DAMANG MINE: SWINGING BACK TO PROFITABILITY

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EVP & Head of West Africa

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GOLD FIELDS LIMITED – Global Operations

Damang – Member of the Gold Fields group

- Located in Western Region of Ghana
- 280km by road from Accra
- 30km by road from Tarkwa
- Concession covers an area of 25,016ha
- Annual rainfall averages 2,030mm
- In 2014, produced 178koz @ AISC of US$ 1,175/oz
WHERE WE’VE COME FROM

Significant Negative Cash Flows and Financial Loss

2012

High AISC/Gold Price Ratio
• 2012 Average US$1,753/oz (Av. gold price US$1,668/oz)

Lower grades mined (Huni Sandstone)

2013

AISC/Gold Price Ratio
• 2013 Average US$1,450/oz (Av. gold price US$1,412/oz)
  • Closure/Care & Maintenance considered

Lower gold production (average 39k oz per quarter)

Reserve dropped to 1 moz due to significant fall in gold price

Damang “4moz Super Pit” Project shelved due to low gold price.
WHERE WE’VE COME FROM

Key Financial Metrics

Production Profile

2012-2013: implementation of a 3-cycle, 4 shift roster.

Reduced tons mined in Apr – May 2013 due to industrial strike and ‘Go slow’

Reduced production in 2014 due to a strategic decision to reposition the mine in 2014.

Changed from 3 shifts to 2 shifts.
REVERSING THE TREND

3 Key Strategic Steps

- **Put in place a turnaround strategy**

- **Consolidate and stabilize** – increase waste strip, extend life of mine, and stabilize the processing plant

- **Increase relevance** – put Damang back on the map as a Productive member of the Gold Fields family
While maintaining the company's core values of:

- Safety
- Respect
- Responsibility
- Innovation
- Honesty
- Delivery
TRANSFORMATION PILLARS

Safety

If we cannot mine **safely**, we will not mine

- Visible Leadership exemplified by HOD walk-the-talk
- Zero tolerance approach to safety.

Human Resources

- 855 GF Employees; 530 Contractors
- Rigorous Talent Management
- Accelerated training and development programs
- Employee Wellbeing Program/Facilities:

<table>
<thead>
<tr>
<th>Description</th>
<th>2013</th>
<th>2014</th>
<th>End of Q1 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees in Service</td>
<td>1,038</td>
<td>845</td>
<td>855</td>
</tr>
<tr>
<td>Contractors</td>
<td>474</td>
<td>637</td>
<td>530</td>
</tr>
<tr>
<td>TE+C</td>
<td>1,512</td>
<td>1,482</td>
<td>1,416</td>
</tr>
<tr>
<td>Tonnes mined/TEC</td>
<td>1,491</td>
<td>1,078</td>
<td>1,064</td>
</tr>
<tr>
<td>Oz sold/TEC</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
</tbody>
</table>
### TRANSFORMATION PILLARS

#### Processing – Strategic Intervention

Improved on plant recovery to **reduce metallurgy cost** by ~25%

<table>
<thead>
<tr>
<th>Metric</th>
<th>UoM</th>
<th>2012 - 2013</th>
<th>2014</th>
<th>New Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leach efficiency</td>
<td>%</td>
<td>30.9</td>
<td>56.1</td>
<td>Added aqueous instead of solid lead nitrate to passivate sulphides in the leach feed.</td>
</tr>
<tr>
<td>Adsorption efficiency</td>
<td>%</td>
<td>33.0</td>
<td>89.2</td>
<td>Adopted optimal carbon movement and the installation of the CIL TK08.</td>
</tr>
<tr>
<td>Acid wash efficiency</td>
<td>%</td>
<td>29.1</td>
<td>44.0</td>
<td>Acid-washed every batch of elution at the CIL train to remove all inorganic foulants.</td>
</tr>
<tr>
<td>Electrowinning efficiency</td>
<td>%</td>
<td>94.7</td>
<td>97.9</td>
<td>Improved the caustic strength and closely monitored the purity of every batch of caustic soda.</td>
</tr>
<tr>
<td>Regeneration efficiency</td>
<td>%</td>
<td>81</td>
<td>102</td>
<td>Adopted continuous running of the kiln to remove all organic contamination.</td>
</tr>
<tr>
<td>Elution efficiency</td>
<td>%</td>
<td>77.0</td>
<td>92.5</td>
<td>Closely monitored elution temperatures, pressures, caustic concentrations. Adopted monthly maintenance of the elution circuit. Improved water quality.</td>
</tr>
<tr>
<td>Gravity circuit efficiency</td>
<td>%</td>
<td>13.7</td>
<td>30.4</td>
<td>Frequent planned maintenance of the knelsons.</td>
</tr>
<tr>
<td>Grind efficiency</td>
<td>%</td>
<td>77.6</td>
<td>77.8</td>
<td></td>
</tr>
<tr>
<td>Fine Carbon in the CIL train</td>
<td>%</td>
<td>5.0</td>
<td>2.0</td>
<td>Adopted single stage pumping for the carbon advance pumps, reduced carbon attrition losses.</td>
</tr>
</tbody>
</table>
TRANSFORMATION PILLARS

Process Optimization

Strategic Intervention Initiatives

- Adopted single stage milling. SAG mill now runs independently
- Improved SAG mill effect by ensuring 10-15% “oversize” rocks in the SAG mill feed
- Weekly planned maintenance at crushing/milling circuit
- Postponed US$25million capital spend on new tailings dam by raising the existing dam wall
- Improved upon the tailings dam management
Efficiency and Productivity

- Switch from V-71 to SV-2
- Juno Go-Line Fuel Facility
- Operation Sneipner
- Operation Fly the Rigs
- Blast Optimization
- 9m to 12m Blasts
- Pre-Split Drilling
- Extending Lubricant Life
- Components’ Rebuild Centre
- Geological and Dilution Control
- Fuel Capping for Light Vehicles

Efficiency & cost-saving initiatives
**TRANSFORMATION PILLARS**

### Business Improvement

<table>
<thead>
<tr>
<th>Cost Usage Initiatives</th>
<th>Throughput Initiatives</th>
</tr>
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<tbody>
<tr>
<td>Benefits delivered in 2013</td>
<td>Benefits delivered in 2013</td>
</tr>
<tr>
<td><strong>US$6.9 Million</strong></td>
<td><strong>US$7.8 Million</strong></td>
</tr>
<tr>
<td>Benefits delivered in 2014</td>
<td>Benefits delivered in 2014</td>
</tr>
<tr>
<td><strong>US$2.4 Million</strong></td>
<td><strong>US$6.4 Million</strong></td>
</tr>
</tbody>
</table>
Sustainable Development and Social Responsibility

- Strong relationships with stakeholders, based on trust, open, honest and frequent engagement
- Creating shared value and leaving positive legacy for host communities

**COMMUNITY SPEND**

- **Education**: 42%
- **Agriculture**: 22%
- **Infrastructure**: 16%
- **Water and Sanitation**: 11%
- **Health**: 9%

Total community investment (2002 – 2014): **USD$5.1M**
SUSTAINING THE TURNAROUND

Action Plans and Initiatives

Total Mine Cost Control

- Greater focus on maintaining and improving the cost base
- Stringent Cost Review Approach – daily and weekly
- Departmental monthly peer review and use of Dashboards
- Departmental Interventions – GM and Finance Team will hold intervention meetings if a Department’s costs blow out.

Owner Blast Hole Drilling and Maintenance

- Consider including grade control.
- Look at equipment that can do both blast hole and RC grade control.

Conceptual Studies of Underground Mining

- Damang: High volume, medium grade
- Amoanda: Low volume, high grade

Continued Processing Plant Optimization

- Improving availability and utilization
- Improving operational flexibility

Synergies with Tarkwa Mine

- Exchange of equipment as required
- HME and Fixed Plant Engineering
**THE WAY FORWARD**

**Exploration**

**Saddle-Huni Bridge**
- Part of “Greater Damang”
- AGC down to 42m yielded 14,442oz
- Resource/information gap observed below 50m depth

*2015 Plan*
*Detailed drilling to model and evaluate of prospective zone below 50m*

**Tamang**
- Southern extension of Juno South
- Potential for both hydrothermal and palaeo-placer mineralisation
- 7 Scout holes drilled in 2014 to prepare for detailed drilling in 2015

*2015 Plan*
*Detailed drilling to delineate, model and evaluate the Banket quartzite host*

**Juno East and South**
- Possible dip and strike extension of favourable geological horizon in pit
- First pass drilling has given indication of mineralisation in the target areas

*Plan 2015*
*Close drill spacing for robust geological and resource models to be built*

**Nyame**
- Strike extension of Damang orebody
- Potential for high grade oxide ore in close proximity to the plant

*Plan 2015*
*RC and DD drilling to develop the oxide potential and delineate the Damang Fault.*

**Tomento North**
- Strike extension of the Tomento Pit 1 reefs
- Initial program in 2014 generated an potential resource of 209koz @1.63g/t

*2016 Plan*
*Close-up drill spacing to refine geological domains and re-evaluate the project*

**Amoanda South**
- Strike extension of Amoanda orebody
- Limited drill testing

*Plan 2016*
*Close drill spacing from current 40X20m to 20X20m and re-evaluate the orebody*
Thank you