Logistics Management for Mining Companies:



A PLS Logistics Services White Paper

Fine-Tuning a Neglected Function Can Drive Profit, Service Excellence

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The logistics challenges of mining companies are unique and complex. Despite this, investments in logistics people, processes and systems often take a back seat to core investments around finding, extracting and processing minerals. Logistics costs as a percent of a mining company's total operating costs may be small, but mining companies can uncover literally millions of dollars in hidden profits by reexamining how they address logistics challenges.

Often, third-party logistics providers (3PLs) who specialize in industrial freight can provide targeted solutions that reduce operating costs and improve service levels, while freeing your team to focus on strategic initiatives. Net freight savings of 8% to 12% are not unusual for a sub-optimized freight network. This paper examines five freight-related challenges faced by mining companies and how 3PLs can help address them.

Challenge #1: Managing Logistics to and from remote locations

Mining sites are located where the minerals are, often in remote locations. In contrast, carrier pools are located where the people and businesses are. It's not unusual for the nearest carrier to a remote mine site to be 200 or more miles away, unless a carrier is formed expressly to serve the mine. This lack of nearby carrier capacity creates problems:

- **Insufficient capacity.** If you can't find carriers to move freight on your schedule, it may result in delays that increase cycle time and inventory holding costs. Some locations are best serviced by rail, increasing risk if service is interrupted.
- **Higher freight costs.** A limited carrier base creates a greater reliance on freight brokers and the accompanying mark-ups. Carrier deadhead distance can also make your freight more expensive. Let's say a trucker drives 150 miles to make a delivery to your remote site. You'll pay not only for the inbound move, but for the trucker's cost to drive empty on his return trip.
- **Inconsistent service.** Broker reliance also impacts service levels, since brokers focus on spot market capacity for individual moves, not on creating a long-term solution for reliable freight service. This lack of reliability makes it difficult to plan – loading, unloading, subsequent freight moves, upstream processing – creating inefficiency across the supply chain.

Outsourcing freight management can address many of these issues, particularly if you partner with a 3PL that specializes in industrial freight. While you may struggle to identify just a handful of carriers to serve remote sites, the right 3PL has working relationships with thousands of trucking companies and all major railroads. This addresses both your capacity challenge and your cost challenge. The larger the base of pre-qualified carriers that sees your freight, the more competition to haul it, which drives down costs.

Service levels, and customer confidence, also improve as you decrease reliance on brokers and replace them with an experienced 3PL. The right partner can apply systems and operational rigor – service level metrics, daily measurement, continuous improvement – to increase the reliability of your supply chain. This can be an important competitive lever when moving goods to and from remote sites.

Challenge #2: Managing complex, multi-modal freight requirements

From extraction to delivery, mining companies use many different transportation modes, with requirements for specialized equipment and expertise. Inbound moves can include a mix of LTL, full truckloads, flatbeds and multi-axle trailers. Outbound moves to processing plants and ports can use rail, barge and trucks and could require hazmat certification or other special requirements. Coordinating and synchronizing these moves is difficult and requires expertise across all modes. That knowledge is tough to come by, particularly if freight management is an add-on responsibility to another "full time" job.



The right 3PL can address this knowledge gap to improve service levels and drive dramatic reductions in time, inventory and freight costs. Strategies employed:

- **Apply just-in-time (JIT) service.** When bull markets cause commodity prices to rise, inventory management becomes more critical. Brokers aggravate, rather than solve, this challenge since they are spot market specialists and cannot get the core carrier truck flow necessary for JIT service. Slower, unpredictable transit times translate to higher inventory. 3PLs, in contrast, can leverage large carrier networks and JIT delivery experience to manage faster, more reliable freight moves to minimize the dirt-to-cash cycle.
- **Secure the lowest rates without compromising quality and safety.** If your freight bookings are handled by non-transportation staff, they may not have time to shop freight rates, so they lean on known carriers who don't normally run freight in the areas requested. The result: inflated rates. A 3PL with a large carrier network already has competitive, real-time market rates in its system.

- **Take control of the inbound supply chain.** To save time, mining companies often purchase parts and equipment "freight pre-paid," so suppliers pass on (often inflated) freight charges in their invoices. Optimizing inbound freight moves is perhaps the biggest single freight savings opportunity for many mining companies. A 3PL can work directly with you and your suppliers to gain control of this inbound freight, with savings of 15% very possible.
- **Optimize modes.** Larger, non-asset based 3PLs understand the PROs and CONs of various modes and can recommend the best strategy to achieve cost and service objectives. Asset-based carriers can do the same, but the pressure to fill their own assets is strong and can impact objectivity.

Time savings can be as important as direct cost savings. A 3PL that can manage transportation across modes provides you with one contact for load tendering, tracking and tracing, and invoicing.

Challenge #3: Asset utilization for railcar fleets

Mining companies need to control rail assets, but purchasing rail cars is not always a priority given the $50,000 and up price tag per car. So the options come down to leasing cars or using railroad-owned, free-running cars. Either way, managing rail equipment is a difficult and time-consuming challenge.

When using railroads assets, "free running" doesn't mean zero cost. Railroad rates will include "rent" on the car being used. While it may make sense to use and pay for car capacity as needed, there is no guarantee that a regular supply of empties will always be available. Leasing addresses this capacity issue but increases C-level pressure to squeeze every penny of value from the leasing agreement. That means close attention to asset utilization – a challenge for mining companies who lack the required systems and processes.

Here again, 3PLs can help. Many industrial-focused 3PLs manage rail fleets for customers. Typical services include:

- **Analysis of the decision to lease or use railroad assets.** A 3PL can work with you, railroads and rail car lessors to do a detailed analysis of equipment availability and cost.
- **Asset utilization improvement.** You don't want cars sitting; you want them moving and creating revenue. On a day-to-day basis, a 3PL can monitor all cars, loaded and empty, to uncover transit time delays, long unloading dwell times, and other factors that tie up assets. They then work with shippers, railroads, unloaders and other parties to address problems.



- **Tracking goods movement.** Tracking rail freight is challenging, but experienced 3PLs have systems that get regular updates on each move and isolate exceptions for further action. In addition, 3PLs can send automated data feeds on ETAs of inbound and outbound moves. This allows mining companies and their customers to plan loading and unloading in order to reduce labor costs, avoid demurrage, and keep assets moving.

Minimizing your dirt-to-cash cycle depends on timely pickups by your rail partners, regardless of whose assets are used. Without systems and processes to effectively manage these assets and intervene when problems arise, you risk delays that can have a domino impact on your supply chain, from mine site to processing centers to customers.

Challenge #4: Managing risk

Every day, thieves risk long prison sentences to steal and resell the copper piping they can find in the walls and rafters of abandoned homes. Imagine the theft potential if the stakes are a full flatbed of copper cathodes. To avoid major losses in the event of theft or damage in transit, insurance documents must be carefully examined to make sure goods are covered.

Why is risk management, as it relates to freight, a difficult challenge for mining companies?

- **Remote locations.** Hijacking schemes have less risk of capture for the thief. The longer travel distances can require drivers to take mandatory breaks in transit, increasing exposure to theft.
- **Broker reliance.** Buying freight capacity through brokers means you may not know who the actual carrier is and whether they have the proper operating authority and insurance.
- **Lack of time.** Collection of documents, detailed contract reviews, complex freight claims resolution processes. All take time to do well, and mining companies typically lack this freight administration function.

Without staff focused on freight management, it's easy to miss details that can lead to financially devastating results. Insurance policies, like many legal documents, can be confusing. Fine print clauses that seem standard could impact your coverage in the event of a loss, such as an exclusion clause for precious metals.



What's the profit impact of reducing your freight costs 10%?

- *You are a $1 billion company with a 5% profit margin*
- *Your logistics costs are 10% of your revenue, or $100 million**
- *$63 million of these costs are for freight transportation**
- *A 10% freight savings equals $6.3 million*
- *$6.3 million represents a 12% profit increase*
- *To generate same profit impact, your company would need to increase sales $126 million*

**Source: CSCMP State of Logistics Report – estimated logistics and freight expense as a percent of revenue across all industries.*

A 3PL that specializes in industrial freight, such as minerals, lumber, oil and gas and heavy equipment, will likely have a well-developed network of specialized carriers that have been vetted and approved based on performance history, safety record, operating authority, and insurance coverage levels. They can analyze your specific freight profile and select carriers with the appropriate coverage. Some 3PLs, like PLS Logistics Services, offer blanket insurance that provides a second layer of protection if the carrier's insurance does not provide the needed coverage.

Aside from protection against financial loss, time-savings may be the biggest advantage of outsourcing transportation management to reduce your risk. 3PLs can identify, select, and manage qualified carriers on your behalf. If problems occur, a 3PL's claims department can manage the sometimes months-long claims process from start to finish.

Challenge #5: Lack of dedicated resources and systems

Mining companies want to find, extract, process and sell minerals and their by-products. That's where people and capital are primarily focused. Functions like transportation are often handled by employees as an added responsibility to a non-logistics position. In the absence of dedicated logistics resources, negative consequences can result:

- Freight decisions are pushed down to location managers, eliminating the buying leverage of the broader organization.
- Details are missed and customer confidence in the reliability of your supply chain erodes.
- Dependence on brokers can result in inconsistent service, unpredictable schedules and a build-up of inventory.

Mining companies may also hesitate to invest in costly transportation management software, resulting in a complete lack of visibility and control. When freight decisions are decentralized and managed ad hoc, executives are powerless to establish policies and controls. Without a central freight management system, no historical intelligence develops to aid future decisions. Even the simple question "How can we improve?" is difficult to answer because there are no historical metrics from which to judge performance.

A key advantage to outsourcing freight management is that it gives mining companies the dedicated freight expertise and advanced systems they may lack – all at a variable cost with no capital investments. With a fixed cost model, a company could experience a business downturn but still pay the same for freight administration. A 3PL can turn these fixed costs, for people and systems, into a variable expense by charging by the shipment. If nothing ships, there is no cost. Non-asset based 3PLs can scale up, as well as down, leveraging a large carrier network to support new projects with flexible freight capacity. Either way, with a variable cost model your logistics costs parallel your revenue stream.

Does outsourcing freight management make sense?

Exploration, compliance, environmental stewardship. Day to day, mining companies grapple with some highly complex issues. It's easy to see how freight management can fall to the bottom of the priority list. The downside of this lack of focus, however, is that profit leaks from the company in the form of sub-optimized transportation. Inflated freight costs can represent literally millions in lost profit. In addition, spotty freight service levels can lead to increased inventory and erosion of customer confidence.

Companies that see a clear benefit to improving freight management practices can invest to develop internal expertise and systems, or they can work with an industrial freight specialist to provide the knowledge, systems, and freight capacity on a variable cost basis. While third-party logistics services are not free, they often drive immediate payback through freight expense reductions that average 8%–12%. Over the long term, they can create a best-in-class freight operation – one that delivers greater visibility, predictability and, ultimately, confidence that products will arrive precisely as planned. That's a capability your customers, and your shareholders, will notice.



Is outsourcing freight management right for you?

There's a relatively easy, no-risk way to determine the potential of a 3PL to address transportation inefficiency and direct these savings to your profit line. Many 3PLs offer transportation opportunity assessments. Your part in the assessment is data crunching -- providing origin and ship-to locations, freight volumes, current rates, and other data to ensure an accurate analysis. Timelines for such assessments vary, but two weeks is typical. Many 3PLs, like PLS Logistics Services, will conduct the analysis for free. Others may charge a nominal fee, which they will waive if the assessment results in a business relationship.

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About PLS Logistics Services

PLS Logistics is one of America's largest freight brokers and the largest third-party logistics provider to the industrial sector. The company's 20,000 pre-qualified carrier partners give shippers access to over 150,000 trucks; including the largest network of flatbeds in North America.