Port MacKenzie
Rail Freight Market Analysis

Port MacKenzie. Photo copyright Alaska Aerial Technologies.

McDowell GROUP

Prepared for:

Matanuska-Susitna Borough

January 24, 2017

McDowell Group

- Multidisciplinary research and consulting firm since 1972
- 17 professional staff in Anchorage, Juneau, and Bellingham
- Providing professional services to Alaska's key industries
  - **Mining**
  - **Oil and Gas**
  - **Seafood**
  - **Visitor Industry**
  - **Transportation**

Scope of Work

- Estimate the type and tonnage of freight that could be moved through a fully developed Port MacKenzie rail extension:
    - Mineral concentrates & mine supplies
    - Coal
    - Forest Products
    - Oil and gas industry products and freight
    - Construction materials
    - General freight

Port MacKenzie

- Best located to serve as Interior Alaska’s bulk commodities export port
  - Unconstrained access to the Interior
  - 9,000 acres of available uplands
  - 1,200 foot deep-draft dock (-60 feet)
- Efficient access to tidewater essential for development of the Interior’s base metal resources
- Rail extension to Port MacKenzie seen as critical long-term infrastructure asset

Mining Industry

- Arctic Project/Ambler District
  - Most advanced base metal prospect in the Interior
  - 700 miles from Port Mac
  - Port Mac included in preliminary mine planni
  - 370,000 tons of concentrate/yr (peak of 500,0
  - Needed infrastructure includes 200-mile road from Dalton Highway
  - Production likely 10 years out
  - Part of a very richly mineralized region

Mining Industry (cont.)

- Other base metal prospects (early stage):
  - *Shorty Creek* – Freegold Ventures, 75 miles NW of Fairbanks
  - *Caribou Dome* – Coventry Resources, Denali Highway access
  - Red Mountain – White Rock Minerals, south of Fairbanks
- 10 to 15 year development horiz
- All would use Port Mac

Mining Industry (cont.)

- Interior gold mining projects
  - *Proven economically viable by Fort Knox and Pogo*
  - *Livengood Gold, Golden Summit, Tetlin, SAM, and others*
- Could use Port Mac, to the extent inbound freight can be moved more cost-effectively
- Sustained improvement in base and precious metals required for Interior mine development.

Mining Industry (cont.)

Coal Exports

- No export activity currently
- Seward facility in “cold storage”
- Seward has capacity for 2 million tons per year
- Recent rebound in prices

Coal train. Photo courtesy Alaska Railroad Corporation.

Oil and Gas Industry

- LNG to Fairbanks via rail
  - ARRC permitted up to 60 ISO containers every 4 days by 2018
  - Additional LNG production capacity needed at Titan, along with infrastructure in Fairbanks
- Gasline materials
  - Construction timing uncertain
- A2A designated Port Mac as Alaska marine terminal

Other Potential Rail Freight

- Forest products
  - 100,000 to 300,000 tons of wood chips annually possible, plus saw logs
- Construction materials
  - Largest source of ARRC rail freight (2.2 million tons)
  - No developed export markets
- Limestone (near Fairbanks)

The Southcentral Freight Picture

- 1.8 million tons of in-bound containerized freight
- 400,000 to 500,000 tons of in-bound rail, break-bulk, and bulk (non-fuel) freight
- Marine freight volumes down in 2015 and 2016
- Rail freight down 2 million tons over past 5 years

Summary

- Port Mac fundamentals haven't changed
- Global commodity price trends are key
- First mineral concentrates 10 years out
- Challenging economic environment in AK
- This report:
  - Serves as inventory of opportunities
  - Provides baseline from which to track developments in the rail freight market

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