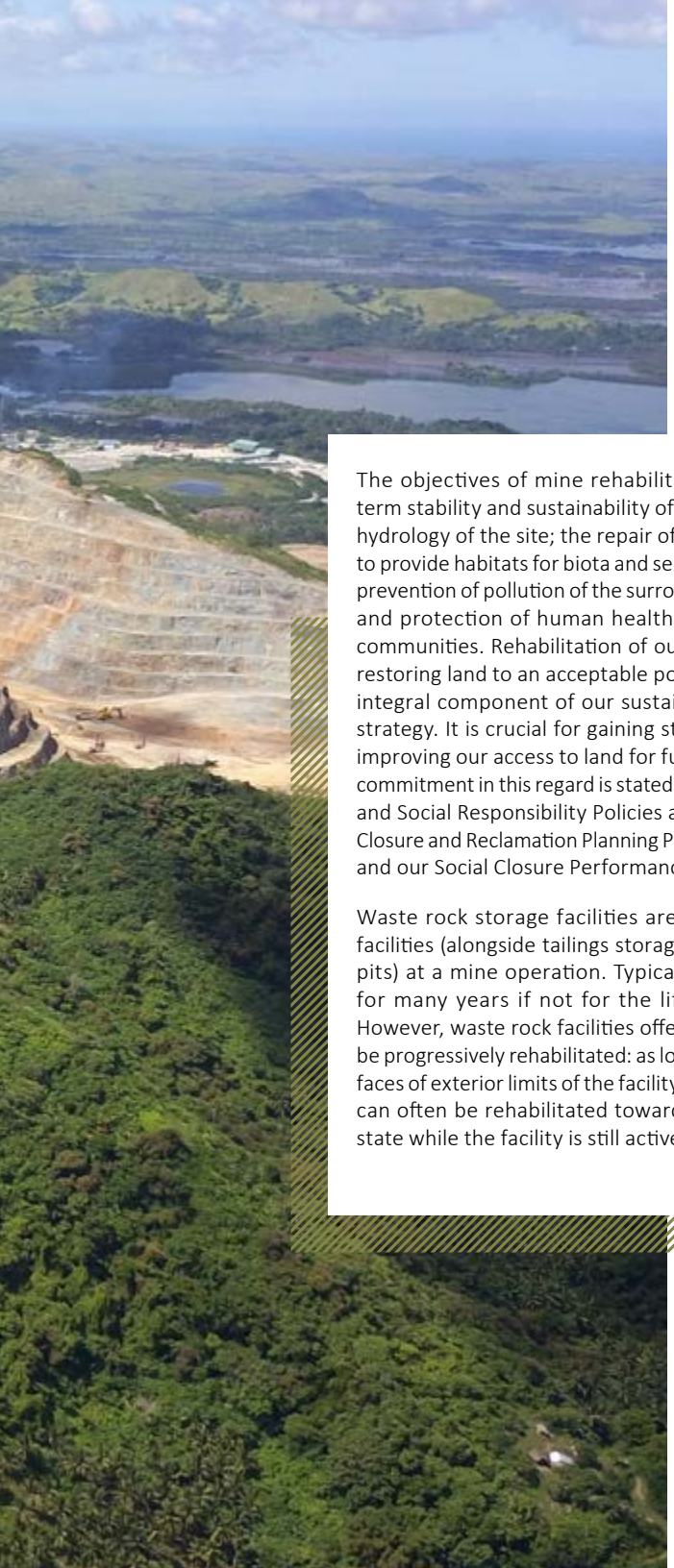
PROGRESSIVE REHABILITATION

BEST PRACTICE AT MASBATE

Mining has the potential to leave long-term adverse impacts on both the surrounding environment and communities. Poorly rehabilitated mines provide significant legacy problems for all manner of stakeholders, including governments, communities and companies. However, regulations and practices around the world have matured to comprehensively address mine closure.



The objectives of mine rehabilitation include: long-term stability and sustainability of landforms, soils and hydrology of the site; the repair of ecosystem capacity to provide habitats for biota and services for people; the prevention of pollution of the surrounding environment; and protection of human health of the surrounding communities. Rehabilitation of our mine facilities and restoring land to an acceptable post-mining state is an integral component of our sustainable development strategy. It is crucial for gaining stakeholder trust and improving our access to land for future mine sites. Our commitment in this regard is stated in our Environmental and Social Responsibility Policies and is detailed in our Closure and Reclamation Planning Performance Standard and our Social Closure Performance Standard.

Waste rock storage facilities are among the largest facilities (alongside tailings storage facilities and open pits) at a mine operation. Typically, these are active for many years if not for the life of an operation. However, waste rock facilities offer the opportunity to be progressively rehabilitated: as lower benches and the faces of exterior limits of the facility are completed, they can often be rehabilitated towards their post-mining state while the facility is still active.

At our Masbate operation, the importance of progressive rehabilitation is amplified by the fact that up to approximately 30% of the waste rock is potentially acid-generating. In addition to the objectives of rehabilitation mentioned above, comprehensive design and planning is key to achieving both successful rehabilitation outcomes and minimizing future costs. Masbate has worked to incorporate advanced design and rehabilitation measures into its waste rock storage facilities for several years. The process incorporates input from nearly all disciplines of the operation: from environment and biodiversity, to mine planning and operations, to social and community development and engagement. These advanced measures have been incorporated into our Bangon, Syndicate and HMBE waste rock storage facilities. Today Masbate monitors these to verify effectiveness, and to ensure that we are able to meet agreed success criteria.

Among the numerous measures that we implement, two key measures are the management of potentially acid generating materials to limit the release of pollutants to water resources, and appropriate surface water management to reduce long-term erosion and rapid establishment of vegetative cover to stabilize slope surfaces:

- Potentially acid generating materials are placed within the interior of the waste rock storage materials. Batters are constructed with acid neutralizing materials. Additionally, waste rock is placed in shorter lifts and combined with paddock dumping and dozing in between lifts to limit gas and water movement within the waste rock layers.
- Surface water is managed to slow and direct surface runoff to engineered drainage drop-down structures so that slope surfaces do not experience significant erosion.
- Surfaces are stabilized through a variety of revegetation measures such as hydroseeding, planting of seedlings, and coco-matting based on slope and soil characteristics.

REHABILITATION OF OUR MINE FACILITIES AND RESTORING LAND TO AN ACCEPTABLE POST-MINING STATE IS AN INTEGRAL COMPONENT OF OUR SUSTAINABLE DEVELOPMENT STRATEGY. IT'S CRUCIAL FOR GAINING STAKEHOLDER TRUST AND IMPROVING OUR ACCESS TO LAND FOR FUTURE MINE SITES.

These progressive rehabilitation measures are monitored, and all indications are that the management of waste rock storage facilities at the Masbate Mine is successfully mitigating the long-term risks associated with the site's waste materials. These measures are industry-leading practice and among the best in the Philippines. The operation has received significant acknowledgement and praise from various stakeholders in-country – including community leaders and government experts.

These practices were a focus of our global internal HSE Conference held in 2018 (see page 58 for more details.) B2Gold is working to adapt these best practices for improving rehabilitation practices at our sites globally. Our other sites have lower precipitation environments and do not face the same potential acid rock drainage issues encountered at our Masbate operation. However, the principles of surface water management and slope stabilization, and the lessons learned on how to apply a multi-disciplinary approach from the planning to the closure phases of a project can be adapted at all of our operations.

In 2019, expanding these improvements across B2Gold will be a key focus of our project and mine planning. Adopting these techniques will help to reduce future costs, and ensure that we are able to successfully transition land from our mine sites to a stable resource that will provide sustainable community benefits for generations to come.