

GEMCOM CUSTOMER CASE STUDY



IAMGOLD drives threefold mine expansion with Gemcom technology

The GEMS solution – a mainstay at IAMGOLD's Omai and Rosebel Mines since 1991 – improves communication and collaboration

Countries: Botswana, Canada, Ecuador, Ghana, Mali, Suriname

Objective:

Support exploration and mining functions and promote efficiency, information sharing and collaboration among interdepartmental groups.

Approach:

Upgrade to GEMS with Microsoft SQL Server and employ Gemcom to convert multiple data sets into a single database environment.

IT Improvements:

- Amalgamation of 27 projects into a single data repository.
- Centralised, easy access to the correct data.
- Automated backup and protection against unauthorised data changes.
- Compatibility with third-party mining software.

Business Benefits:

- Streamlined workflows and cross-functional collaboration.
- Improved communications between system users.
- Easy-to-learn functionality, which accelerates staff proficiency.
- Real-time business intelligence for making strategic mining decisions.



“Having Gemcom GEMS here is an advantage from a human resources standpoint. The software has worldwide recognition, so it will be much easier to find people already trained in GEMS compared to other software.”

– Renaud Adams, Vice President and General Manager, IAMGOLD Corporation



Rosebel Mine, Suriname

A bright start

Toronto, Canada-based IAMGOLD Corporation (TSX: IMG; NYSE: IAG) is a top, mid-tier gold producer that began trading publicly in 1996. The corporation (www.iamgold.com) owns eight different operations in North America, South America and Africa; two non-gold assets that provide significant cash flow; and four development projects that afford continual growth.

Acquired in November 2006, the company's crown jewel is the Rosebel open pit mine in Suriname, South America. Rosebel produced 276,000 ounces of gold in 2007. However, its significant unrealised value has prompted the company to undertake an \$18.4 million expansion to increase annual production and boost metallurgical recovery from 93 to 95 percent. As the multi-phase expansion goes full tilt, the company's workforce will mine four different pits (and potentially a fifth) approximately 6 kilometres apart at Rosebel, moving an average of 120,000 tonnes of material daily. The ongoing expansion will elevate the production level above 300,000 ounces per year; however, Rosebel has the potential to grow considerably above this level.

"Rosebel has been booming since day one. We have only been in operation for about four years but are already undergoing a third expansion," says Renaud Adams, Vice President and General Manager of IAMGOLD.

A solid part of the corporate culture

Early on IAMGOLD standardised on the GEMS collaborative mining system to gain efficiency. The software enables the exchange of timely, accurate information among interdependent functions, such as geology, planning, surveying and scheduling.

For years, IAMGOLD enjoyed success with GEMS at its Omai site in Guyana. The software also has been in use at the Rosebel site for some time. Prior to Rosebel's acquisition, Cambior, the company which owned the mine at the time, had adopted GEMS. Employing their software of choice, Cambior staff set up Rosebel mining data in GEMS, which protected the information, saved time and made the transfer to IAMGOLD an easy exercise. After the data transfer, the IAMGOLD staff could immediately start creating projects with the data.

"From the very beginning, there was a strong push for all departments – engineering, surveying, geology – to use the same mining software package. GEMS software was part of the corporate culture at the start. We never entertained changing the software," says Eric Ramsey, IAMGOLD's Senior Mine Geologist. In addition, several Cambior employees who transferred to IAMGOLD were avid GEMS users.

Overcoming the tight labour pool

Gemcom's system helps the company address the scarcity of qualified workers brought on by the mining boom. This issue hit home for IAMGOLD, whose own staff of skilled expatriates dwindled last year due to the competition among mining companies. Facing immediate demands for skilled workers, IAMGOLD now draws from a pool of South American nationals with limited knowledge, skills and mine training. "It has been difficult to maintain a high-quality, technical operation at Rosebel," Adams admits.

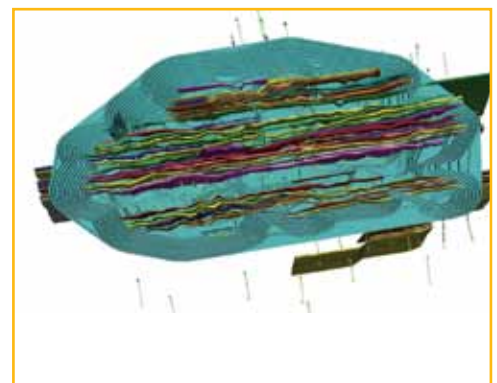
Gemcom addresses this issue by making its mine collaboration software simple to use, which enables new and less skilled employees in underdeveloped areas to grasp the training they need and become capable users quickly. "The GEMS software is well documented and is an easy-to-use product," Adams observes.



Geologists working in the Pay Caro pit.



Pit drillers in Pay Caro pit.



Geological interpretation constructed with GEMS.

“The GEMS solution is the single most critical tool onsite. It is our main data repository for the entire Rosebel mining project.”

– Eric Ramsey, Senior Mine Geologist, IAMGOLD Corporation



Blast on the Pay Caro pit.



Shovel and haul truck in Pay Caro pit.



Rosebel processing plant.

Many Chilean job candidates who have sought employment recently at IAMGOLD are familiar with GEMS, so the company expects to tap from this pool of skilled employees when it expands further in South America.

Better collaboration with a single database

IAMGOLD originally acquired several licenses of the GEMS Desktop version from Cambior. Over time, four groups were all working on the same deposits – but in different databases. The grade control, surveying, engineering and mine exploration groups created separate data sets for their portion of a project, which caused accuracy, data reliability and communication issues. A group would export data from another group’s database into its own, which was time-consuming. Periodically the data sets required manual synchronisation and validation. Eventually the Microsoft Access databases contained 27 various projects of drill holes, solids, profiles, pit designs and block models. The amount of information was expanding beyond the software’s limits, putting the data in jeopardy.

IAMGOLD needed to eliminate redundancy and merge those various compilations into a single, scalable structure with multiuser access. Janice Martin was Gemcom’s implementation manager for the migration to GEMS with Microsoft SQL Server. She configured the data model to support the company’s workloads, departments and security requirements.

“It was a successful implementation,” Ramsey says. “Our migration to GEMS with Microsoft SQL Server brought those separate databases together, so that everybody could work on the current data set. Now we have everything in one controlled, protected structure, along with better collaboration and communication among our departments.” Approximately 30 persons currently use GEMS.

Gemcom implemented security permissions to protect the data, which are helpful when new hires, who may possess various levels of training, join the company. “We can protect our data, while allowing employees to be trained on the system,” Adams says.

A jewel of a tool for many tasks

The GEMS solution houses nine different projects, including ore ratings for the three Rosebel pits in production. With 3-D renderings, GEMS is useful for the following activities: ore/waste packets, daily advance working faces, volumetrics, remaining ore/waste in the pits, mine-out ore/waste packets, resource estimates, new assay and blast hole importing, augers, trenches, structural mapping, production block models, density models and drilling patterns. “I’m using GEMS every day,” Ramsey says. “It is hard to imagine how grade control would be without it. We also update all of the diamond drilling statistics in GEMS for resource development and exploration.”

The engineering team uses GEMS for their short-term planning and annual mine plan budgets. Employing the Cut Evaluation feature, they conduct daily scenarios, watch operations animated on the screen and verify production targets.

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The GEMS survey application aids surveyors' mining strategy, assisting with surveying backfill and topography pickups, as well as pit, dump and road designs. "Before designing the packets, the surveyors go directly into the ore control workspaces, get packet limit positions, upload them into their real-time global positioning system (GPS) and mark them out in the field. They download the current topographic information directly into GEMS, which is simple to do," Ramsey explains.

Shared platform with smooth interfaces

Incorporating the latest data and drawings into GEMS with an industry-standard database engenders fluid, proficient workflows. The software interfaces with GPS, AutoCAD and Wenco fleet management software programmes making data transfer straightforward. Even the new laboratory management system that IAMGOLD is evaluating for purchase can work with GEMS. "GEMS with a SQL Server database gives us an edge. Many different products we buy can interface easier with GEMS than with Vulcan," says Ramsey.

In addition, GEMS complements the Gemcom Whittle software, IAMGOLD's main tool for long-term planning. "We import the Whittle shell into GEMS and the production blocks into Whittle and vice-versa. It all works quite well," Ramsey says.

He and his colleagues employ the Whittle strategic mine planning tool in a number of ways: for calculating reserves, optimising pit designs, and analysing drilling and mining decisions. Whittle helps them identify sensitive areas that need additional information and ultimately, to secure capital to advance drilling activities.

Return on investment

IAMGOLD has built up considerable expertise and proficiency by using Gemcom technologies over the years. Proficiency and real-time GEMS data – accessible on-demand – serve to improve decision making. And informed decisions can lead to better margins, lower costs and more gold discoveries. The gold miner has set a goal of adding a minimum of 50,000 ounces of production by 2010, and will continue its aggressive exploration and development programmes. GEMS will continue to play a prominent role in these endeavours.

"The increase in productivity, quality and performance that we have gained by doing our jobs in GEMS paid for our software investment. We want to continue taking advantage of what the Gemcom solution offers," Adams concludes.

IAMGOLD Corporation Solutions at a Glance

Primary Applications:

- Gemcom GEMS
- Gemcom Whittle
- Microsoft SQL Server
- AutoCAD
- Global positioning system
- Wenco fleet management system

Gemcom Services:

- Database consolidation and migration
- Software deployment
- Onsite training and knowledge transfer
- Ongoing technical support

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www.gemcomsoftware.com.

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