Chile: An attractive mining district
Year 2013

**SHARE IN GLOBAL PRODUCTION**

- **Copper**
  - Chile: 32%
  - Others: 68%
  - Global Ranking: 1

- **Molybdenum**
  - Chile: 15%
  - Others: 85%
  - Global Ranking: 3

- **Natural Nitrates**
  - Chile: 100%
  - Global Ranking: 1

- **Lithium Carbonate**
  - Chile: 39%
  - Others: 61%
  - Global Ranking: 1

**SHARE IN GLOBAL RESERVES**

- **Copper**
  - Chile: 28%
  - Others: 72%

- **Molybdenum**
  - Chile: 21%
  - Others: 79%

- **Natural Nitrates**
  - Chile: 100%

- **Lithium Carbonate**
  - Chile: 42%
  - Others: 58%

Source: Cochilco, Codelco, USGS.
Codelco has a great future

CODELCO: WORLD LEADER IN COPPER RESERVES

Leadership in copper reserves

- **Codelco**: 9%
- **Chile**: 19%
- **Australia**: 13%
- **Peru**: 10%
- **USA**: 6%
- **Mexico**: 6%
- **Russia**: 4%
- **China**: 4%
- **Others**: 29%

Estimated mineral resources

<table>
<thead>
<tr>
<th>Mineral (million tonnes)</th>
<th>Copper grade (%)</th>
<th>Copper content (million tonnes)</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chuquicamata</td>
<td>2,147</td>
<td>0.70</td>
<td>15.1</td>
</tr>
<tr>
<td>Radomiro Tomic</td>
<td>3,671</td>
<td>0.46</td>
<td>16.8</td>
</tr>
<tr>
<td>MH</td>
<td>936</td>
<td>0.95</td>
<td>8.9</td>
</tr>
<tr>
<td>Salvador</td>
<td>1,678</td>
<td>0.46</td>
<td>7.7</td>
</tr>
<tr>
<td>Andina</td>
<td>6,017</td>
<td>0.75</td>
<td>45.1</td>
</tr>
<tr>
<td>El Teniente</td>
<td>4,195</td>
<td>0.83</td>
<td>34.8</td>
</tr>
<tr>
<td>Gabriela Mistral</td>
<td>491</td>
<td>0.36</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Codelco</strong></td>
<td>19,136</td>
<td>0.68</td>
<td>130.2</td>
</tr>
</tbody>
</table>

* Our mineral resources let us expect more than 70 years of exploitation

*: Mineral resources include mineral stocks and broken material.

Although, copper prices has shown a downward trend since 2011...

Copper Price c/lb

Copper Price

Stocks in Metal Exchanges **

‘000 tonnes

* Year 2014: copper price and stocks until November 19th. **: LME, COMEX and SHFE.
Price prospects remain auspicious in the long-term
Long-term copper price forecasts, c/lb, 2015 currency

Correlation between spot and long term forecast: 0.67

*Note: Structural Budget price is the average in the next ten years after the year of forecast.*
Despite the trend towards more discipline in capital use and delays in projects, important investments are projected in the coming years.

**EXPECTED INVESTMENT IN COPPER PROJECTS* WITH STARTUP DURING THE PERIOD 2014-2023**

- **Total Latin America: US$ 165 billion**
- **Total Rest of the World: US$ 127 billion**

**WORLD TOTAL: US$ 292 billion**

Despite the trend towards more discipline in capital use and delays in projects, important investments are projected in the coming years.

Total Latin America: US$ 165 billion

- Chile: US$ 44 billion
- Peru: US$ 20 billion
- Canada: US$ 29 billion
- USA: US$ 24 billion
- Philippines: US$ 16 billion
- Mexico: US$ 14 billion
- Panama: US$ 12 billion
- PN Guinea: US$ 12 billion
- Argentina: US$ 11 billion
- Mongolia: US$ 11 billion
- Indonesia: US$ 8 billion
- Russia: US$ 8 billion
- Australia: US$ 7 billion
- Rest of Latin America: US$ 7 billion
- Rest of the World: US$ 11 billion

Total Rest of the World: US$ 127 billion

**SOURCES:** Codelco and Wood Mackenzie (September 2014).

*: Includes CAPEX of projects under construction, highly probable, probable and possible.
### Major copper projects in Chile* with startup between 2014 and 2023 (without Codelco)

<table>
<thead>
<tr>
<th>Name</th>
<th>Owner</th>
<th>Status</th>
<th>Startup year</th>
<th>Production '000 tonnes</th>
<th>Investment US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caserones</td>
<td>Pan Pacific Copper</td>
<td>On commissioning</td>
<td>2014</td>
<td>174</td>
<td>4,080</td>
</tr>
<tr>
<td>Sierra Gorda</td>
<td>KGHM</td>
<td>On commissioning</td>
<td>2014</td>
<td>190</td>
<td>4,240</td>
</tr>
<tr>
<td>Antucoya</td>
<td>Antofagasta</td>
<td>Under construction</td>
<td>2015</td>
<td>76</td>
<td>1,900</td>
</tr>
<tr>
<td>Escondida OGP1 (Organic Growth Project 1)</td>
<td>BHP Billiton/ Rio Tinto</td>
<td>Under construction</td>
<td>2015</td>
<td>107</td>
<td>4,199</td>
</tr>
<tr>
<td>Encuentro Oxides</td>
<td>Antofagasta</td>
<td>On feasibility</td>
<td>2016</td>
<td>45</td>
<td>760</td>
</tr>
<tr>
<td>Los Pelambres Expansion</td>
<td>Antofagasta</td>
<td>On prefeasibility</td>
<td>2020</td>
<td>95</td>
<td>7,000</td>
</tr>
<tr>
<td>Lomas Bayas Sulphides</td>
<td>Glencore</td>
<td>On prefeasibility</td>
<td>2020</td>
<td>97</td>
<td>1,600</td>
</tr>
<tr>
<td>El Morro</td>
<td>Goldcorp</td>
<td>On prefeasibility</td>
<td>2021</td>
<td>127</td>
<td>3,900***</td>
</tr>
<tr>
<td>Quebrada Blanca Hypogene</td>
<td>Teck Resources</td>
<td>On feasibility</td>
<td>2021</td>
<td>205</td>
<td>5,590</td>
</tr>
<tr>
<td>Santo Domingo Sur Iris</td>
<td>Capstone Mining</td>
<td>On feasibility</td>
<td>2021</td>
<td>87</td>
<td>1,700</td>
</tr>
<tr>
<td>El Abra Mill</td>
<td>Freeport</td>
<td>On feasibility</td>
<td>2022</td>
<td>198</td>
<td>5,000</td>
</tr>
<tr>
<td>Relincho</td>
<td>Teck Resources</td>
<td>On feasibility</td>
<td>2022</td>
<td>174</td>
<td>4,500</td>
</tr>
<tr>
<td>Collahuasi Phase 3</td>
<td>Anglo American/ Glencore</td>
<td>On prefeasibility</td>
<td>2023</td>
<td>294</td>
<td>6,500</td>
</tr>
</tbody>
</table>

**Sources:** Codelco, SNL and Wood Mackenzie (3rd quarter 2014), companies’ reports and press releases.
*The list includes highly probable and probable projects. Average production of copper content in the first 10 years operating at capacity. **: CAPEX according to companies’ reports or other sources. ***: Currently under revision, as the company withdrew its EIAs in November 7, 2014.
Codelco’s target: around 2.5 million tonnes of annual copper production by 2025

MINING STRUCTURAL PROJECTS

<table>
<thead>
<tr>
<th>Year</th>
<th>Project</th>
<th>Tons per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Ministro Hales</td>
<td>176,000 tpy</td>
</tr>
<tr>
<td>2018-2019</td>
<td>Radomiro Tomic</td>
<td>354,000 tpy</td>
</tr>
<tr>
<td>2019</td>
<td>Chuquicamata Underground</td>
<td>367,000 tpy</td>
</tr>
<tr>
<td>2019</td>
<td>El Teniente New Mine Level</td>
<td>432,000 tpy</td>
</tr>
<tr>
<td>2019</td>
<td>Salvador Inca Open Pit</td>
<td>196,000 tpy</td>
</tr>
<tr>
<td>2019</td>
<td>Andina Transfer</td>
<td>161,000 tpy</td>
</tr>
<tr>
<td>2023</td>
<td>Andina Expansion</td>
<td>343,000 tpy</td>
</tr>
</tbody>
</table>

Note: Projects production corresponds to the average of the first 10 years operating at design capacity.

Investment Program: history and future (PND* 2014)

Codelco faces an unprecedented investment challenge

* PND: Business and Development Plan.
Production contribution of all the Structural Projects, PND 2014 (under construction and pending approval)

Note: Ministro Hales project commissioned included in production of Codelco with and without Projects. PND: Business and Development Plan of Codelco (with projects)
Codelco: the challenge of maintaining production in the short and medium term, despite the sharp drop in ore grades

**COPPER PRODUCTION***

![Copper Production Graph]

**GRADE AND TREATED MINERAL**

![Grade and Treated Mineral Graph]

*: It doesn’t include Codelco’s stake in El Abra and Anglo American Sur.

**: Until year 2010, treated ore grade. From year 2010 to date, mined ore grade.
Projected production PND* 2014 and critical success factors

- Robust mine plans.
- Optimize the use of treatment capacity, reaching design capabilities.
- Increase concentrator recovery and smelter yield.
- Higher rates of operational continuity.
- Increased own and third parties productivity.
- Management alignment and leadership in the administration of assets and production processes.
- Commitment of employees and the entire organization.

*PND stands for Business and Development Plan.

**Note:** It doesn’t include Codelco’s stake in El Abra and Anglo American Sur.
### Business and Development Plan (PND): 2014-2018

**Investments (on cash base) and Financing**

<table>
<thead>
<tr>
<th>US$ million, currency of the year*</th>
<th>2014-2018</th>
<th>Annual average</th>
<th>Share %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total investment</strong></td>
<td>23,542</td>
<td>4,708</td>
<td></td>
</tr>
<tr>
<td>Projects</td>
<td>20,190</td>
<td>4,038</td>
<td>86%</td>
</tr>
<tr>
<td>Deferred expenditure (mines development)</td>
<td>2,789</td>
<td>558</td>
<td>12%</td>
</tr>
<tr>
<td>Contributions to societies</td>
<td>563</td>
<td>113</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td>23,542</td>
<td>4,708</td>
<td></td>
</tr>
<tr>
<td>Internal</td>
<td>14,116</td>
<td>2,823</td>
<td>60%</td>
</tr>
<tr>
<td>Net debt</td>
<td>5,426</td>
<td>1,085</td>
<td>23%</td>
</tr>
<tr>
<td>Capitalization</td>
<td>4,000</td>
<td>800</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Projects by objective</strong>**</td>
<td>20,190</td>
<td>4,038</td>
<td></td>
</tr>
<tr>
<td>Structural Projects</td>
<td>12,265</td>
<td>2,453</td>
<td>61%</td>
</tr>
<tr>
<td>Sustainability</td>
<td>2,735</td>
<td>547</td>
<td>14%</td>
</tr>
<tr>
<td>Development projects</td>
<td>2,712</td>
<td>542</td>
<td>13%</td>
</tr>
<tr>
<td>Equipment replacement and facilities repairs</td>
<td>1,403</td>
<td>281</td>
<td>7%</td>
</tr>
<tr>
<td>Information</td>
<td>1,075</td>
<td>215</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Structural Projects</strong></td>
<td>12,265</td>
<td>2,453</td>
<td></td>
</tr>
<tr>
<td>RT Sulphides Phase II</td>
<td>3,480</td>
<td>696</td>
<td>28%</td>
</tr>
<tr>
<td>Chuquicamata Underground</td>
<td>3,265</td>
<td>653</td>
<td>27%</td>
</tr>
<tr>
<td>El Teniente New Mine Level</td>
<td>2,881</td>
<td>576</td>
<td>23%</td>
</tr>
<tr>
<td>Transfer</td>
<td>975</td>
<td>195</td>
<td>8%</td>
</tr>
<tr>
<td>Andina Expansion</td>
<td>777</td>
<td>155</td>
<td>6%</td>
</tr>
<tr>
<td>Salvador Inca Open Pit</td>
<td>571</td>
<td>114</td>
<td>5%</td>
</tr>
<tr>
<td>Ministro Hales</td>
<td>317</td>
<td>63</td>
<td>3%</td>
</tr>
</tbody>
</table>

Codelco’s Investment: 2015
PRELIMINARY FIGURES*

INVESTMENTS BY DISTRICT

<table>
<thead>
<tr>
<th>District</th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>North District</td>
<td>1,707</td>
</tr>
<tr>
<td>Center South District</td>
<td>1,782</td>
</tr>
<tr>
<td><strong>Projects Investment</strong></td>
<td><strong>3,489</strong></td>
</tr>
</tbody>
</table>

PROJECTS INVESTMENT BY OBJECTIVES

<table>
<thead>
<tr>
<th>Objective</th>
<th>US$ million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural Projects</td>
<td>1,364</td>
</tr>
<tr>
<td>Sustainability</td>
<td>847</td>
</tr>
<tr>
<td>Other Development Projects</td>
<td>684</td>
</tr>
<tr>
<td>Engineering Studies, Geological Exploration and Research</td>
<td>362</td>
</tr>
<tr>
<td>Equipment Replacement and Facility Refurbishment</td>
<td>233</td>
</tr>
<tr>
<td><strong>Projects Investment</strong></td>
<td><strong>3,489</strong></td>
</tr>
</tbody>
</table>

*: 2015, preliminary budget.
Structural mining projects: major milestones 2014 - 2015

- **Chuquicamata Underground:**
  - Taking investment decision and start construction, beyond the early works.

- **El Teniente New Mine Level:**
  - Further progress in the development and construction of mining works.

- **RT Sulphides Phase II:**
  - Environmental approval.
  - Submit the First Stage of investment request.

- **Andina Expansion:**
  - Continue advancing for environmental approval in 2015.

- **Salvador Inca Open Pit:**
  - Completion of pre-feasibility study.

**Cross challenge:** detailed engineering of change in management models of the projects
The increase in costs has been a widespread trend in the industry

**INDUSTRY AVERAGE COSTS**

![Graph showing Industry Average Costs from 1985 to 2012]

**Source:** Wood Mackenzie and Codelco.
After several years, during 2013, Codelco broke the upward trend in costs standing at the second quartile cut of the industry cost.

Since 2013, Codelco is engaged in a systematic effort to increase productivity and reduce costs

Maximize copper production through:
- Identify opportunities that provide fine copper, other than those defined in budget
- Visibility and closing the gaps of bottlenecks
- Project of Breaks in Management

Promote initiatives to improve productivity:
- Project of Third Party Service Productivity (PPST)
- FTE and Productivity Measurement
- Relationship with APRIMIN, CCHC, AGEMA and Mining Council
- Management model based on KPI and Back Office (PGST)

Optimize budget management corporately:
- Salaries
- Energy, supplies, materials and equipment
- Energy efficiency
- Contracts, services and strategic supplies
- Third Party Services

Through savings on discretionary items, install a transverse message of cost containment, including:
- Vehicles
- Consultancies
- Service commissions
- Cellphones
Our challenge: to eradicate fatalities
Number of Fatalities and Rate, 2000 – 2014*

* Year 2014 up to November 7.
Environment and communities: PND 2014 goals and key success factors

**SERIOUS AND VERY SERIOUS ENVIRONMENTAL INCIDENTS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>More critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>92</td>
<td>55</td>
</tr>
<tr>
<td>2014</td>
<td>40</td>
<td>14</td>
</tr>
</tbody>
</table>

*: Year 2014 up to November 12.

**GOALS**

- Zero serious and very serious environmental incidents.
- Zero serious or very serious sanctions of Environment Superintendence.
- Zero community conflicts with impact on business continuity or in projects execution.
- Environmental and social approval of the Structural Projects.

**KEY SUCCESS FACTORS**

- Closing gaps associated with the most critical environmental vulnerabilities.
- Ensuring RCAs commitments.
- Environmental Risk System integrated to the operation.
- Application of standards and tools for community management: close linkage with more critical localities.
- Commitment of employees and the entire organization.
CHILE-JAPAN BUSINESS COMMITTEE

CHILEAN COPPER MINING AND CODELCO CHALLENGES

Nelson Pizarro C.
CEO

December 2\textsuperscript{nd}, 2014