World Class Peruvian Mining Operation
Antamina – Project History

- Initial exploration by Cerro de Pasco (1953 - 1970)
- Subsequent exploration by EME Rumania (1973 - 1981)
- Privatization auction won by Inmet and Rio Algom July 1996
- Compañía Minera Antamina S.A. formed September 1996
- Inmet sold its 50% share to Noranda and Teck in July 1998
  - Noranda also purchased an additional 12.5% interest from Rio Algom
  - Resulted in an ownership structure of Rio Algom (37.5%), Noranda (37.5%) and Teck (25%)
- Mitsubishi Corporation purchased a 10% share in March 1999
  - Resulted in current ownership structure of BHP (33.75%), Glencore (33.75%), Teck (22.5%) and Mitsubishi (10%)
- First concentrate production in May 2001
- Expansion project completed in 2012
- Established mine with 15 years of operating history
- 9th largest copper mine in the world, with 431kt copper in conc in 2016
- One of the lowest cost copper operations globally
- Wholly owned mining infrastructure, including the concentrate pipeline and port facilities

Notes
1. Based on Wood Mckenzie 2016 Q4
**Antamina At a Glance**

- Top global copper producer with by-product zinc, silver, moly and lead
  - 15 years of continuous operation
  - Reserves and resources officially support another 13 years (2029) of future operations.
- Largest miner in Peru, located in Ancash Region, 270km NE of Lima
- Concession sold by government in 1996, mining started in 2001
- Production of copper, zinc, and lead concentrates exported to customers via wholly owned pipeline and port

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**Copper, Zinc, and Silver Production (1)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Cu (kt)</th>
<th>Zn</th>
<th>Ag (Moz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>330</td>
<td>292</td>
<td>10</td>
</tr>
<tr>
<td>2008</td>
<td>344</td>
<td>348</td>
<td>11</td>
</tr>
<tr>
<td>2009</td>
<td>316</td>
<td>456</td>
<td>14</td>
</tr>
<tr>
<td>2010</td>
<td>301</td>
<td>386</td>
<td>13</td>
</tr>
<tr>
<td>2011</td>
<td>333</td>
<td>237</td>
<td>11</td>
</tr>
<tr>
<td>2012</td>
<td>447</td>
<td>219</td>
<td>12</td>
</tr>
<tr>
<td>2013</td>
<td>443</td>
<td>260</td>
<td>15</td>
</tr>
<tr>
<td>2014</td>
<td>345</td>
<td>211</td>
<td>12</td>
</tr>
<tr>
<td>2015</td>
<td>391</td>
<td>235</td>
<td>18</td>
</tr>
<tr>
<td>2016</td>
<td>431</td>
<td>198</td>
<td>20</td>
</tr>
</tbody>
</table>

Notes:
1. Copper, Zinc, and Silver in concentrate
Antamina currently holds a total of 167 concessions.
Evolution of Reserves and Resources

- Track Record of Reserves and Resource Replacement and Increased Mine Life
## Reserves and Resources

### As of December 31, 2016

<table>
<thead>
<tr>
<th></th>
<th>Mtonnes</th>
<th>Cu (%)</th>
<th>Zn (%)</th>
<th>Ag (g/t)</th>
<th>Mo (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proven Reserves</td>
<td>174</td>
<td>1.01</td>
<td>0.82</td>
<td>11.00</td>
<td>0.028</td>
</tr>
<tr>
<td>Probable Reserves</td>
<td>378</td>
<td>0.92</td>
<td>1.10</td>
<td>10.00</td>
<td>0.020</td>
</tr>
<tr>
<td><strong>Total Mineral Reserves</strong></td>
<td><strong>552</strong></td>
<td><strong>0.95</strong></td>
<td><strong>1.01</strong></td>
<td><strong>11.00</strong></td>
<td><strong>0.023</strong></td>
</tr>
<tr>
<td>Measured and Indicated Resources (1)</td>
<td>533</td>
<td>0.83</td>
<td>0.54</td>
<td>11.00</td>
<td>0.019</td>
</tr>
<tr>
<td><strong>Measured and Indicated Reserves and Resources</strong></td>
<td><strong>1,085</strong></td>
<td><strong>0.89</strong></td>
<td><strong>0.78</strong></td>
<td><strong>11.00</strong></td>
<td><strong>0.021</strong></td>
</tr>
<tr>
<td>Inferred Resources</td>
<td>1,247</td>
<td>0.88</td>
<td>0.62</td>
<td>10.00</td>
<td>0.018</td>
</tr>
</tbody>
</table>

### Note

1. Excluding reserves
Mineralization at Depth

- Apparent continuity of mineralization to 1,500m below the present topography
- Deep ore tends to be Cu-Mo with moderate Ag and Zn, low Bi
Production Process

- Open Pit
- Primary Crusher
- Concentrator Plant
- Concenrate Pipeline
- Concentrate Stockyard
- Tailings Dam
- Port
Antamina Operations – Mine

Equipment
- 7 P&H 4100 shovels
- 3 Hitachi EX5600 hydraulic shovels
- 29 CAT 793 C/D/F, 92 Komatsu 930E
- 10 Drills (3 49R, 5 49HR, 2 P&H320)

Material moved: 700–800, 230 Mt/yr

8 ore types reduced to:
- Cu, Cu/Zn & Bornite Ore
- Cu grade ~0.7–1.1%
- Zn grade ~1.5%–2.5%
- Process Cu, Cu/Zn and bornite ores
- 2 SAG mills and 4 ball mills, with sequential flotation of bulk Cu and Zn concs
- Bulk Cu concentrate is further treated to produce a Mo conc or Pb/Bi conc

**Products:**
- Cu and Zn concs
- Moly and Pb/Bi
- Ag as by-product
- Cu and Zn concs by pipeline to port
- Mo and Pb/Bi concs bagged & transported by road
Antamina Operations – Pipeline & Port

- 302 km pipeline for concentrate
- Storage for dewatered concentrate
- Ship loader
- 28 m docking depth & 50,000 t ship capacity
- Water treatment produces clean water for forest project implemented by Antamina in 2001
Forestation Area – 174 hectares

Water Disposal (Evapo-Transpiration)
Health and Safety Record

Consistently Improving Health and Safety Records

<table>
<thead>
<tr>
<th>Year</th>
<th>Improvement of the health and safety system</th>
<th>OHSAS 18001 Certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3.30</td>
<td>1.38</td>
</tr>
<tr>
<td>2008</td>
<td>3.40</td>
<td>1.19</td>
</tr>
<tr>
<td>2009</td>
<td>2.85</td>
<td>0.92</td>
</tr>
<tr>
<td>2010</td>
<td>2.59</td>
<td>0.81</td>
</tr>
<tr>
<td>2011</td>
<td>1.71</td>
<td>0.22</td>
</tr>
<tr>
<td>2012</td>
<td>1.86</td>
<td>0.56</td>
</tr>
<tr>
<td>2013</td>
<td>1.69</td>
<td>0.95</td>
</tr>
<tr>
<td>2014</td>
<td>2.53</td>
<td>1.09</td>
</tr>
<tr>
<td>2015</td>
<td>1.60</td>
<td>0.00</td>
</tr>
<tr>
<td>2016</td>
<td>1.90</td>
<td>0.63</td>
</tr>
</tbody>
</table>

Based on 1,000,000 man hours

Health & Safety Focus

- Visible leadership & behavioral safety
- Safety meetings, job observations & procedural reviews
- Extensive Transport safety programs

Note
1. 2016 based on October YTD.
Leading Risk Management Practices

- Allocation of substantial time and resources to have best in class Risk Management Practices
- Systematic approach to Risk Management called SIGRA (Sistema Integral de Gestión de Riesgos de Antamina)
- Transparent Risk Management policy with strong organizational support
  - Clearly defined lines of accountability
- Streamlined Risk Management process
  - Risk Identification
  - Risk Analysis – Causes, Impact, Control and Risk Classification
  - Evaluation – Importance & Tolerance and Steps to Improve
  - Monitoring

Strong Labor Relations

- 50-55% of workforce unionized
Water Management

- Genuine commitment to the responsible use of water resources
- Tailings Dam
  - Ensures the proper disposal of tailings resulting from the productive process
- Water Monitoring
  - Achieving 100% compliance with water quality standards
- Water Consumption
  - Antamina holds two water use licenses (underground and surface water) for its operational activities
Antamina’s CSR Vision

Create the Necessary Conditions for Growth of Antamina and its Neighbourhoods

- Manage perception regarding environmental care & management
- Manage agreements
- Requirements for the operation and growth
- Coexistence with local communities
- Value the cultural identity

Social License / Risk Management

Contribution to improve quality of life

- Investments for the area of influence
- Develop management and leadership skills in communities
- Broaden the local economy
- Generate alliances
- Generate active environment

Open Communication with All Stakeholders

- Multi-Stakeholder Socio-Environmental Model
  - Mechanism of concerted, collaborative and synergistic development plans between government, communities and Antamina.
- Our stakeholders will view Antamina as a partner vs. a provider
- Peaceful coexistence with our neighbours
Achievements: An Important Member of the Community

Public Works for Taxes
- Ticlios Health Center
- Kawish-Succha road Access
- Guinea-Pig Reproduction Center
- Palmira Health Center
- Sheep Genetic Improvement -LATE
- Elementary school infrastructure
- Secondary school infrastructure
- Elementary school infrastructure

Sustainable Development Projects

Public Works for Taxes

Elementary school infrastructure
Antamina recognized for third consecutive year in 2016 with the MERCO Talent Award. Among the top 10 Peruvian companies in the category Retention and Attraction of Talent and leads the Mining sector.

Antamina ranked fourth in the most attractive company to work in Peru, according to the survey Employee Brand 2016 by Laborum and Apoyo Communications. For fourth consecutive year, it ranks as the best company in the mining sector.

Top Ten Most Admired Peruvian Companies 2013-2014 (Pricewaterhouse Coopers y G de Gestion)

2014 National Quality Award granted to Antamina by the Quality Management Committee
Awards and Recognition (2/2)

Sustainability and Social Responsibility Acknowledgments

- The Local Management Strengthening Project - FOGEL wins the "Sustainable Development 2016" competition, awarded by the National Society of Mining and Petroleum - SNMPE, in the category "Management of Local Development".

- Perú 2021 NGO - Award for CSR and Sustainable Business Development Project: “Roundtables for Development”. 2nd Place 2013

- IPAE Luis Hochchild Plaut Award 2013 "Promotion of Peruvian Arts and Culture" Archaeological Research and Conservation of Site of Chavin Project
Thank You and Welcome