

# Mining World

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**Mining  
World**



# Safety: Martabe six years lost time injury free

*A practical guide by Boart Longyear*

**S**afety is emphasised daily on mine sites or operations, especially those in remote locations. With high rainfall amounts, averaging 4m (13 ft) a year, hills with 30° gradients reaching up to 914m (3,000 ft) above sea level and located on the trans-Sumatra fault, the Martabe mine site presents an endless combination of hazards. Yet, the Boart Longyear Drilling Services team working on the Martabe mine site in Indonesia celebrated six years lost time injury (LTI) free in March 2012.

"A combination of high-risk machinery, a hazardous environment, strong gusting winds and electrical storms creates hundreds of combinations of things that could go wrong," says Taufik Octaviano, the environmental health and safety manager for Boart Longyear in Indonesia.

Located on the north west coast of Sumatra, Indonesia, Martabe is an open-cut gold mine being constructed by G-Resources. It covers 1,639 km<sup>2</sup> (1,018 square miles), which includes seven known deposits totaling 7.86M oz of gold and 73.48M oz of silver, and production commencement is scheduled for July.

Boart Longyear implements surface diamond core methods to produce high-quality-readable core samples, as well as geotechnical and grade control drilling services at Martabe. Because of the remoteness of the site, Boart Longyear uses LF70 heli-portable rigs, which allows the drillers access to the rough terrain and the ability to reach target depth in the time frame required.

The first step in the safety measures is making sure the equipment, procedures and standards are user-friendly. Feedback is sought out from the crew on these items, providing buy-in from the team and making implementation of the measures a smooth process.



Teamwork and constant training are key to how Boart Longyear stayed LTI free at Martabe. Everyone on-site is encouraged to voice an opinion on safety, no matter how much experience they have, what their qualifications are or where they rank in seniority.

All new people on-site, whether they are first-day or long-term employees, are given green-hat (entry-level) training before doing any work. Physical copies of previous training certifications are required and if not provided, the employee will be retrained.

Refresher trainings on critical areas are done every six months with a concentrated effort on manual handling, housekeeping and helicopter operations. The crew has gained certification as helicopter landing officers (HLOs) and other various specialties through independent certified trainers.

Also, a close working arrangement between the Martabe team, the client and the helicopter company allows for the use of each other's resources and sets a uniform standard and direction.

Totalling 114 Boart Longyear employees at the Martabe site, the experience level of the crew ranges from six months to 40 years. The majority are in the





three-to-five year range. All senior members have more than 15 years of experience, and those with the most experience are drill supervisors.

Overseeing the day-to-day operations are experienced fly-in fly-out (FIFO) drilling supervisors, trainers and environmental health and safety (EHS) advisors. Boart Longyear also supports the Martabe site with maintenance, training, logistics and human resource teams.

Recruiting from the local community is a priority; all drill helpers and trainee drillers are from the local community. Of the 18 drillers currently working the Martabe site, four are FIFO with specialised training and the rest are locals that were once plantation workers. Everyone on-site is asked to be skilled in multiple tasks. Each of the Martabe crew has a concentration on a main skill while being available to help out with a secondary skill when needed. For example, all EHS advisors are trained to do helicopter rig shifts as the HLO. This promotes respect for others' tasks and increases cooperation between different departments on-site.

### Flyable Rig

The LF70 diamond core fly drill is a lightweight, flyable exploration rig ideal for drilling in remote locations. Highly mobile with the ability to be delivered via helicopter, the LF70 can be assembled in less than an hour and has a NQ drill depth capacity of 798m (2,619 ft).

Modular design of the LF70 consists of seven sections, each weighing less than 585 kg (1,287 lb) and being easily transportable by helicopter. This reduces downtime when mobilising between sites and significantly decreases the environmental impact to a drill site. Although the LF70 is lightweight and mobile, it does not lack in power. The rigid design provides superior performance and reliability. Housing a 5.4 ton capacity mainline hoist with a 6.4 ton pullback rating, the rig can reach drilling angles between 45° and 90°.

A self-contained operator panel allows for the driller to easily control the simple hydraulic system.

The simplistic design features direct-coupled hydraulic pumps that allow for easy maintenance. Delivering high-torque when needed, the four-speed transmission is capable of drilling up to PQ-sized walls. The patented Nitro-Chuck nitrogen gas spring jaws with hydraulic-open/spring-close functionality ensure fail-safe operation. The lift to shift levers provide additional operator safety.

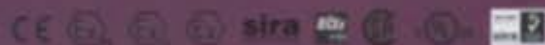


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Additionally, Boart Longyear announces the addition of the newly developed dedicated horizontal drill rig to its fleet of drilling technologies. The new horizontal drill rig offers industry-leading safety features, low noise emission, powerful hydraulics and enables safe and efficient mine dewatering.

With experienced drillers and advanced technology, Boart Longyear delivers efficient mine water solutions worldwide.

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