THE TRANSFORMATION OF ARTISANAL GOLD MINING ACTIVITIES INTO SMALL-SCALE MINING OPERATIONS INITIATIVE

The Barrick Gold Tanzania’s approach

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Artisanal Mining Initiative is about:

- Collaborative approach between Barrick and artisanal mining communities with the aim of building a small-scale mining industry
- Improve environmental, health and safety practices
- Community economic empowerment
- Basic training and management support
Defining the need.....
Our approach..

- We are guided by the Government policies
  - Strategies for rationalizing Artisanal and Small-Scale Mining were incorporated in “The Mineral Policy of Tanzania” MEM October 1997

- And our journey starts from here.....

  - Ours is a transformation journey which needs a long range view. Within it, there is a need to have programs and projects that will transform Artisanal Mining activities into Regulated, Productive and Sustainable Small-Scale Mining operations that will economically empower communities and contribute towards poverty reduction.
Our approach....

- Ours is a community development program designed to promote community self help for sustainable economic growth of people directly or indirectly affected by our operations. It is also our view that the desired transformation could be achieved through taking cognizance of the following:

  - Education as a key
  - People participation
  - Cooperative Societies as the right vehicle
  - Land, appropriate technology with adequate funding
OUR STRATEGY
Our strategy......

We identified seven work streams

To achieve our goals
Our strategy......

- AWARENESS
  - Information
  - Education
  - Participation
  - Formalization

- OWNERSHIP
  - Patriotism/
  - Credibility
  - Entrepreneurial
    - skills

- COMMON
  - SENSE
  - OF
  - PURPOSE
ACCESS TO LAND

Mineral bearing land

Managing and transfer of mineral rights ownership

Facilities and waste management
Our strategy......

APPROPRIATE TECHNOLOGY

Safe, environmental friendly, easy to acquire, operate and maintain that will deliver optimum results

Training programs (Based on The Mining Act- Safety Regulations 1999, encompassing the technology and Capacity building i.e. business skills)
ADEQUATE FUNDING

To sustain themselves as businesses

Creating a structure for future funding and expansion
A MODEL MINE CONCEPT

Implement the model mine concept at a chosen site with full participation of artisanal miners

Transfer the learning and achievements to other sites
RESPONSIBLE MINING PRINCIPLES

Establish responsible gold trading channels and practices for the gold to be produced in order to realize optimum benefits for the artisanal miners.
STAKEHOLDER MANAGEMENT

Engagement from the beginning

Solicit for acceptance and support from the Government, communities and other interested parties

Provide feedback to the above
Our Vision is……

Business Opportunities like Small-Scale Mines, Suppliers, Producers etc that will create jobs and promote stability

Organized, Regulated, Sustainable organizations in the Communities

Land Education Technology Funding

National Building Initiatives- Patriotism, awareness and sense of belongingness through UTU/MABINGWA

THE END STATE SHOULD BE ECONOMICALLY EMPOWERED COMMUNITIES
ACHIEVEMENTS
Artisanal and Small-Scale Mining Committees established with a wider representation

Executive Committees also introduced to follow up on decisions made

Technical visits organized to broaden their understanding of issues
Bulyanhulu ASM
Education through technical visits

Matundasi Gold Small-Scale Mining and recovery demonstration Center

Bulyanhulu Mine Rescue Summit
We chose North Mara as a pilot site for implementing a model mine.

We invested in education through:

Base Line Study

Detailed Technical Investigation Study
Base Line Study

To determine social economic factors as well as alternative livelihood if any
Span of ASM activities is 24km across INGWE DIVISION.
At North Mara, four Cooperative Societies have been formed and registered namely:

- Mara Miners Cooperative Society Ltd
- Mlima Mgosi Cooperative Society Ltd
- Msege Miners Cooperative Society Ltd
- Nyamagunchara Miners Cooperative Society Ltd

The four Societies formed are based on closeness, infrastructure and obviously common challenges. They employ 1513 people (973 men and 540 women)

IN NORTH MARA ALL MEMBERS OWNS ACTIVE PRIMARY MINING LICENCES, AND IN BULYANHULU SEVEN ARE IN THE PROCESS.
Certification Ceremony

G. Taylor VP Barrick Africa

M. Mwibambi District Co-op Officer

Tarime District Adm. Officer for DC
Employment
1513 people
973 men
540 women
We surveyed and located beacons, shafts, dumps, roads and rivers and compared the workings with the National Cadastral Database.

We conducted geological and geotechnical mapping, sampled and treated rock dumps, tailing dumps and all accessible workings.

WE IDENTIFIED OPPORTUNITIES AS WELL AS CHALLENGES
Opportunities…..Quartz veins clearly visible and distinguished

We know the grades and ore characteristics
Opportunities… Quartz veins and Shear Zone Trends in ASM areas

A GEOLOGICAL MAP WAS PRODUCED
Challenge......Typical stope with little head room

Limited working space
The challenge....support in stopes is a typical working stope...little room-
Challenge......Waste is left in the stope hence reducing working space

Because of the economics of the operation
Challenge....Safety is compromised and so is production

Obstructions reduces air circulation which means low productivity
Challenge.....working space and productivity

Dragging ore bags over broken waste is difficult
Challenge...... Stone-Age technology.....

Tools

Hand crushing...

Gold extraction by mercury

Sluices for gold capture
To realize the desired outcome and benefits....

We have to:

1. **Address safety and health issues on the rock face**
2. **Improve on their mining methods and schedules**
3. **Have a centralized decent processing plant that conforms to our base line**
4. **Put some decent logistics to support production.**
IMPLEMENTATION
Principles of our model mine concept:

One model mine for each cooperative

No mercury

No exploitation -like child labour and gender inequalities

Legal compliant

Based on Barrick Core values
Components...

Main shaft with facilities
Ventilation shaft
Hoist
Ventilation and Drainage
Rock waste handling
Handling and storage of ore
Ore blocking and extraction sequence
Support
Simplified mine layout...

- Fresh Air Intake
- Main Shaft
- Ventilation Shaft with exhaust fan
- Crosscut with Ventilation door
- Raise
Hoisting and ore handling...
Typical Small Scale Head gear

- Head frame
- Bucket and dump mechanism
- Shaft gate
- Hoist
Components:

5 tons per hour central processing plant
No mercury only gravity recoverable gold
Produce sellable gold
Central waste containment
Gold trading through fair trading practices
Typical Small-Scale Processing plant

- Ore reception
- Crushing
- Grinding
- Gravity concentration
The Plan..

We are requesting for:

- Gold Recovery Plant USD 556,240.00
- Mining & Logistics 424,301.00
- Infrastructure, safety & Security 156,000.00
- Crating, transport & commissioning (plant) 200,000.00
- Working costs 400,000.00

TOTAL USD 1,736,541.00

THIS IS AGAINST THE BUDGET OF USD 2.7 MILLION
As a transformation process, we have to take all stakeholders on board from day one.
We launched our initiative nationally on 16.08.2008
The launch...
We appealed to all stakeholders to join hands...
To the Local Government, all relevant Village Chairmen, Executives and Councilors have been briefed and a presentation to Tarime District Council will be scheduled.

The 15km road network to the Artisanal site has been constructed and is overseen by respective Village leadership.
Access – Construction of road network (15km)
Construction of access roads to artisanal mining sites
We are working on the funding arrangements which will involve the Artisanal Community and other stakeholders that will guarantee ownership and sustainability.

Technical training, capacity building and procurement will follow after the finalization of the funding process.
To achieve the responsible metal trading objective, we are in discussion with

The Rand Refinery of South Africa

Who are planning to build and operate the refinery in Tanzania, and are willing to buy gold from artisanal and Small-Scale miners.
Financial viability

A combination of:

- ore grades
- improved ore extraction
- improved metal recovery
- and Fair trading practices,

The project will easily pay back in two years.

The recovered loan, will go into the fund that will help other sites.
A draft memorandum of understanding MoU explaining:

- Parties involved
- Roles
- Responsibilities
- Where and when

has been tabled to set the scene for future engagements
Our wish....
Providing the alternative....

... together we can provide the alternative choice to our artisanal miners.....

AHSANTE SANA