	66.99	79.80	71.73	77.46
3	Ontario	28.66	37.47	25.51	32.30	31.54
4	Quebec	18.49	23.02	24.40	14.25	18.12
5	Manitoba	4.18	6.27	7.47	6.67	12.67
6	Saskatchewan	4.80	6.56	5.19	4.37	5.33
7	Yukon	2.85	3.96	1.69	1.41	2.29
8	Nova Scotia	1.31	0.69	0.51	1.23	0.80
9	Prince Edward Island	1.27	0.01	0.20	0.06	0.33
10	Newfoundland	0.21	0.34	0.50	0.27	0.26
11	New Brunswick	1.48	0.23	1.36	0.65	1.93
12	Northwest Territories	0.32	0.33	0.06	0.05	0.00
13	Nunavut	--	--	0.00	--	--
	TOTAL	\$175.26	\$213.78	\$219.91	\$234.93	\$289.17

Source: Statistics Canada

Note: Due to rounding, columns may not total.

Analysis of Economic Impact

Direct Employment and Payroll

McDowell Group identified several dozen Canadian companies working in Alaska and employing Alaskans. The Alaska Department of Labor and Workforce Development collects monthly employment data from Alaska employers. The Department developed a list of employers who registered their Alaska employment counts from their Canadian headquarters. While the study team, with assistance from the Alaska Department of Workforce Development, strived to capture total Alaska employment by Canadian companies, it is likely that some Canadian companies were not identified.

Based on companies identified, it is estimated that Canadian companies employed an average of 2,600 people in their Alaska operations in 2004. The top ten employers (see table below) represented 88 percent of this employment, employing 2,280 people.

Based on Department of Labor and Workforce Development data, it is estimated these Canadian companies accounted for \$134 million in 2004 payroll, representing an average of \$51,400 per employee. Canadian firms working in the mining, and oil and gas sectors accounted for \$55 million, representing 41 percent of total payroll (\$58,200 per employee). Individual companies may publicly report slightly different employment figures based on number of people hired, inclusion of contract labor, or their peak employment.

Canadian Companies' Employment in Alaska, Annual Average, 2004

Sector	Annual Average Employment
Mining, Oil and Gas	951
Retail and Wholesale Trade	705
Manufacturing	358
Information	153
Professional, Scientific, and Technical Services	171
Transportation and Warehousing	126
Accommodation and Food Services	76
Other Services	52
Administrative and Support Services	4
Agriculture, Forestry, Fishing, and Hunting	2
Utilities	1
TOTAL	2,600

Source: Alaska Department of Workforce and Development

Top 10 Canadian Employers in Alaska, Annual Average, 2004

Company	Average Annual Employment
Alaska Commercial Company	647
Fairbanks Gold Company (Fort Knox Mine)	411
Teck Cominco (Red Dog Mine)	360
Agrium	221
Arctec Alaska (ATCO Frontec)	153
NANA/Colt Engineering	127
Alaska General Seafoods	99
Veritas DGC Land Inc.	93
White Pass & Yukon Route Railway	92
RHE Holdings Inc. (Management of Super 8 Hotel)	76

Source: Alaska Department of Workforce and Development

Summary of Total Impact

Canada has a broad range of direct impact on the Alaska economy. Spending in Alaska by Canadian mining companies on mineral exploration, development and production; spending by visitors from Canada; Canadian purchases of Alaska exports; and, employment of Alaskans in Alaska by Canadian companies all account for direct, measurable contributions to local, regional, and statewide economies.

The economic impact of Canada on Alaska goes beyond these direct effects, however. Money that enters Alaska's economy as a result of Canadian investment or operational spending creates multiplier effects as that money circulates through the economy. Multiplier effects include indirect impact – the result of Canadian companies purchasing goods and services from Alaska vendors, resulting in additional employment and income opportunities. Multiplier effects also include induced impact, which are the result of Alaskan employees of Canadian companies spending their payroll dollars in Alaska.

It is not possible to fully measure total direct, indirect, and induced effects of Canadian interests on the Alaska economy, but it is possible to gain a sense of its magnitude. For example, Canadian mining industry interests alone accounted for total output of approximately \$1 billion in 2004 (with initiation of production at the Pogo Mine, gross output will be well above \$1 billion annually). This is a measure of the gross value of metals produced at the Canadian-owned mines.

Total spending in Alaska in support of Canadian mining-related activity, including exploration expenditures, development-related spending, and spending on payroll and goods and services in support of producing mines such as Red Dog and Fort Knox, likely totaled \$300 million in 2004, with employment of 1,500 production, exploration, and construction and mine development workers. Applying an Alaska mining industry employment multiplier of 1.8 to this total indicates that employment in Alaska directly or indirectly related to Canadian mining interests totaled 2,700 jobs in 2004, with payroll totaling \$160 million.³²

Canadian interests in industries other than mining also have indirect effects on the Alaska economy. Previous research indicates that Agrium's plant on the Kenai Peninsula has a total employment impact in Alaska of approximately 500 jobs and \$35 million in payroll.

Other Canadian-related employment in Alaska (other than mining-related and fertilizer production) in tourism, retail, and other sectors, totaled about 1,500 jobs in 2004 and approximately \$60 million in annual payroll. Including the indirect effects linked to the businesses that employ these workers, and induced effects of this employment and payroll (the additional economic activity associated with providing goods and services to these workers), Canada-related employment likely totaled another 2,200 jobs and \$90 million in payroll in 2004.³³

This study has identified a total of 5,400 jobs and \$285 million in annual payroll that is directly or indirectly linked to Canadian investment or other Canadian business activity in Alaska. Not included in this total are jobs and income associated with the spending by Canadian visitors to Alaska. Canadians spent an estimated \$81 million in Alaska in 2004. The direct, indirect, and induced employment and payroll associated with that spending is estimated at 2,100 jobs and \$45 million in payroll.³⁴ In total, 7,500 Alaska jobs and \$330 million in annual payroll can be attributed to Canadian interests in Alaska.

³² Employment and payroll multipliers for mining in Alaska are approximately 1.8 and 1.5, respectively, according to the economic impact modeling program IMPLAN. Construction industry multipliers (which would apply to mine development activity) are approximately the same.

³³ Based on a multiplier of 1.5 to capture indirect and induced employment and payroll.

³⁴ Canadian visitor spending is assumed to occur in the retail, lodging, transportation, and amusement/recreation services sectors.