Nickel Mining Activities in North Maluku Mines Business Unit

Challenges and Opportunities in Indonesia Mining and Mineral Industries in The Future

Tato Miraza | Development Director PT ANTAM (Persero) Tbk

PwC Asia School of Mines 2012 | Bali, November 30 2012
Outlines

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ANTAM JOURNEY

ANTAM in the future:
GLOBAL MINING BASED CORPORATION,
WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS

Indonesia Mining Industry:
OPPORTUNITIES AND CHALLENGES

Downstream Mining Industry:
TOWARDS INDONESIA ECONOMIC DEVELOPMENT ACCELERATION AND EXPANSION
Introduction:

ANTAM SUCCESS STORIES
INTRODUCTION: ANTAM JOURNEY

Our history

**1960**
- **PERUSAHAAN NEGARA (PN) TAMBANG EMAS TJIKOTOK**, was established based on Peraturan Pemerintah No. 91 Year 1961

**1961**
- **BADAN PIMPINAN UMUM PERUSAHAAN TAMBANG UMUM NEGARA (BPU PERTAMBUN)** was established

**1962**
- **PN ANEKA TAMBANG** was established by merging several state-owned single commodity companies

**1968**
- **Listed in INDONESIA STOCK EXCHANGE (IDX)**

**1974**
- Antam’s status in ASX was upgraded to full listing

**1997**
- Issuance of Rp 3 Trillions bonds for investment and business developments

**1999**
- Status Amendment from PN Aneka Tambang to PT ANEKA TAMBANG (PERSERO)

**2001**
- Issued US$200 million bonds for funding the FeNi III smelter construction

**2003**
- Listed in AUSTRALIAN SECURITIES EXCHANGE (ASX) as Foreign Exempt

**2006**
- ANTAM change its corporate logo

**2011**
- Issuance of Rp 3 Trillions bonds for investment and business developments
INTRODUCTION: ANTAM JOURNEY

Long journey in nickel

1909

POMALAA
SMALL SCALE OF NICKEL ORE COMMMENCED PRODUCTION

1938

DISCOVERY OF NICKEL IN POMALAA, SOUTHEAST SULAWESI

1939

POMALAA
FIRST NICKEL ORE SHIPMENT OF

1938

1939

1959

1962

1973

1976

1977

1979

1992

1995

1998

2000

2004

2006

2010

2011

2012

GROUNDBREAKING OF CONSTRUCTION FENI HALMAHERA SMELTER

MODERNIZATION AND OPTIMATION OF FENI POMALAA PLANT

TAPUNOPAKA NICKEL MINE, COMMENCED OPERATIONS

GROUNDBREAKING OF CONSTRUCTION FENI II SMELTER

FENI II SMELTER COMMENCE COMMERCIAL OPERATION

MODERNIZATION ON ROTARY KILN WITH COPPER COOLER DONE BY ANTAM ITSELF.

GROUND BREAKING OF CONSTRUCTION FENI III SMELTER

LEMO ISLAND NICKEL MINE, NEAR POMALAA, COMMENCED OPERATING BY PT NIKKEL INDONESIA

GEBE ISLAND NICKEL MINE COMMENCE OPERATION

GEBE ISLAND NICKEL MINE COMMENCE PRODUCTION

CLOSURE OF GEBE NICKEL MINE

TANJUNG BULI NICKEL MINE COMMENCE OPERATION

GROUNDBREAKING OF CONSTRUCTION FENI II SMELTER

FENI I SMELTER COMMENCE COMMERCIAL OPERATION

BRICK LAYING INSIDE ELECTRIC FURNACE DONE BY ANTAM ITSELF.

LEMO ISLAND NICKEL MINE , NEAR POMALAA, COMMENCED OPERATION BY PT NIKKEL INDONESIA

TAPUNOPAKA NICKEL MINE, COMMENCED OPERATIONS

GROUNDBREAKING OF FENI III SMELTER CONSTRUCTION

FEN III SMELTER COMMENCE COMMERCIAL OPERATION

MODERNIZATION ON ROTARY KILN WITH COPPER COOLER DONE BY ANTAM ITSELF.

TANJUNG BULI NICKEL MINE COMMENCE OPERATIONS

CLOSURE OF LEMO NICKEL MINE

PAKAL NICKEL MINE COMMENCE OPERATIONS

LEGEND

Nickel mine

FeNi smelter plant

Mine closure
INTRODUCTION: ANTAM JOURNEY

Long journey in gold

1937 - FIRST GOLD REFINING BY BRAANKENSIEK
1937 - LOGAS GOLD MINE, PEKANBARU, COMMENCED OPERATION
1939 - CIKOTOK GOLD MINE COMMENCED OPERATION

1957 - LOGAS GOLD MINE CLOSURE

1971 - LOGAM MULIA, PULOGADUNG PLANT CONSTRUCTION
1977 - CIPLUTER GOLD MINE COMMENCED OPERATION
1979 - CIKOTOK MINING AREA CLOSURE
1982 - LOGAM MULIA ESTABLISHED
1988 - CIPLUTER GOLD MINE CLOSURE
1989 - PONGKOR I PLANT COMMENCED OPERATION
1994 - PONGKOR II PLANT COMMENCED OPERATION
1996 - PONGKOR II PLANT STARTED CONSTRUCTION
1998 - PONGKOR II PLANT STARTED CONSTRUCTION
2009 - PT CIBALIUNG SUMBER DAYA (CSD) ACQUISITION
2010 - PT CSD COMMENCED OPERATION
2009 - PT CIBALIUNG SUMBER DAYA (CSD) ACQUISITION

LEGEND
- Gold mine
- Gold mine + processing / refinery Plant
- Mine closure
INTRODUCTION: ANTAM JOURNEY

Long journey in bauxite

1920

DISCOVERY OF BAUXITE IN PULAU BINTAN, KEPULAUAN RIAU

1935

KIJANG BAUXITE MINE, PULAU BINTAN, COMMENCED OPERATION

2009

KIJANG BAUXITE MINING CLOSURE

2010

TAYAN CHEMICAL GRADE ALUMINA PLANT CONSTRUCTION

2011

TAYAN BAUXITE MINE COMMENCED OPERATION

LEGEND

- Bauxite mine
- Alumina processing plant
- Mine closure
INTRODUCTION: ANTAM JOURNEY

Long journey in iron sand and coal

CILACAP IRON SAND MINE COMMENCED OPERATION

KUTOARJO IRON SAND MINE COMMENCED OPERATION

LUMAJANG IRON SAND MINE COMMENCED OPERATION

SAROLANGUN COAL MINE ACQUISITION BY PT INDONESIAN COAL RESOURCES

1970

1979

1982

1989

1998

2003

2011

CILACAP IRON SAND MINING CLOSURE

PELABUHAN RATU IRON SAND MINE COMMENCED OPERATION

PELABUHAN RATU IRON SAND MINING CLOSURE

LEGEND

Iron sand mine
Coal mine
Mine closure
INTRODUCTION: ANTAM JOURNEY

ANTAM mining closure

BAUXITE MINING CLOSURE IN KIJANG

Ex mine

Revegetation

Mangrove Plantation

IRON SAND MINING CLOSURE IN CILACAP

One man one tree plantation

Ex mine Reclamation
Current operations

- **FERRONICKEL SMELTER AND NICKEL ORE MINE**
  - Pomalaa, Southeast Sulawesi

- **NICKEL ORE MINE**
  - Tapunopaka, Southeast Sulawesi
  - Tanjung Buli, North Maluku

- **COAL MINE**
  - Sarolangun, Jambi (PT Indonesia Coal Resources)

- **BAUXITE MINE**
  - Tayan, West Kalimantan

- **GEOMIN EXPLORATION UNIT**
  - Pulogadung, Jakarta

- **GOLD MINE**
  - Cibaliung, Banten (PT Cibaliung Sumberdaya)
  - Pongkor, West Java

- **PRECIOUS METALS PROCESSING & REFINERY**
  - Pulogadung, Jakarta

**Commodities:**
- Nickel
- Precious metals
- Bauxite
- Coal

**INTRODUCTION: ANTAM JOURNEY**
In 1H12, ANTAM spent Rp114.5 billion on exploration and mine development activities.
Since the IPO, the value per share increased 692% to Rp1.430 on May 22, 2012.

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Avg Vol</th>
<th>Adj Close*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 1, 2012</td>
<td>1.290</td>
<td>1.310</td>
<td>1.220</td>
<td>1.250</td>
<td>4.963.400</td>
<td>1.250</td>
</tr>
<tr>
<td>Sep 3, 2012</td>
<td>1.250</td>
<td>1.430</td>
<td>1.220</td>
<td>1.350</td>
<td>16.130.100</td>
<td>1.350</td>
</tr>
</tbody>
</table>

* Close price adjusted for dividends and splits.
INTRODUCTION: ANTAM JOURNEY

Business strategy

- Focus on core business:
  - Focus on segments that it knows best: Nickel, Gold and Bauxite

- Creating sustainable growth:
  - Adding value by moving away from selling raw materials & increasing processing activities
  - Expanding capacity to increase cash generation and lower unit costs
  - Continuously striving to obtain cost efficiencies and being environmentally and socially sustainable
  - Maintaining diversified customer base
  - Developing strategic alliances

- Maintaining financial strength:
  - Focus on long-term and sustainable profitability, and flexible dividend policy at 30 – 40% of profits
  - Maintain solid balance sheet and healthy debt leverage (Debt/Equity of 2.0x)
  - Maintain healthy liquidity–ensuring debt maturity well spread out over the next 5 years & focusing on long term financing with matching maturity profile against cash flow generation
  - Development of growth projects without burdening balance sheet

ANTAM also maintains good and strong relationships with the Government and has a leverage on strong Government support.
INTRODUCTION: ANTAM SUCCESS STORY

Financial performance

**Solid Revenue**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Rp Bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>9,592</td>
</tr>
<tr>
<td>2009</td>
<td>8,711</td>
</tr>
<tr>
<td>2010</td>
<td>8,744</td>
</tr>
<tr>
<td>2011</td>
<td>10,346</td>
</tr>
<tr>
<td>1H12</td>
<td>4,492</td>
</tr>
</tbody>
</table>
```

**Healthy Margins**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Gross Margin</th>
<th>Operating Margin</th>
<th>Net Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>28</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>2009</td>
<td>14</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>2010</td>
<td>7</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>2011</td>
<td>29</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>1H12</td>
<td>19</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>
```

**Solid Cash Position**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Rp Bn</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>3,264</td>
</tr>
<tr>
<td>2009</td>
<td>2,766</td>
</tr>
<tr>
<td>2010</td>
<td>4,229</td>
</tr>
<tr>
<td>2011</td>
<td>5,640</td>
</tr>
<tr>
<td>1H12</td>
<td>5,223</td>
</tr>
</tbody>
</table>
```

**Leveraged for Growth**

```
<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>10</td>
</tr>
<tr>
<td>2009</td>
<td>6</td>
</tr>
<tr>
<td>2010</td>
<td>8</td>
</tr>
<tr>
<td>2011</td>
<td>28</td>
</tr>
<tr>
<td>1H12</td>
<td>29</td>
</tr>
</tbody>
</table>
```

**Strong Revenues Supported with Solid Operational Performance**

**Consistent Healthy Margins**

**Solid Cash Position to Support Growth**

**Higher Leverage for Growth**
Reserves and resources

**Saprolite Nickel (‘000wmt)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserve</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>306,300</td>
<td>56,400</td>
</tr>
<tr>
<td>2009</td>
<td>397,350</td>
<td>50,350</td>
</tr>
<tr>
<td>2010</td>
<td>317,200</td>
<td>54,200</td>
</tr>
<tr>
<td>2011</td>
<td>152,450</td>
<td>140,800</td>
</tr>
<tr>
<td>1H 2012</td>
<td>152,450</td>
<td>162,530</td>
</tr>
</tbody>
</table>

**Gold Ore (‘000 dmt)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserve</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>4,450</td>
<td>886</td>
</tr>
<tr>
<td>2009</td>
<td>4,058</td>
<td>104,500</td>
</tr>
<tr>
<td>2010</td>
<td>4,246</td>
<td>242,700</td>
</tr>
<tr>
<td>2011</td>
<td>4,834</td>
<td>263,800</td>
</tr>
<tr>
<td>1H 2012*</td>
<td>6,427</td>
<td>267,500</td>
</tr>
</tbody>
</table>

**Limonite Nickel (‘000wmt)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserve</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>447,700</td>
<td>498,850</td>
</tr>
<tr>
<td>2010</td>
<td>400,300</td>
<td>407,300</td>
</tr>
<tr>
<td>2011</td>
<td>431,090</td>
<td>-</td>
</tr>
<tr>
<td>1H 2012*</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Bauxite (‘000wmt)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Reserve</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>70,900</td>
<td>130,300</td>
</tr>
<tr>
<td>2009</td>
<td>104,500</td>
<td>106,350</td>
</tr>
<tr>
<td>2010</td>
<td>105,700</td>
<td>106,350</td>
</tr>
<tr>
<td>2011</td>
<td>106,350</td>
<td>106,350</td>
</tr>
<tr>
<td>1H 2012*</td>
<td>106,350</td>
<td>276,700</td>
</tr>
</tbody>
</table>

*Reserves conversion from resources 1H 2012 still on evaluation
INTRODUCTION: ANTAM JOURNEY

ANTAM contributions to nation and community

- **Tax and Non Tax (in billions rupiah)**

<table>
<thead>
<tr>
<th>CONTRIBUTION</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>1H12*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central tax</td>
<td>315</td>
<td>438</td>
<td>1,170</td>
<td>517</td>
</tr>
<tr>
<td>Local tax</td>
<td>24</td>
<td>52</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Dividend payout</td>
<td>356</td>
<td>157</td>
<td>438</td>
<td>-</td>
</tr>
<tr>
<td>Land rent</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Production royalty</td>
<td>120</td>
<td>211</td>
<td>178</td>
<td>94</td>
</tr>
<tr>
<td>Forestry area retribution</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>817</td>
<td>862</td>
<td>1,868</td>
<td>645</td>
</tr>
</tbody>
</table>

*unaudited

- **Corporate Social Responsibilities Expenses (in billions rupiah)**

- **Corporate Social Responsibilities Breakdown 2011**

- **INTRODUCTION: ANTAM JOURNEY**

*unaudited

- **INTRODUCTION: ANTAM JOURNEY**
INTRODUCTION: ANTAM JOURNEY
HR and HSE

HR Productivity

Total employee based on status

<table>
<thead>
<tr>
<th>Status Kepegawaian Status</th>
<th>Periode Pelaporan</th>
<th>Reporting Period</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>Pegawai Tetap</td>
<td>Permanent Employee</td>
<td>2,517</td>
</tr>
<tr>
<td>Pegawai Tidak Tetap</td>
<td>Non-permanent Employee</td>
<td>166</td>
</tr>
<tr>
<td>Jumlah</td>
<td>Total</td>
<td>2,683</td>
</tr>
</tbody>
</table>

Our value

Safety record

Employees are one of ANTAM’s main assets.
ANTAM puts occupational health and safety for the employees as top priority.
External accolades and recognition

**CORPORATE IMAGE AND LEADERSHIP**

- **GOOD PERFORMANCE & BRONZE ACHIEVEMENT**  
  Indonesia Quality Award | Nov 2012
- **BEST IN BUILDING & MANAGING CORPORATE IMAGE 2011 & 2012**  
  Corporate Image Award (IMAC) | June 2012
- **GREEN CEO**  
  Warta Ekonomi | July 2012
- **VERY BEST FOR NON-BANK SOE**  
  Infobank Award | Oct 2012
- **BEST FOR HC INITIATIVE IN PEOPLE DEVELOPMENT**  
  Indonesian Human Capital Study Award | Oct 2012
- **BEST CEO COMMITMENT**  
  Alpha Southeast Asia Magazine | Sept 2011
- **MOST ORGANIZED INVESTOR RELATIONS**
- **STRONGEST ADHERENCE TO CORPORATE GOVERNANCE**
- **BEST SUSTAINABILITY REPORTING ON WEBSITE 2011**
- **RUNNER UP-2 BEST SUSTAINABILITY REPORTING 2010 CATEGORY “NATURAL RESOURCES”**  
  Indonesia Sustainability Reporting Award | Dec 2011

**GOOD CORPORATE GOVERNANCE**

- **BEST OVERALL**  
  IICD, Corporate Governance Award | Dec 2011
- **THE BEST GCG IMPLEMENTATION 2011**  
  Business Review Award | Dec 2011
- **MOST TRUSTED COMPANY**  
  CGPI Award | Dec 2011

**HEALTHY AND SAFETY ENVIRONMENT**

- **MOST ADMIRED COMPANY**  
  SRI KEHATI Award | June 2012
- **UPAKARTI UTAMA**
  ✓ UBPN Southeast Sulawesi  
  ✓ UBPP Logam Mulia
- **UPAKARTI PRATAMA**
  ✓ UBPE Pongkor  
  ✓ UBPN North Maluku
- **PROPER HIJAU**
  ✓ UBPE Pongkor
- **PROPER BIRU**
  ✓ UBPN North Maluku  
  ✓ UBPP Logam Mulia  
  ✓ PT CSD
  
  Ministry of Environment | Nov 2011

**CORPORATE SOCIAL RESPONSIBILITIES**

- **INDONESIA GREEN AWARDS 2011**
  Business & CSR Magazine | Sept 2011
- **PLATINUM**
  ✓ Development Program of Biodiversity Center of Halimun-Salak Mountain National Park
  ✓ Revitalisation Program and Dev’t Program of Community Areas of Bajo Tribe
- **GOLD**
  ✓ Community Empowerment Program in Former Iron Ore Mining Areas
ANTAM in the future:

GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
### ANTAM vs competitors

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>FORTUNE 500 RANK</th>
<th>REVENUE (USD BILLIONS)</th>
<th>EBITDA (USD BILLIONS)</th>
<th>ASSETS (USD BILLIONS)</th>
<th>NPM</th>
<th>ROA</th>
<th>ROE</th>
<th>DEBT TO EQUITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antam</td>
<td>-</td>
<td>1,0</td>
<td>0,3</td>
<td>1,3</td>
<td>19%</td>
<td>14%</td>
<td>18%</td>
<td>28%</td>
</tr>
<tr>
<td>Rio Tinto</td>
<td>140</td>
<td>56,6</td>
<td>26,0</td>
<td>112,4</td>
<td>25%</td>
<td>13%</td>
<td>25%</td>
<td>93%</td>
</tr>
<tr>
<td>BHP Billiton</td>
<td>159</td>
<td>52,8</td>
<td>38,1</td>
<td>88,9</td>
<td>24%</td>
<td>14%</td>
<td>26%</td>
<td>83%</td>
</tr>
<tr>
<td>Vale</td>
<td>186</td>
<td>45,3</td>
<td>35,5</td>
<td>129,1</td>
<td>38%</td>
<td>13%</td>
<td>25%</td>
<td>87%</td>
</tr>
<tr>
<td>Xstrata</td>
<td>315</td>
<td>30,5</td>
<td>18,5</td>
<td>69,7</td>
<td>15%</td>
<td>7%</td>
<td>12%</td>
<td>73%</td>
</tr>
<tr>
<td>*Chinalco</td>
<td>331</td>
<td>28,9</td>
<td>0,0</td>
<td>56,8</td>
<td>0%</td>
<td>0%</td>
<td>-1%</td>
<td>1380%</td>
</tr>
<tr>
<td>*Alcoa</td>
<td>465</td>
<td>21,0</td>
<td>3,6</td>
<td>39,3</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>189%</td>
</tr>
<tr>
<td>Norilsk Nickel</td>
<td>-</td>
<td>12,8</td>
<td>6,8</td>
<td>23,9</td>
<td>24%</td>
<td>13%</td>
<td>17%</td>
<td>33%</td>
</tr>
<tr>
<td>Freeport-McMoRan Copper &amp; Gold</td>
<td>-</td>
<td>19,0</td>
<td>12,2</td>
<td>29,3</td>
<td>23%</td>
<td>1%</td>
<td>35%</td>
<td>134%</td>
</tr>
<tr>
<td>Newmont</td>
<td>-</td>
<td>9,5</td>
<td>5,3</td>
<td>25,6</td>
<td>24%</td>
<td>1%</td>
<td>17%</td>
<td>92%</td>
</tr>
</tbody>
</table>

Source: annual reports 2010, fortune global 500

GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
## Strategic vision 2020

### Build capacity for downstream diversification (2012-2016)

**Current 2011 (Projection)**
- **Asset:** ~USD 1,15 Bio
- **Revenue:** ~USD 1,25 Bio

**World class standard**
- **Asset:** ~USD 6,8 Bio
- **Rev:** ~USD 4,7 Bio

- Strengthening Geomin’s core competencies to boost reserves and discover world-class resources
- Expansion in scale of resources and project capacity
- Development of in-house mining’s core operation and strengthening competencies
- Increase in competitiveness of production and cash costs to meet global standards
- Expansion of current capacity and improvement of process efficiency
- Development of long-term strategic growth projects
- Strengthening downstream marketing and distribution channels to accommodate the growing capacity and additional downstream products
- Market expansion and customer focus through effective use of business intelligence

### Increase scale & complexity of operation (2017-2020)

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### Supporting Key Platform

**Strengthen existing functions**: 1) manpower competencies, 2) integration of CSR management within value chain, and 3) strong R&D function backed-up by universities

**Improving organization, GCG, and corporate management**: 1) Holding structure, 2) Investment arm, 3) Marketing distribution and Business Intelligence

**Adequate financing** which supports strategic growth projects

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GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
Diversification, reserves and production capacity growth focuses

**Organic growth initiatives:**
1. Strategic projects: FHT, SGA, CGA
2. Capacity enhancement and optimalization project: MOP-PP
3. Targeted replacement rate of reserves from existing resources

**Inorganic growth initiatives:**
1. Joint venture and partnerships
2. Acquisition of government shares
3. Acquisition of new IUPs, mining assets or processing facilities

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### Projected Reserves*

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel Ore</td>
<td>420 M Wmt</td>
<td>202 M Wmt</td>
</tr>
<tr>
<td>Gold</td>
<td>106 M Wmt</td>
<td>280 Ton</td>
</tr>
<tr>
<td>Bauxite</td>
<td>0 Ton</td>
<td>500 M ton</td>
</tr>
<tr>
<td>Coal</td>
<td>0 Ton</td>
<td>500 M ton</td>
</tr>
</tbody>
</table>

### Projected Production*

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feronickel</td>
<td>18.688 Tni</td>
<td>0 Tn</td>
</tr>
<tr>
<td>Gold</td>
<td>2.776 Kg</td>
<td>3.000 Kg</td>
</tr>
<tr>
<td>Alumina</td>
<td>0 Tn</td>
<td>1.700 KTon</td>
</tr>
</tbody>
</table>

GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
Current development projects

PROYEK PENGEMBANGAN ANTAM MENUJU HILIRISASI PERTAMBANGAN

SGA MEMPAWAH PROJECT
- Bauxite processing into SGA
- Capacity: 1.2 mmt of SGA pa
- Completion: 2016
- Antam Share: 100%

CGA TAYAN PROJECT
- Bauxite processing into CGA
- Capacity: 300,000 tonnes of CGA pa
- Completion: 2014
- Estimated Project Cost: US$450 M
- Antam Share: 80% (20% is owned by SDK Japan)

NICKEL MANDIODO PROJECT
- Capacity: 12,000 tonnes of Ni pa (10% Ni in product)
- Completion: 2016
- Estimated Project Cost: US$350-400 million
- Antam Share: 100% through subsidiary PT AJSI

SPONGE IRON MERATUS PROJECT
- Capacity: 315,000 tonnes of sponge iron pa
- Completion: 2012
- Project Cost: US$150 million
- Antam Share: 34% (66% is owned by PT Krakatau Steel)

FENI HALMAHERA TIMUR PROJECT
- Capacity: 27,000 tonnes Ni pa
- Completion: 2014
- Project Cost: US$1.6 billion
- ANTAM Share: 100%

MODERNISASI, OPTIMASI DAN POWERPLANT POMALAA
- Efficiency improvement of existing ferronickel smelters to 25,000-27,000 tNi pa
- Completion: 2014
- Project Cost: US$450-500 million
- Antam Share: 100%

GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
Development projects updates

- East Halmahera FeNi Project
- Tayan CGA Project
- South Kalimantan Sponge Iron Project
- Mandiodo NPI Project
- MOP-PP Project
- Mempawah SGA Project

GLOBAL MINING BASED CORPORATION, WITH HEALTHY GROWTH AND WORLD-CLASS STANDARDS
Financing plan for our development project

- **Indonesia Financing Institution and Equity Injection**
  Total project cost US$70 million funded by US$49 million loan and equity injection US$21 million, ANTAM’s share 34%

- **ECA Financing and Equity Injection**
  Total project cost US$450 million funded by ECA Financing US$292 million and equity injection US$157 million, ANTAM’s share 80%

- **Total project cost US$ +/-1,332.3 million will be funded by 65% debt and 35% Equity**
  - ECA Financing and/or investment loan +/- US$854.3 million
  - Equity injection and/or strategic partnership +/-US$460.14 million

- **ECA Financing, Investment Loan and Bond**
  - Total project cost US$ +/- 500 million funded by combination of ECA Financing, Investment Loan and Bond.
  - ANTAM will issue up to Rp 4 T Bond where Rp 3 T (or equivalent with +/- US$ 323 million) of the Bond will be used to finance MOP PP Project, while the rest of project cost or +/- US$ 177 million will be funded by ECA Financing and or Investment Loan
Indonesia Mining Industry:

OPPORTUNITIES AND CHALLENGES
OPPORTUNITIES AND CHALLENGES

Mineral dan coal potency

MINERAL POTENCY

- Ferro and Associates, a.l.: Nickel, Iron, Nickel, Cobalt, Mangaan, Chromit
- Precious Metal, a.l.: Gold, Silver and Platina
- Base Metal, a.l.: Nickel, Copper, Tin, reciprocal
- Rare metal, a.l.: Bauxite, Monazite

COAL POTENCY

- Very High (anthrasit) (> 7.100 cal/gr)
- High (Bituminus) (6.100 - 7.100 cal/gr)
- Medium (Sub Bituminus) (5100 - 6100 cal/gr)
- Low (Lignite) (< 5.100 cal/gr)

*) Including 41 billion tons U/G

RESOURCES
161.34 Billion Ton *

RESERVES
28.17 Billion Ton

OPPORTUNITIES AND CHALLENGES

Challenge & opportunity to regulation

1. To build domestic metals processing and refining due to Law of the Republic of Indonesia No. 4 Year 2009

   - Export of Ore May Continue Under Specific Terms and Conditions
     - Clear and Clean (C&C) Status on Its Mining Permits
     - No outstanding financial obligation to the state
     - Signing the Integrity Pact
     - Export tax burden
     - Mineral export quota

   - Minimum Requirement of Metals Processing and Refining
     - Ni Matte > 70% Ni
     - FeNi (saprolite) > 20% Ni
     - FeNi (limonite/blended) > 10% Ni
     - NPI > 6% Ni
     - SGA > 99% Al2O3
     - CGA > 99% Al2O3
     - CGA > 99% Al(OH)3
     - Al > 99%

   The regulation requires mining companies to obtain the necessary approvals to continue to export ore until 2014

2. Considering the competitiveness of national industries and strategic value of certain pioneer industries, the Ministry of Finance (MOF) Government of Indonesia (GoI) may grant a tax holiday facilities

   - This income tax exemption or reduction for pioneer investment regulation No. 130/PMK.011/2011 dated 15 August 2011 gives opportunity to ore processing industry to get exemption from corporate income tax for a period start from 5 years

3. PERATURAN PEMERINTAH (PP)/GOVERNMENT REGULATION No. 9/2012 sets royalty (non-tax charge) on processed products such as aluminum, alumina & FeNi

4. UU No. 32/2009 REGARDING ENVIRONMENTAL PROTECTION AND MANAGEMENT

   RPP OF WASTE THAT WILL REVISE PERATURAN PEMERINTAH No. 74/2001 REGARDING HAZARDOUS AND TOXIC MATERIAL (B3) MANAGEMENT and PP No. 18 JO 85/1999 REGARDING B3 WASTE MANAGEMENT

   - Enclose Amdal and UKL/UPL
   - Certified Amdal and Licensed Amdal Committee
   - Environmental Risk Analysis
   - Periodic Environmental Audit
   - Criminal offence and fine for violation
   - Tighter B3 Waste Category
Supreme Court Decision on Permen No. 7/2012

Supreme Court (MA) decision on judicial review filed by the Association of Nickel Indonesia (ANI) on 12 April 2012, MA granted in part the petition article ANI. The decision revoked

- **ARTICLE 8 SECTION (3),**
  - “Cooperation plan for processing and/or refining/smelting as referred to in Article 8 section (2) may only be implemented after obtaining approval from the Director General on behalf of the Minister”

  Article 8 section (2): “The cooperation for processing and/or refining/smelting as referred to in section (1) can be: a. sale and purchase of ore or concentrate; b. services for processing and/or refining/smelting; or c. joint development of facilities for processing and/or refining/smelting”

  Article 8 section (1): “In the event that the holders of IUP Production Operation and IUPK Production Operation as intended by Article 7, due to economical reason, may not conduct their own processing and refining/smelting of mineral, they may conduct the cooperation for processing and/or refining/smelting with other parties who hold: a. IUP Production Operation; b. IUPK Production Operation; or c. IUP Production Operation specifically for processing and refining/smelting.”

- **ARTICLE 9 SECTION (3)**
  - “The partnership as referred to in Article 9 section (1) may only be implemented after obtaining approval from the Director General on behalf of the Minister”

  Article 9 section (1): “The holders of IUP Production Operation and IUPK Production as intended by Article 7 may conduct a partnership with other entities to build the facilities for processing and/or refining/smelting”

- **ARTICLE 10 SECTION (1),**
  - “Based on the feasibility studies, the holders of IUP Exploration and IUPK Exploration who cannot do their own processing and refining/smelting due to economical reason and/or cannot conduct the cooperation or partnerships as referred to in Article 8 and Article 9, shall consult with the Director General to implement this Minister Regulation”

- **ARTICLE 21**
  - “Upon effectiveness of this regulation, the holders of IUP Production Operation and IPR issued before the operation of this Regulation of the Minister are prohibited from selling ore (raw material or ore) abroad within 3 (three) months of the operation of this Regulation of the Minister”

**OPPORTUNITIES AND CHALLENGES**

DITJEN MINERBA ARE NO LONGER AUTHORIZED TO REGULATE THE EXPORT QUOTA

CREATES AN OPPORTUNITY FOR MINING COMPANIES TO SUE DITJEN MINERBA FOR THEIR LOSSES

GOVERNMENT ENSURES SUPPORT TO CONTINUE DOWNSTREAM MINING PROGRAM
Opportunities & challenges & to develop new business

4.
- Lack of infrastructures, particularly in regions other than Java island.
- Scarcity of human resources, especially in the professional and expert level.
- De-centralization of authority due to sovereignty (autonomous) of regional Governments.
- Based on current publications (July 2011-Jan 2012), issues raised up regarding to the Indonesian Mining Industries can be categorized into 8 segment, such as Production (21%), License Overallap (20%), Environmental (18%), Contract Renegotiation (15%), State Income (10%), labour (8%), Divestment (4%) and Mining Licenses (4%).

ONE CONCEPT OF MINING BUSINESS LICENSE SYSTEM
- An integrated approach involving central and local governments as well as local parliament in issuing license
- Avoid overlapping mining license
- Specific penalties, both financial and criminal, for any authorities that do not follow the law
- Higher degree of certainty for ANTAM’s mining licenses

SPECIAL MINING AREAS
- The government will set a special State Reserves Area (SRA)
- State owned enterprise (SOE) and local government owned enterprises are given priorities to develop the SRA
- Additional output and product diversification given ANTAM’s status as SOE
- Potential increasing exploration properties for ANTAM

OBLIGATION FOR DOMESTIC ORE PROCESSING
- Mining licenses holders have to process and refine the minerals domestically
- Enhanced performance profile as ANTAM can take advantage in processing minerals from other mining license holders as well as reserves conservation
- Potential risk in revenue loss from ore sales
INSTRUKSI PRESIDEN No. 41 YEAR 2004 REGARDING LICENSE OR AGREEMENT OF MINING AREA INSIDE THE FOREST

- Assign 13 (thirteen) permits or agreements in mining that has existed prior to the enactment of Law No. 41 Year 1999 on Forestry as stated in Appendix decree, to continue its activities in the forest until the end of the license.

ANTAM in KEPPRES No.41/2004 granted permission to continue mining activities in the area of protected forest, but in INPRES No. 10/2011, ANTAM mining permits were included in Peta Indikatif Penundaan Izin Baru.

INSTRUKSI PRESIDEN (INPRES) NO. 10 TAHUN 2011 REGARDING NEW LICENSE GRANT POSTPONEMENT AND IMPROVEMENT OF NATURAL FOREST GOVERNANCE OF PRIMARY AND LAND PEAT

- Delay granting new permits in primary natural forest and peatland inside conservation forest, protected forest, production forest and other used areas that are set out in Peta Indikatif Penundaan Izin Baru

Showstopper in ANTAM mining activities and operations

The obligation to Clear and Clean (CnC) based on UU No. 4/2009 dan PP No. 23/2010

For companies that have announced CnC, the CERTIFICATE CnC can be obtained by fulfil following condition:
1) Administrative Aspects
2) Technical Aspects
3) Financial Aspects

Within 30 days after the CnC announcement, it shall:

- Stages of Exploration:
  - Submit proof of deposit of dues remained until last year
- Stages of Production Operations:
  - Convey the approval of UKL, UPL / EIA
  - Submit a report complete exploration and feasibility study
  - Submit proof of deposit of fixed fees and production fees (royalties) until last year.

- Other issues
  - Bureaucracy
  - Overlapping with palm oil and or overlapping permit itself
  - Building permit (Izin Mendirikan Bangungan–IMB)

Documentation related to the licensing and administration of documents should be more integrated.
Foreign loan

- KEPUTUSAN PRESIDEN REPUBLIK INDONESIA (KEPPRES)/PRESIDENTIAL DECREE NO. 59 / 1972 REGARDING FOREIGN LOAN
  - (Article 3 dan 4(1) KEPPRES No. 59 / 1972 revoked in KEPPRES No. 24 / 1998)
- KEPPRES NO. 39 / 1991 REGARDING COMMERCIAL FOREIGN LOAN MANAGEMENT COORDINATION
- PP NOMOR 10 / 2011 REGARDING PROCEDURES FOR FOREIGN LOANS AND GRANTS

Coordination for all commercial foreign loans which is
- Not include in the responsible framework of Intergovernmental Group on Indonesia (IGGI) / Consultative Group on Indonesia (CGI) and other official loans required by the Government,
- State Owned Enterprises (including State Bank and Pertamina); and
- Private Owned Enterprises (including banks and non-bank financial institutions ) is conducted by “Tim PKLN”

Tim PKLN is headed by the Coordinating Minister for Economic Affairs involving other Ministry and Bank Indonesia

“Will be misleading if the government handling private law, such as arrange SOE foreign loans which is should have a permit from Tim PKLN headed by Coordinating Minister of Economy. Though commercial loan is the business of the corporation, ”

“Obviously that legal product was inappropriate. Many laws are involving government into private law. It is also improper, but has become the law”

- Herman Hidayat • Law Bureau Head in Ministry of SOE Bulletin Edition 58/ Year VI Date 29 Februari 2012-
Lack of domestic technology innovation

- The role of technology is essential in the production of the world's mining operations. In addition to lower production costs, the technology can increase the value of the Company's mineral reserves.
- Enormous budgets for mining technology research and the slow technology to be obstacles to innovation in mining

<table>
<thead>
<tr>
<th>PERUSAHAAN</th>
<th>R&amp;D HIGHLIGHTS</th>
</tr>
</thead>
</table>
| ALCOA      | • R & D is focused on the Alcoa Technical Center in Pittsburgh, Pennsylvania, USA which is the largest light metals research center in the world  
• Alcoa developed the Global Innovation Network which is an R & D collaboration with leading universities (Moscow State University, St. Petersburg State Mining Institute), research institutes (India's Council of Scientific and Industrial Research-CSIR), etc. |
| VALE       | • Single global model for R & D activities in which the function of mineral exploration and development cycle of integrated technology to accelerate the discovery of new mineral. Technology development activity centered in Mineral Development Center (CDM), Minas Gerais, Brazil while exploration activities focused in five regional locations  
• Focus in Ni, Vale has integrated R & D center, Vale Technological Center (VTC, ex-Inco) in Ontario, Canada  
• Vale also has the Vale Technological Institute (ITV) in Brazil, a non-profit research and graduate education aimed at supporting R & D companies, especially in the field of mining and sustainable development.  
• Activities in the CDM, ITV, and VTC done in conjunction with international research institutions and universities to enhance their access to the latest technological developments |
| Antam      | • Antam has a unit that serves to conduct research and technology development.  
• This unit is under the Directorate of Development.  
• Some of the research conducted to support the development of the mining business into downstream |
TOWARDS INDONESIA ECONOMIC DEVELOPMENT ACCELERATION AND EXPANSION

Downstream Mining Industry:
Mutual beneficial relationship

Wishes for the success of state-owned enterprises (SOE) and private company with the government to promote the establishment of high economic growth, balanced, equitable and sustainable so that the positive effects of economic development of Indonesia can be felt by the entire community around the archipelago,

Downstream mining industry toward economic development across Indonesia that create a solid economic independence and economic competitiveness should be supported from many aspects:

INTEGRATED COOPERATION BETWEEN SOE + PRIVATE COMPANY AND LOCAL AUTHORITY
- Good mining practice, reclamation and post mining
  - Corporate social responsibility program
    - Local employment
    - Local content

INTEGRATED “ONE ROOF SERVICES” PERMIT ARRANGEMENT
- IUP/Mining Licenses
- Forestry Permit
- Port Permit
- and other permit

MINERAL AND COAL FOR PEOPLE WELFARE AND INDONESIA ECONOMIC DEV’T

HEALTHY AND PROFITABLE INVESTMENT ENVIRONMENT
- Royalty Policy
- Tax Holiday

MINING TECHNOLOGY DEVELOPMENT COLLABORATION
- Industry
- Government of Indonesia
- International Research Center/Engineering Design Consultant
- Academic/University
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THANK YOU

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