

# Canadian Malartic Mine Optimiser their inventory levels with **IMAFS**

Canadian Malartic Mine | Gold | IMAFS | Stock Optimisation | Quebec, Canada



Canadian Malartic  
**eliminated 78% of stockouts** for items with high usage, 45% for critical components and reduced stock levels by 14% for the items **controlled by IMAFS**.

## Overview

The Canadian Malartic Mine (CMM) is one of the biggest gold mines in Canada. The first gold pour was in April 2011, and commercial production began in May 2011.

To ensure production efficiency, companies must minimise equipment downtimes. During the start up, it was decided to invest in important levels of stock to support production and maintenance. It was critical to do so since Canadian Malartic didn't have any history or spare parts requirements. After two years of operations and building consumption history, mine management wanted to improve the inventory management processes and their results.

## Challenge

Canadian Malartic managed Min Max manually on some 16,000 items. The inventories were continually increasing. At the same time, there were many stockouts, a little over 5%, for critical and high consumption items even with a stock investment of tens of millions dollars. A stockout in the mining industry could potentially lead to a disruption in production that has major financial impacts. It is imperative to minimise stockouts.

“I appreciate the quality of IMAFS inventory optimisation functions and the continuous support of their team. Our inventory analyst appreciates the **ease of use of IMAFS**, the friendliness of the exception reports and the flexibility in creating new ones. Our internal customers are telling us how much they appreciate the 75% reduction in stockouts. Financial management team are happy with the **14% inventory reduction** for items controlled by IMAFS parameters over an 18 month period.”

**M. Roch Trépanier**  
Supply Chain Superintendent

## Solutions

In Spring, management created an inventory analyst position and provided training in the modern concepts of inventory management. It also decided that inventory parameters needed to be updated. To do so, management opted to use IMAFS, an inventory optimisation software available in a Cloud mode. IMAFS software was already integrated to their maintenance management software, Guide TI, from COGEP.

IMAFS software optimises inventory management parameters by calculating optimal Min Max to achieve the customer's service level objectives while minimising stock levels.

Firstly, IMAFS was used to review the ABC classification of items by product family (plant maintenance parts, mobile parts and consumables). The classification draws attention to critical and high usage items. IMAFS also measured CMM's parts availability. It was 93.3% for high usage items and 95.3% for critical parts. With the software, they were able to set their parts availability target to 98% for those items and calculate parameters that would help them achieve it.

IMAFS dynamically calculates on a monthly basis:

- Supplier delivery lead times by item and by transportation mode
- Consumption forecasts by item based on historical demand
- Min Max for each item based on the forecasts, service level goals, lead times and other parameters

CMM implanted IMAFS parameters for mobile equipments after they were revised by the analyst. They implanted IMAFS parameters for the consumable items and they gradually rolled out the parameters for the items supporting plant operations.

IMAFS Cloud also gives management a dashboard and exception reports to track and measure their inventory performance.

## Impact

Two years later, 80% of the items in the mobile and consumables families and 50% of the plant items were managed by IMAFS.

For mobile spare parts and consumables, IMAFS helped eliminate 80% of stockouts for high usage items and 50% of the stockouts for critical components. For the plant items, stockouts for high usage items were reduced by 75% and by 35% for critical parts. The service levels are on target.

For the items controlled by IMAFS, inventory levels decreased by 23% for mobile parts, 20% for consumables and 9% for the plant items.

Overall, CMM eliminated 78% of stockouts for items with high usage, 45% for critical components and reduced stock levels by 14% for the items controlled by IMAFS.

Based off the initial success, CMM has plans to increase the number of parts controlled by IMAFS to take advantage of optimised inventory parameters.

