



## ASIAN METALS MANUFACTURER

# Pre-Feasibility Logistics for Critical Minerals

## BACKGROUND

An Asian vertically integrated metals manufacturer was evaluating a multi-decade capital investment in a North American critical minerals mine. The total commitment ran into the billions. Their smelter operated in Japan; the mine site sat in remote eastern Canada, six thousand nautical miles and two coasts away. Between origin and destination ran a logistics question that the buyer's existing advisors had been unable to answer with the confidence an investment committee would require.

The question came down to feasibility before economics. Before the board would approve the next phase, a US\$25 million commitment to advance the project, they needed a defensible logistics answer first. A logistics provider and a shipbroker had already weighed in. Their views differed, and both carried structural conflicts of interest. Canadian operating reality remained largely invisible from Japan, and the buyer's own desk research had returned the message "it can't be done," with little substantiation.

The introduction came through Invest Quebec. SimWell's mining vertical track record was already on the agency's list, and the referral carried weight with a Japanese buyer working from a distance. SimWell entered as an independent third perspective from a firm with operational depth in Canadian mining logistics.

## CHALLENGE

The buyer stood at pre-feasibility on the underlying mine investment. At that stage, the question is binary before it is quantitative. *Is there a route?* comes before *what will it cost?* Decisions turn on defensible evidence about real routes, real carriers, and real operational constraints rather than on cost models built atop untested assumptions.

The technical scope was substantial. The mine would produce thousands of wet metric tons of concentrate every two months once operations began in the early 2030s. All of that material had to move from a remote mine site through a single railhead at Matagami, Quebec, to candidate ports on either Canadian coast, then across the Pacific to a specific destination port in Japan that no commercial line currently serves directly. Both bulk and container shipping methods fit some segments of the question, each with a distinct cost, capacity, and risk profile.

Geography shaped what the buyer had been able to figure out on their own. From Japan, Canadian ports surface by name recognition. Specialized mineral ports that handle iron ore, alumina, and concentrate at high volume do not appear in a search for the country's biggest ports. The routing options that mattered most for the buyer's cargo type stayed invisible behind the megaport names that any general search would return.

Independence carried equal weight. A logistics provider has a commercial interest in routing recommendations that flow through their service network. A shipbroker has commercial interest in shipping arrangements that move through their book. Neither could provide a clear view of the full opportunity space, and the buyer's investment committee would see straight through any analysis with a commercial agenda attached.

*"Everyone they had talked to told them it couldn't be done. They needed someone to show them the art of the possible: what's actually moving today, on what routes, with which carriers."*

**Mario Yazbeck**, Director, SimWell

## SOLUTION

SimWell scoped against the decision rather than against a methodology. The buyer's first email named optimization as the capability of interest. Through the scoping conversation, SimWell rebuilt the engagement around what the executive committee actually needed at this stage: structured pre-feasibility research with defensible cost ranges and named operational realities, delivered against a December executive deadline.

The work covered six candidate Canadian ports across both coasts, decomposed into truck, rail, terminal handling, and ocean segments. SimWell built cost and duration ranges for each route against industry-benchmark rates, vessel-finder distances, and intermodal transit calculations, then validated each leg through direct outreach to terminal operators, shipping associations, and logistics service providers. Risk profiles were built per route, with mitigation strategies identified for each movement type.

What set the engagement apart was operational knowledge of Canadian mining logistics. The SimWell team works extensively with the iron ore value chain on Quebec's North Shore, building models that handle the same dry bulk minerals, the same vessel classes, and the same long-haul Pacific voyages that the future concentrate flow would rely on. That direct project experience pointed to a routing option neither of the buyer's prior advisors had identified: Sept-Iles, the only Quebec port currently offering direct bulk sailings to Japan, running on lanes that already move dry bulk minerals to Japan in volume.

*"If you search for the biggest ports in Canada, you get Montreal, Vancouver, and Quebec City. You don't get Sept-Iles. The buyer was looking at general-purpose ports, while the route that mattered most ran through a specialized mineral terminal."*

**Mario Yazbeck**

Sept-Iles entered the analysis mid-engagement and reshaped the routing recommendation. SimWell also added Saguenay (Grande-Anse) to scope as a high-bulk-capacity port the buyer had not considered. Two ports beyond the buyer's original four, both surfaced through SimWell's working knowledge of Canadian ore logistics rather than through generic research.

The honest finding on East Coast bulk to northern Japan landed where the analysis pointed. No firm sailings currently serve concentrate from Quebec ports to the buyer's destination. Bulk is the cheapest method by a wide

margin once the lane exists, but the lane must be developed. SimWell laid out the freight sourcing exercise required to open actual rate indications, identified the carriers worth approaching, and outlined the loading-terms questions the buyer would need to answer to obtain rate quotes.

## RESULTS

By delivering pre-feasibility logistics research grounded in real Canadian operating reality, SimWell gave the buyer something their prior advisors had not provided: a defensible answer to whether the underlying mine investment could move concentrate to the smelter at all.

### Key project findings included:

- **US\$25M capital commitment informed** through pre-feasibility logistics analysis delivered against a fixed executive deadline. The buyer's investment committee committed to a binding three-phase earn-in agreement on the same day SimWell finalized the deliverable.
- **Two routing options surfaced beyond the buyer's original scope**, including Sept-Iles, the only Quebec port currently offering direct bulk sailings to Japan. Two prior outside analyses had not identified these options.
- **Direct finding on East Coast bulk feasibility**: no firm sailings currently serve concentrate from Quebec ports to the buyer's destination. SimWell defined the freight sourcing exercise the buyer would need to run to develop the route in time for production.
- **Pre-feasibility foundation for operational decision support** as the project advances. Phase I is publicly active, with infill drilling underway and boots on the ground expected in 2027.

The buyer expects operationalization and supply chain modeling as the next stage of work, positioning SimWell to scale alongside the project as it advances toward production.

**US\$25M**

CAPITAL COMMITMENT  
INFORMED

**6**

CANDIDATE PORTS  
EVALUATED

**2**

ROUTING OPTIONS SURFACED  
BEYOND ORIGINAL SCOPE

**SimWell** helps mining operators make better decisions across the full project lifecycle. We bring operational knowledge of Canadian mining logistics, build simulation and optimization models grounded in real-world operations, and scale our work alongside the project as it advances toward production.