

**Antamina**  
**two and a half years later...**



# Agenda

- Introduction
- Country Overview
- Operations Overview
- Environment, Health, Safety & Community
- Production

# Country Overview



# Economic Context

	2003A	2004F
• GDP Growth	4.0%	4.0%
• Inflation rate	2.5%	2.5%
• Exchange rate (end of period)	3.46	3.50
• % Devaluation (Appreciation)	-1.4%	0.0%
• Exports (US\$ Millions)	8,954	10,300
• Imports (US\$ Millions)	8,244	8,800
• Fiscal Deficit (% of GDP)	1.9%	1.6%

# Macroeconomic Situation

- Low and stable inflation interest rates.
- Stable exchange rate.
- Declining Country risk: 337 basis points
- Mining exports leading growth.
- Main concerns:
  - Government debt
  - Political turmoil
  - Unrest

# Fiscal Situation

- Higher spending, higher taxes to lower deficit.
- Non flexible public expenses
  - 86% of public spending on pensions, debt service and payroll
- Public debt:
  - 25% of public spending
  - 4.8% of GDP
- Government requires more revenue to remain solvent
  - ITF and other new taxes

# Privatization Process

- 2003 proceeds: \$13.3 million versus budget of \$500 million.
- Government re-launching privatization:
  - New head of ProInversion
  - Budgeted proceeds in 2004: \$400 million
  - Congress not aligned with Government's strategy to attract investment
  - Successful privatization of Yuncan hydroelectricity project.



# Economic Policy

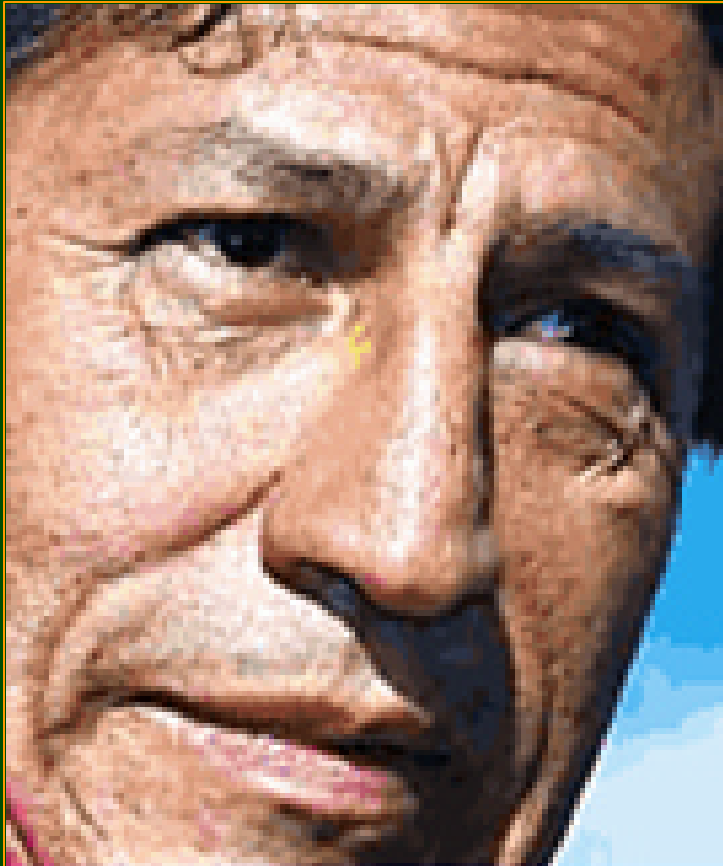
- Good external image:
  - “Peru is doing a lot in macroeconomics but needs more dynamism in microeconomics and labor issues” (The Economist, March 2004)
  - 63.4% of participants in the Annual Governors Assembly of BID considers that Peru have a positive image for investors
- Pro-market economic policy in the MEF:
  - Inability to fend off political pressures
  - Has imposed unwise taxes (ITF).
- Populism in the Congress:
  - Mining royalties
  - Changes in labor law



# Political Context

- Halfway through its mandate, the Government is still losing popularity:
- Opposition is leading the political debate.
- Congress, judiciary and new Regional Governments are also very unpopular.

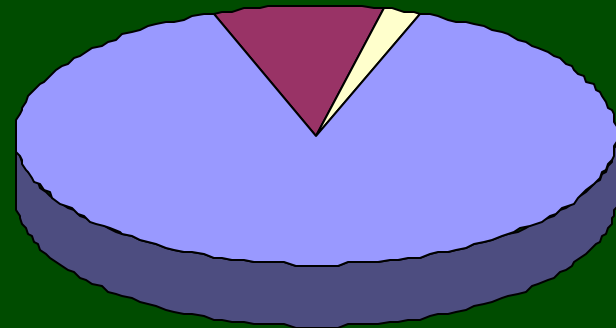
# President Toledo's Popularity



Do you approve or disapprove the manner in which President Alejandro Toledo manages the country's affairs?

**APPROVES**  
9%

**NO OPINION**  
2%



**DISAPPROVES**  
89%

Source: Apoyo S.A. April 2004

# Will Toledo Finish his Term?

- Economy: mostly under control.
- Demonstrations: not many in 2004, so far.
- Anti-system movement (Antauro Humala): not powerful.
- Opposition: at the moment, not keen to see the Government fall.
- Pro Fujimori movement: not powerful alone.
- Government corruption scandals: complicated and unpredictable.

# General Context for CMA

- Main concerns
  - Labor relations at a national level;
  - Difficulties maintaining constructive dialogue;
  - Very low Government approval ratings.

# CMA Response

- Remain neutral but engaged.
- Aggressive communications effort.
- Developing grass-roots support through community development programs.
- Well positioned to weather political storms.

# Operations Overview

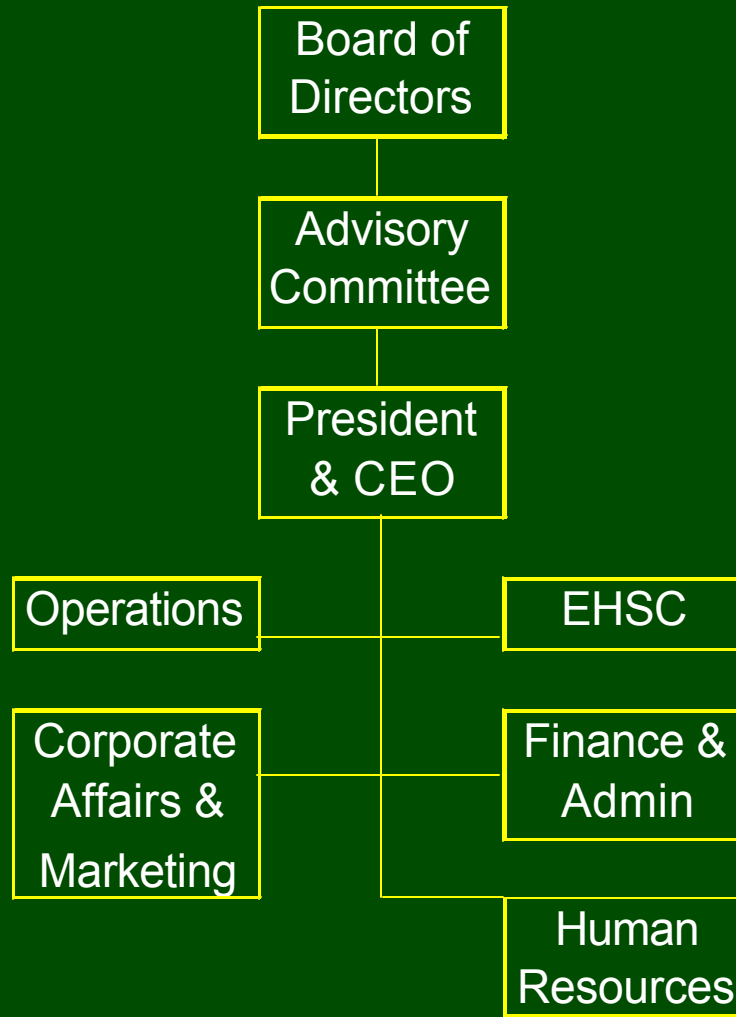


# Ownership

	<u>%</u>
BHP Billiton	33.75
Noranda Inc.	33.75
Teck Cominco Limited	22.50
Mitsubishi Corporation	10.00
	<u>100.00</u>



# Organization



# Initial Investment

## (December 31, 2001)

Mining equipment and preproduction stripping	286
Concentrator and ancillary facilities	771
Concentrate pipeline	128
Port	108
Infrastructure (road, camp, power)	128
Other Owners Costs	340
	<u>1,761</u>
Acquisition, Land, Exploration, Feasibility	204
Financing and working capital	264
	<u><u>2,229</u></u>



# CMA's area of influence



- Mine: Eastern range of the Andes, between 4,200 y 4,700 masl.
- Port: Near Huarmey.

# Infrastructure

- Access Road:
  - 120 km from Laguna Conococha to mine site.
  - Upgraded 44 km of existing road.
  - Built 76 km of new road in very challenging conditions.
- Power:
  - Switching station and 58 km, 220 kV power line to supply 120 MW to mine site.
  - 5.5 km, 66 kV power line to supply 3 MW to port.

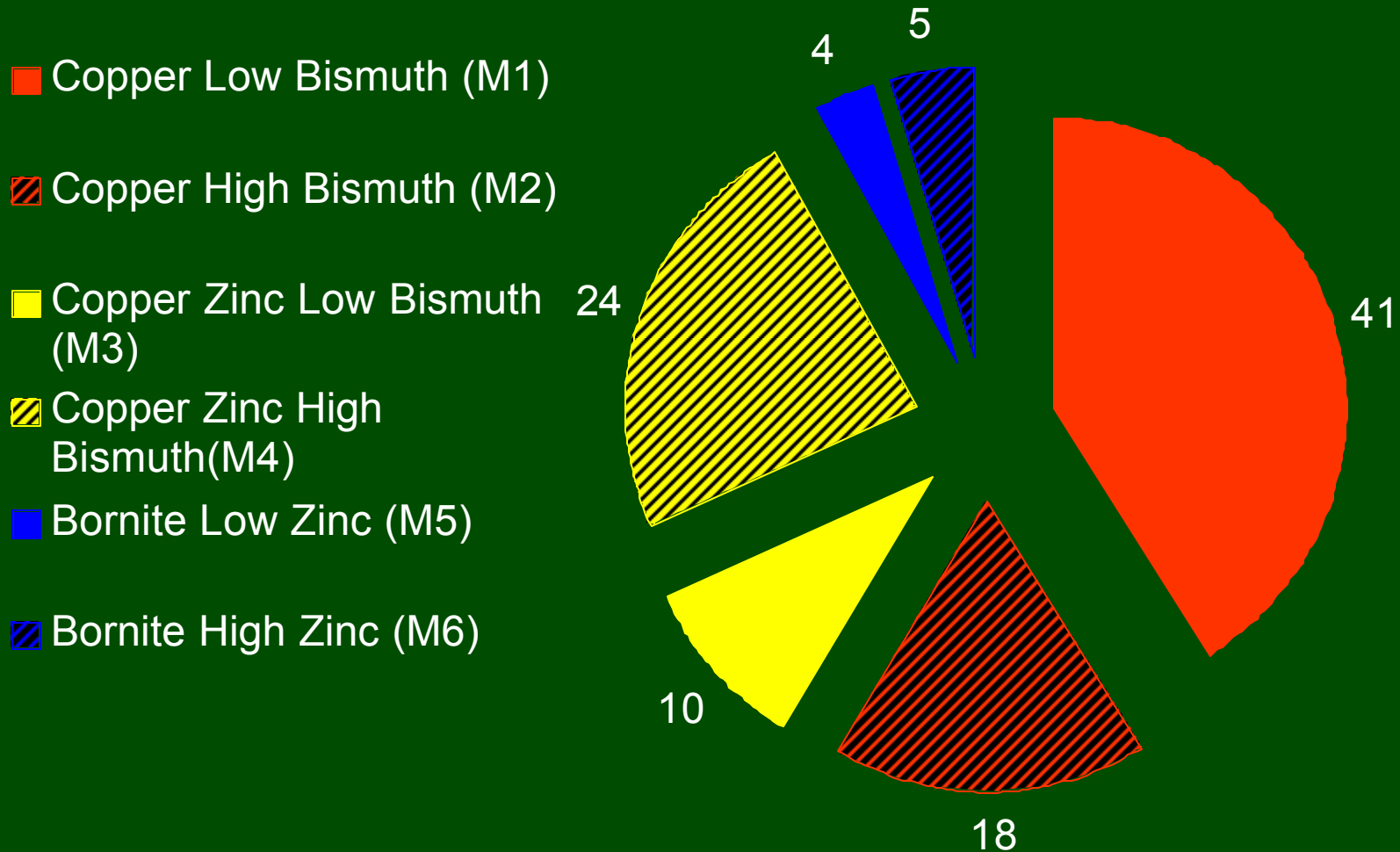
# Reserves & Resources

December 31, 2003

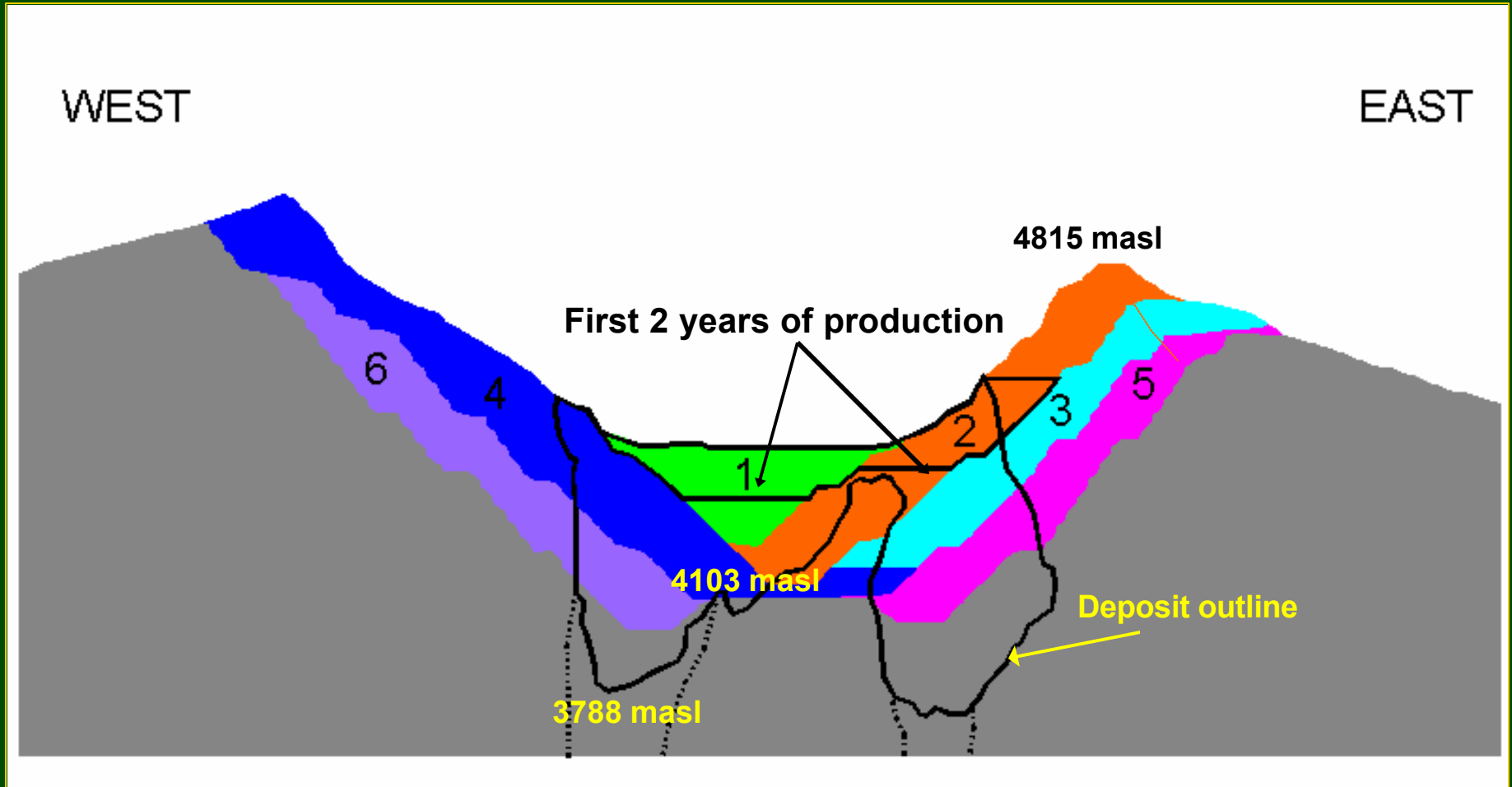
	Million Tonnes	Cu %	Zn %	Ag g/t	Mo %
Mineral reserve estimate					
Proven	275	1.27	1.01	14.1	0.03
Probable	226	1.17	0.90	13.2	0.03
Total	501	1.22	0.96	13.7	0.03
Mineral resource estimate <sup>1</sup>					
Measured	28	0.50	0.20	4.9	0.03
Indicated	31	0.47	0.27	5.9	0.03
Total	58	0.48	0.24	5.5	0.03
Inferred resource <sup>1</sup>	28	0.79	0.99	13.0	0.02

1. Does not include any material stated as reserves.

# Ore Reserves by Ore Type



# Mining Phases





# Major Mining Equipment

Bucyrus 49R Drill 5

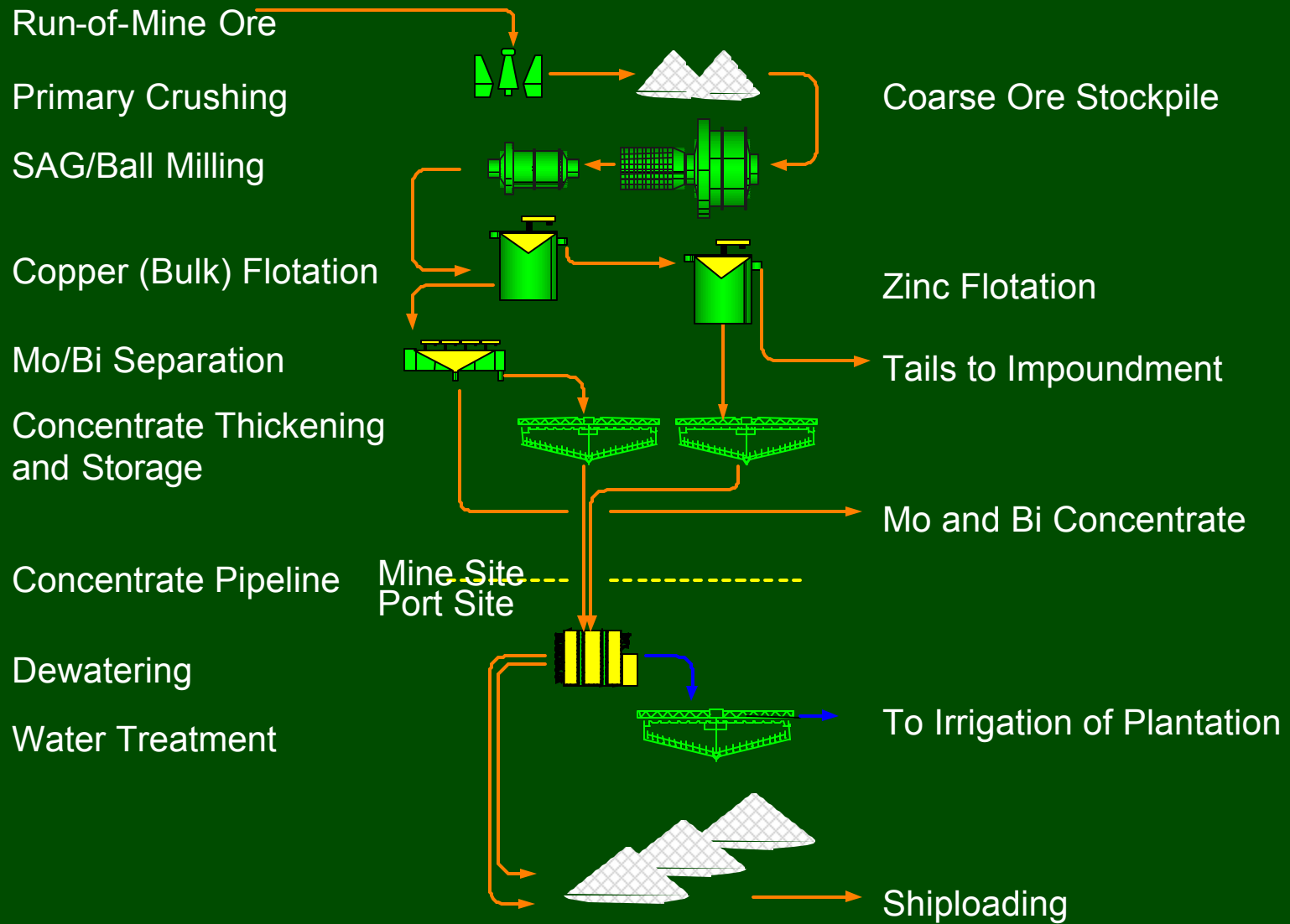
Bucyrus 495 B Shovel 4

Cat 994 Loader 3

Cat 793 Haul Truck 43



# Process Overview



# Primary Crusher & Stockpiles



# Crushing

- Single 60” by 89” gyratory crusher.
- Crushed ore conveyed through 2.7 km tunnel.
- Radial stacker loads twin stockpiles each with 50,000 dmt live capacity.
- Three feeders under each stockpile.

# Concentrator

- Single 11.6 m by 6.4 m SAG mill.
- Three 7.3 m by 11.0 m ball mills.
- All mills variable speed direct drive.
- Copper flotation circuit.
- Zinc flotation circuit.
- Bismuth/moly cleaning circuit.

# Concentrate Pipeline

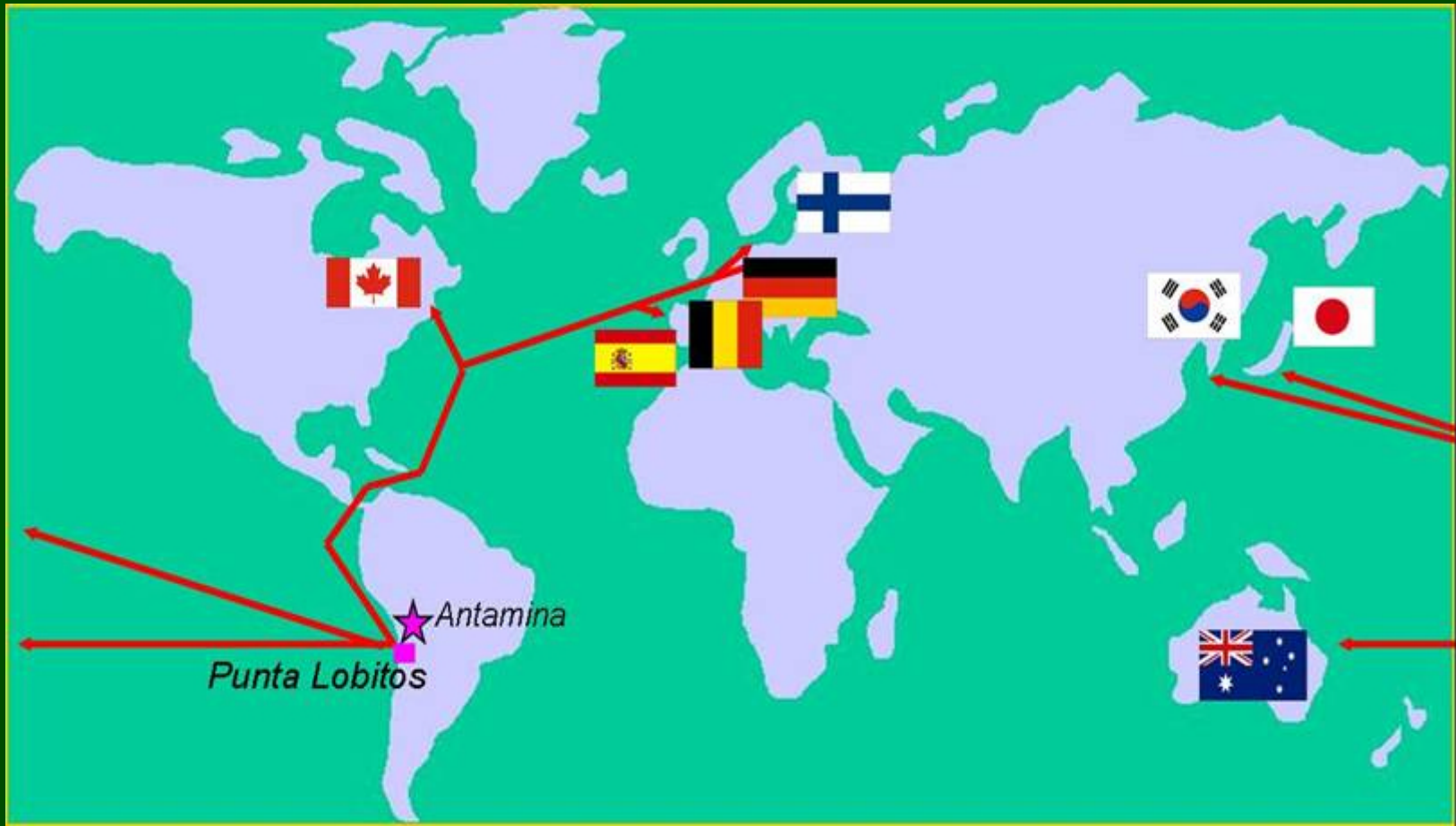
- 302 km from concentrator to filter plant.
- 10" to 8" diameter pipe.
- Single pump station at the mine site.
- 4 valve stations
- Zero problems with multiple concentrates.
- Design throughput: 1.8 million dmt/year.

# Port Facilities

- Concentrate slurry storage tanks.
- Filter plant with four pressure filters
- Concentrate storage shed:
  - Capacity: 180,000 wmt of a single product, lower with multiple products.
- Pier and ship loader.
- Water treatment facility and tree plantation.



# Customers



# Customers

- 75% of production is sold under long term contract.
  - 12 high-quality customers in 9 countries.
  - Japan, Korea, Canada, Sweden, Finland, Germany, Belgium, Australia, Bulgaria.
- Balance of output is sold under spot and short term contracts to smelters and traders:
  - Chile, Peru, China, Germany.

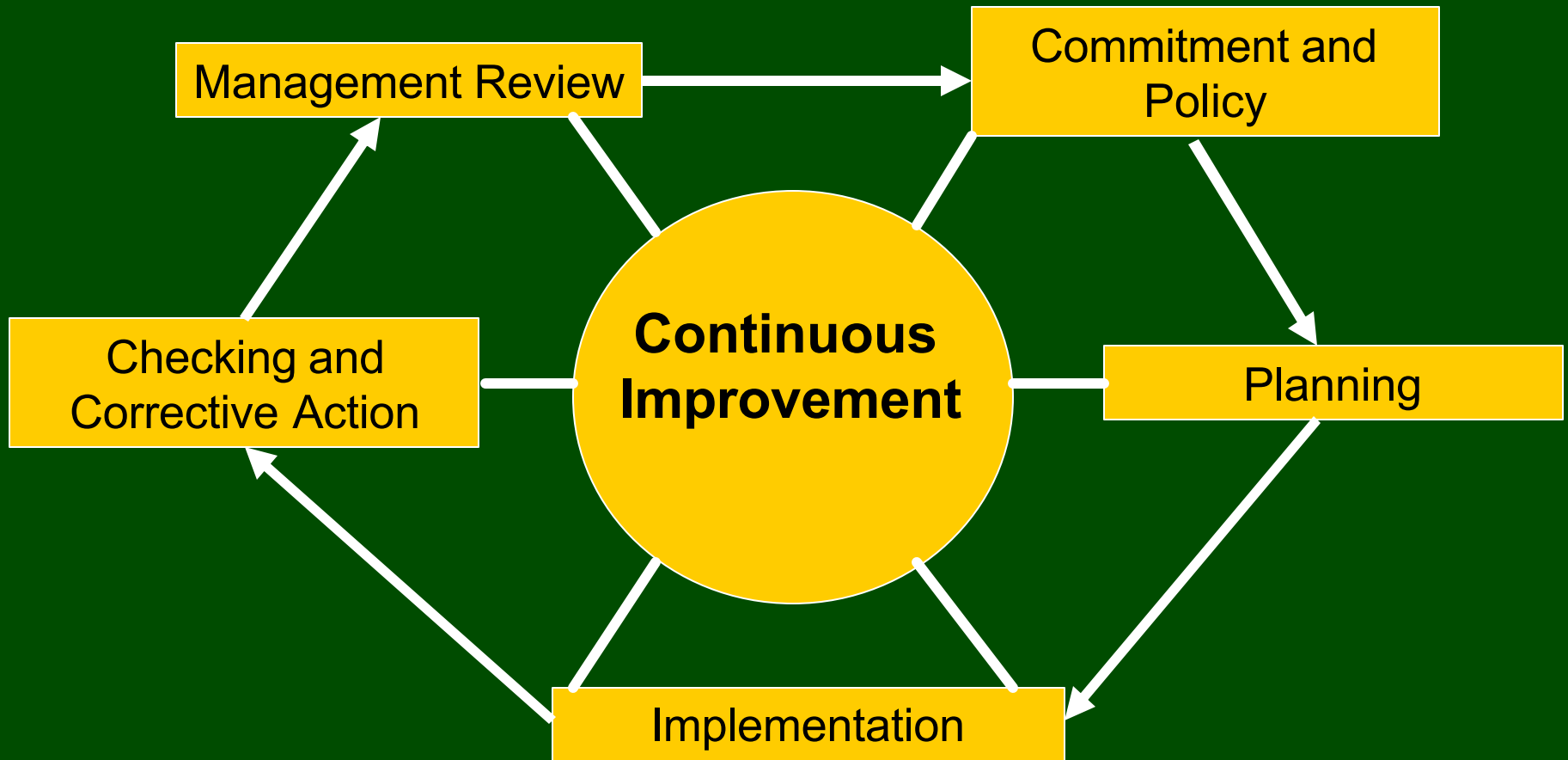
# Human Resources

National Labour	940
National Staff	403
Expatriate	28
Trainees and Temporary	70
	<hr/>
	1,441
	<hr/> <hr/>

# Environment, Health, Safety & Community



# EHS Management System



# EHS Audit Program

- Internal Inspections and Audits.
- Shareholder Audits.
- Lender Oversight
  - World Bank EH&S Guidelines
- Independent Tailings Review Board.
- Government.
- Stakeholders.

# Environmental Programs

- Permits and Authorizations.
- Public consultation.
- Monitoring Programs:
  - Water quality
  - Aquatic life
  - Air quality
- Erosion Control and Revegetation Program.
- Solid and hazardous waste management program.



# Permits

- ◆ Over 300 permits.

First experience for many regulatory agencies.

Types of permits required :

- Construction.
- Water discharge.
- Operations.
- Fuel tanks.



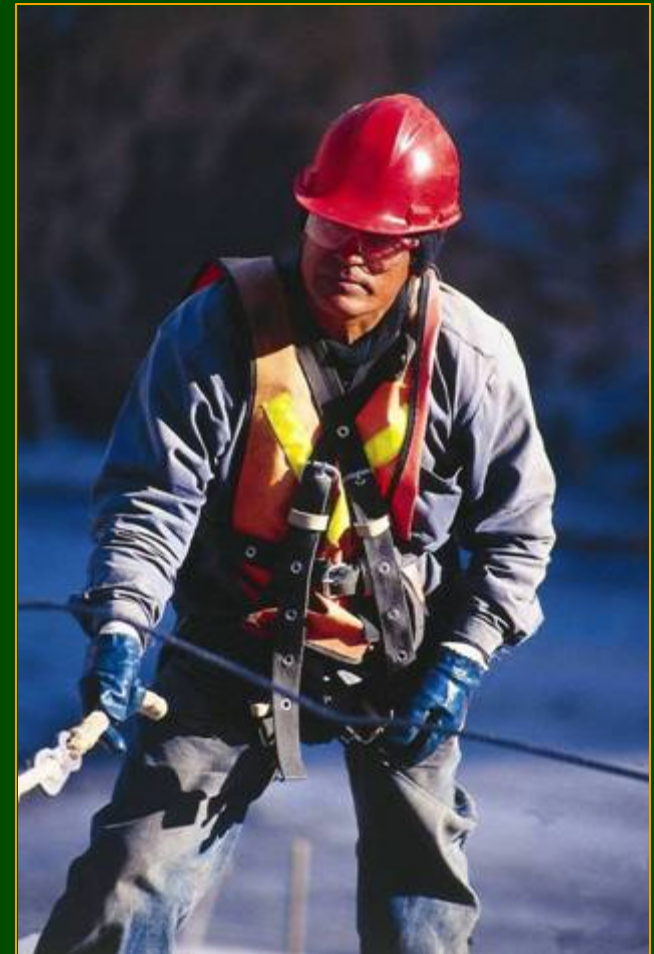
# Public Consultation Process

- Public Hearings and Open House in Lima.
- Public Meetings in Project Area.
- EIA Widely Distributed, placed on Peruvian Mining and Energy Ministry web site.



# Building a Sustainable Culture of Safety Awareness

- Standards.
- Training.
- Inspections and audits.
- Continuous improvement.



# Safety Programs

- STOP.
- ISTECC.
- Safety Values.
- Senior Management EHS Committee.
- Contractor Management.
- Inspections and Audits.
- Transport Management.
- Training.
- Occupational Health.



# Risk Management

- Risk Assessments.
- Action Plans.
- Response Plans.
- Risk Audits.
- Rescue Team.
- Transportation Management.

# Stakeholder Programs

- Communities.
- Environmental Committees.
- Government.
- NGOs.
- Universities.
- Municipalities.
- Regional working groups.

# Environmental Committees

- Created as an official communication channel between CMA and communities
  - Provide technical environmental information
  - Receive a feedback from local residents
- Established in:
  - San Marcos
  - Ayash Basin
  - Huarmey
  - Huallanca

# EHS Stakeholder Programs

## Working Groups

- Regional working groups consisting of mining companies, communities, government, and NGOs:
  - Grupo de Trabajo PN Huascarán
  - Consejo Ambiental Regional (CONAM)
  - TMI, SPDA, VIDA



# Community Development Strategy

- The community leads in planning its development. It is necessary to change attitudes.
- Local Development Committee ( Mesa de Concertación ): includes all the stakeholders, CMA acts as a facilitator
- The community approves the development plan and budget, and monitors its compliance.
- Public consultation used as a tool.
- Programs are executed by NGO's.
- Build trust and social capital

# Principles of CD Programs

- Avoid paternalism, through promoting sustainable development.
- Supply tools for individual and collective development.
- Attract Government and multinational agencies contributions.
- Complement, not replace, government responsibilities.
- Respect local culture, habits and values.

# Objectives of CD Programs

- Upgrade the quality of life by improving education and health services.
- Improve agricultural and livestock-raising practices.
- Promotion of small enterprises.
- Support cultural activities.

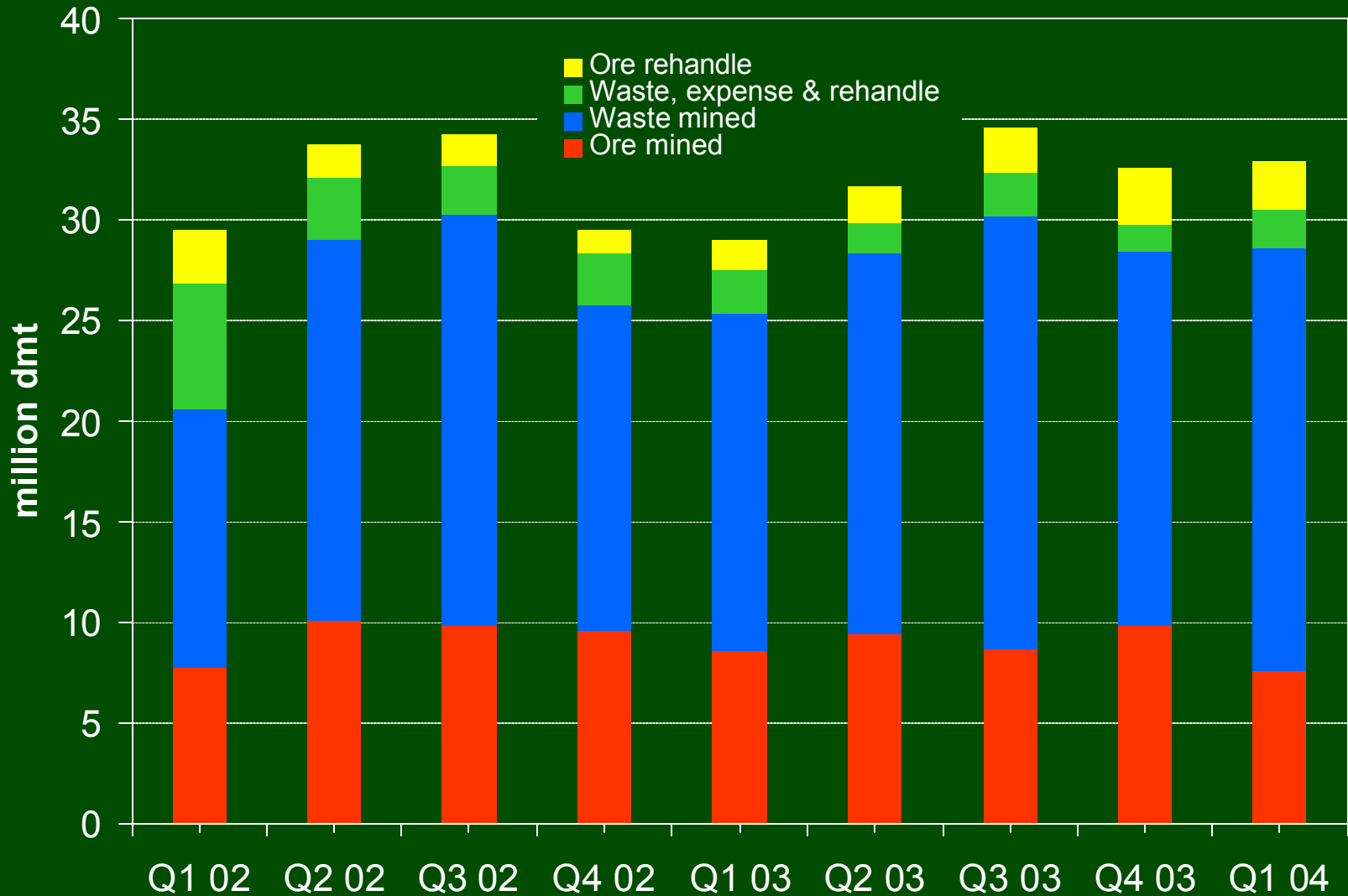
# Production



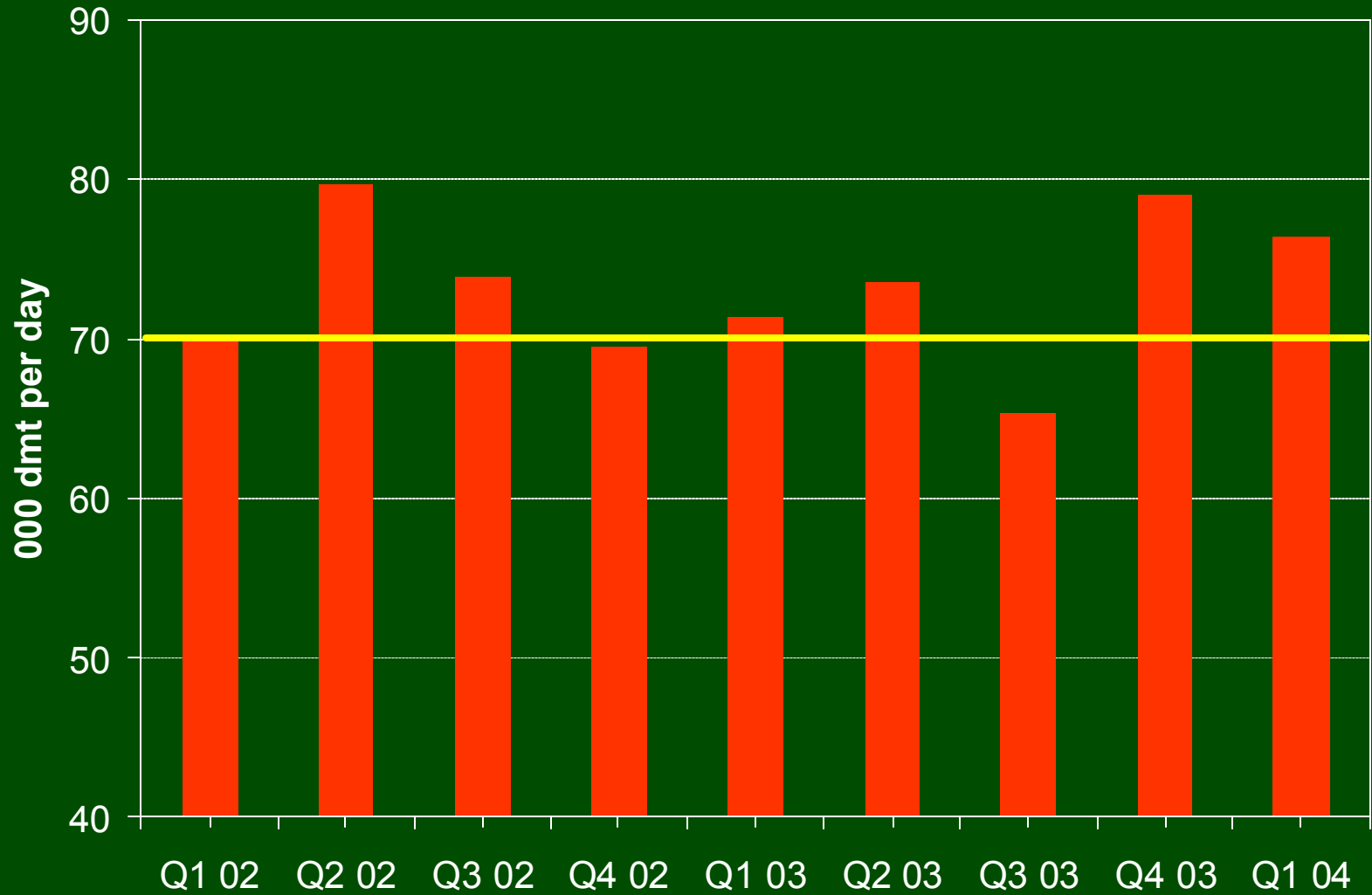
# Lake Sediments

- Original schedule was to complete removal of lake sediments by end of Q3 2003.
- Fatal accident in November 2002 required new approach to sediment removal:
  - Long-line excavator added in March 2003;
  - Long-line effective but sporadic in first six months of use.
  - Revised schedule developed in October 2003 to complete in June 2004. On track.
  - Lease dragline added in February 2004.

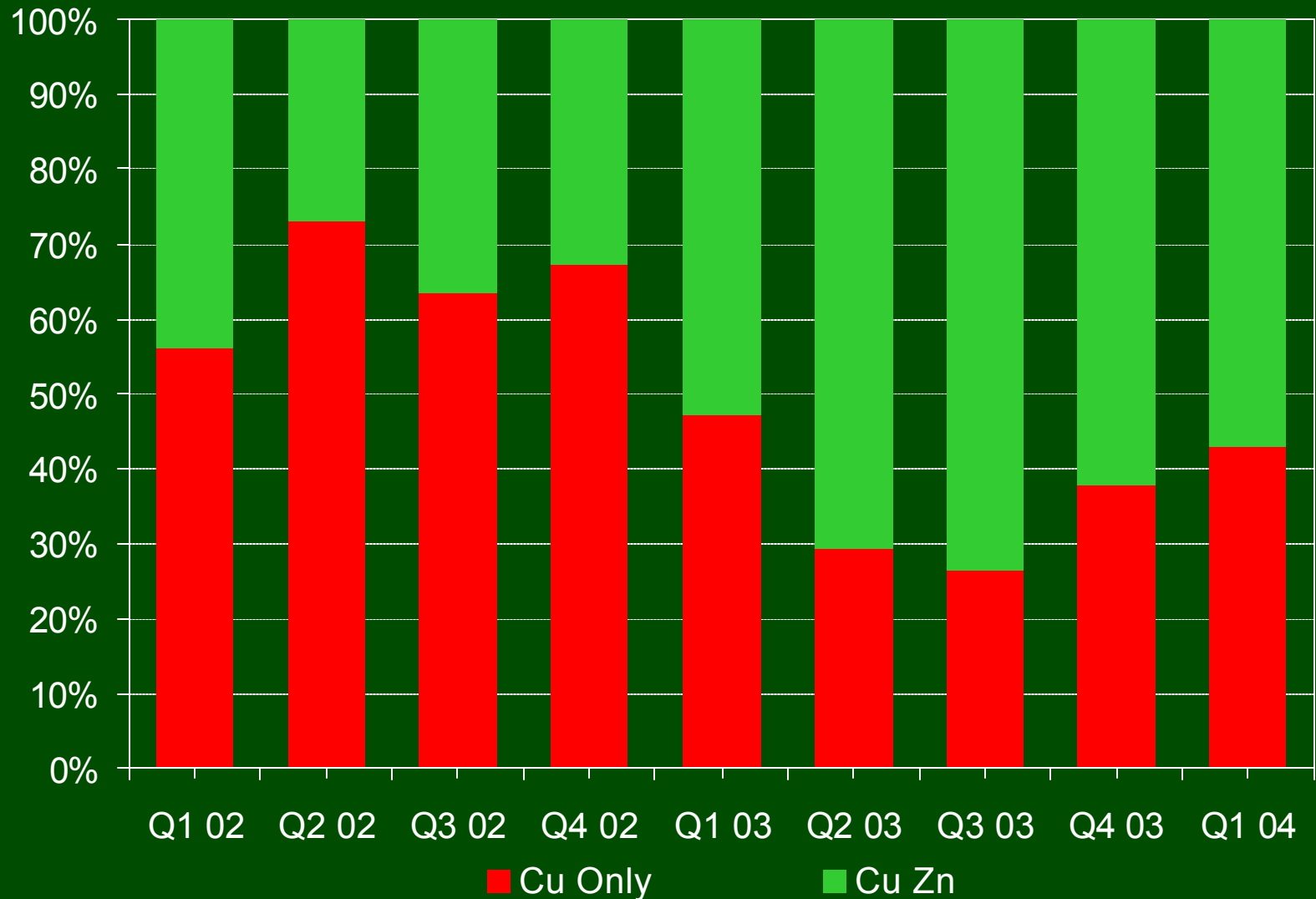
# Mine Production



# Daily Milling Rate

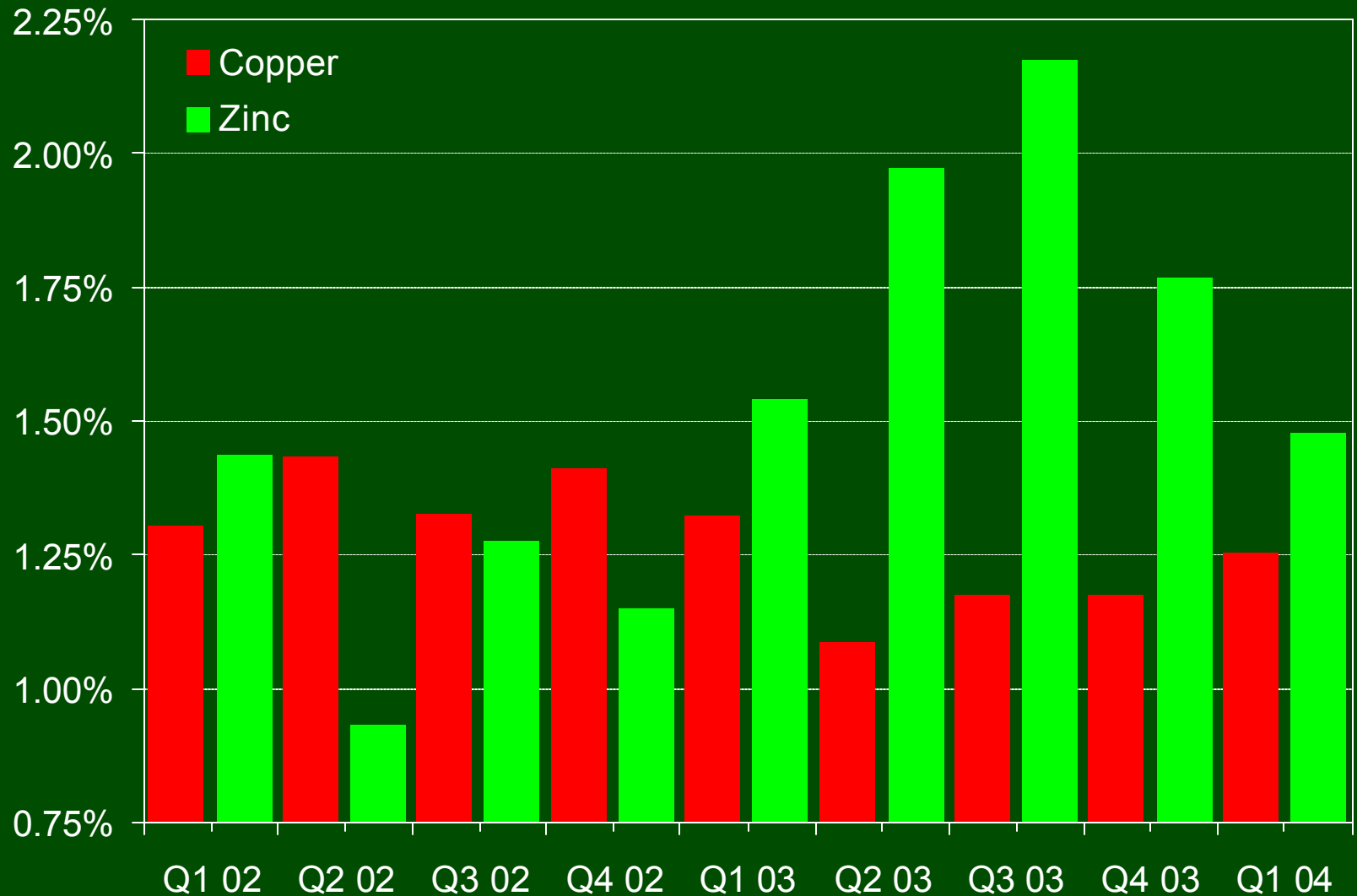


# Mill Feed by Ore Group

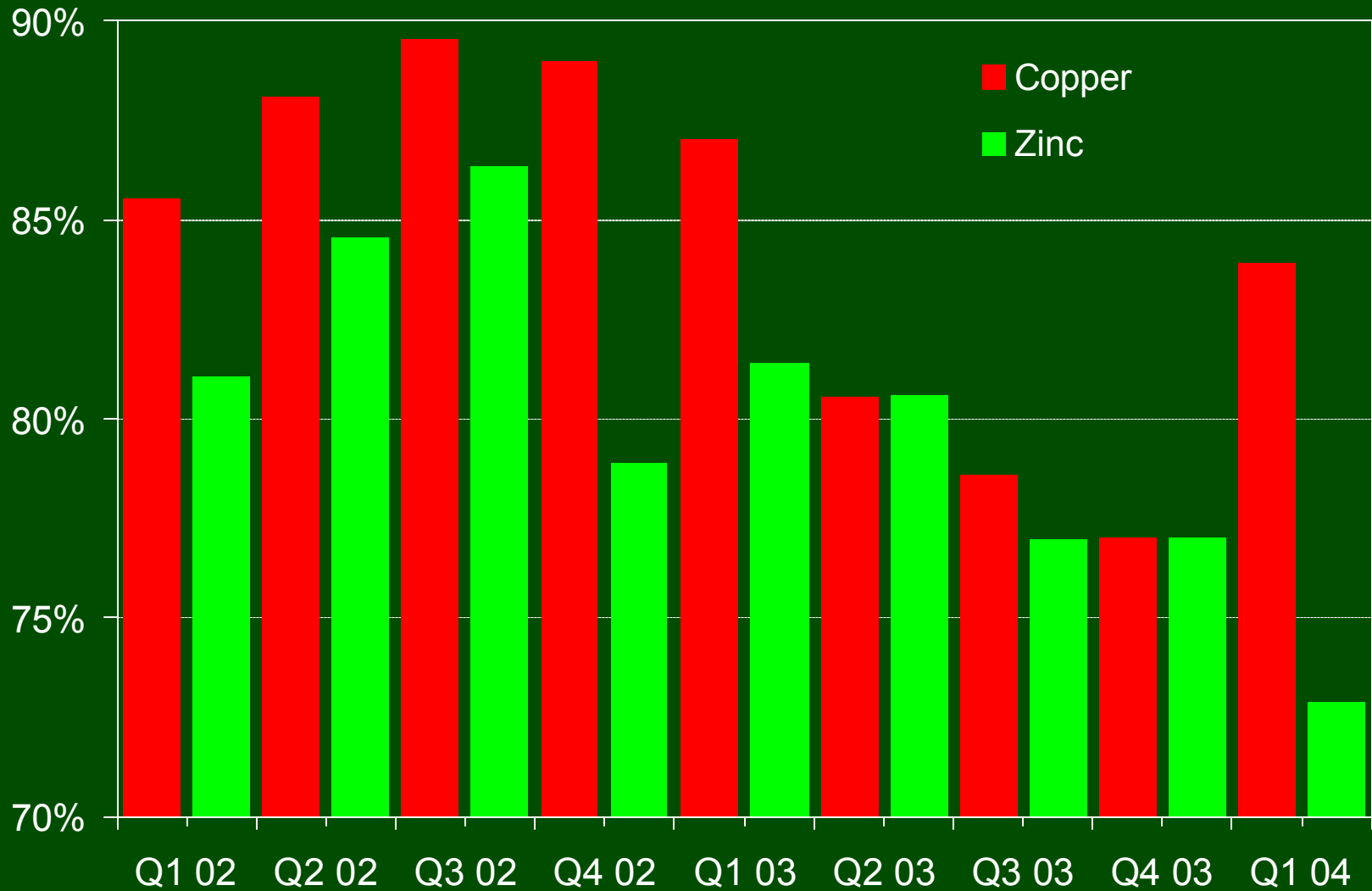




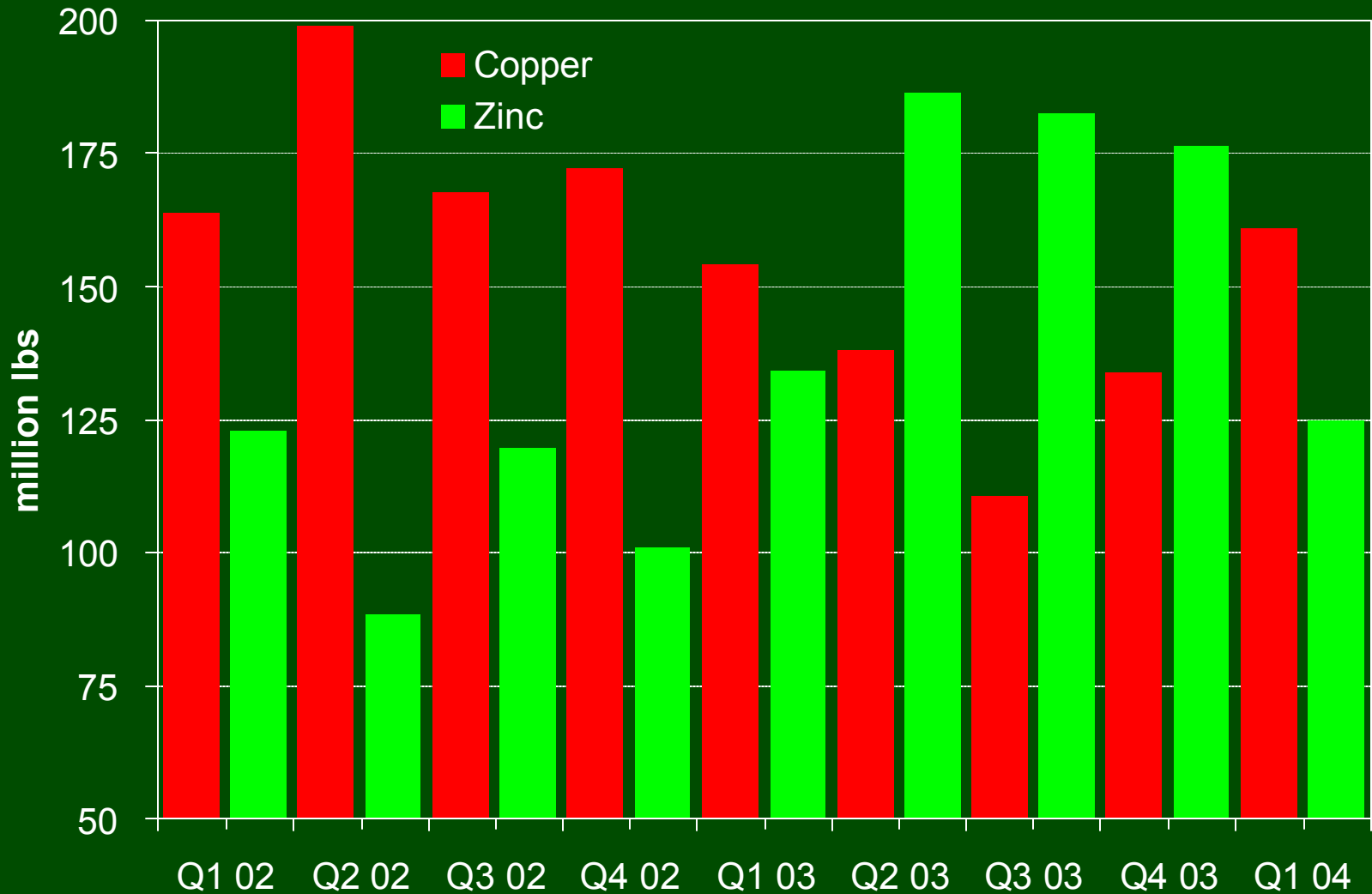
# Head Grades



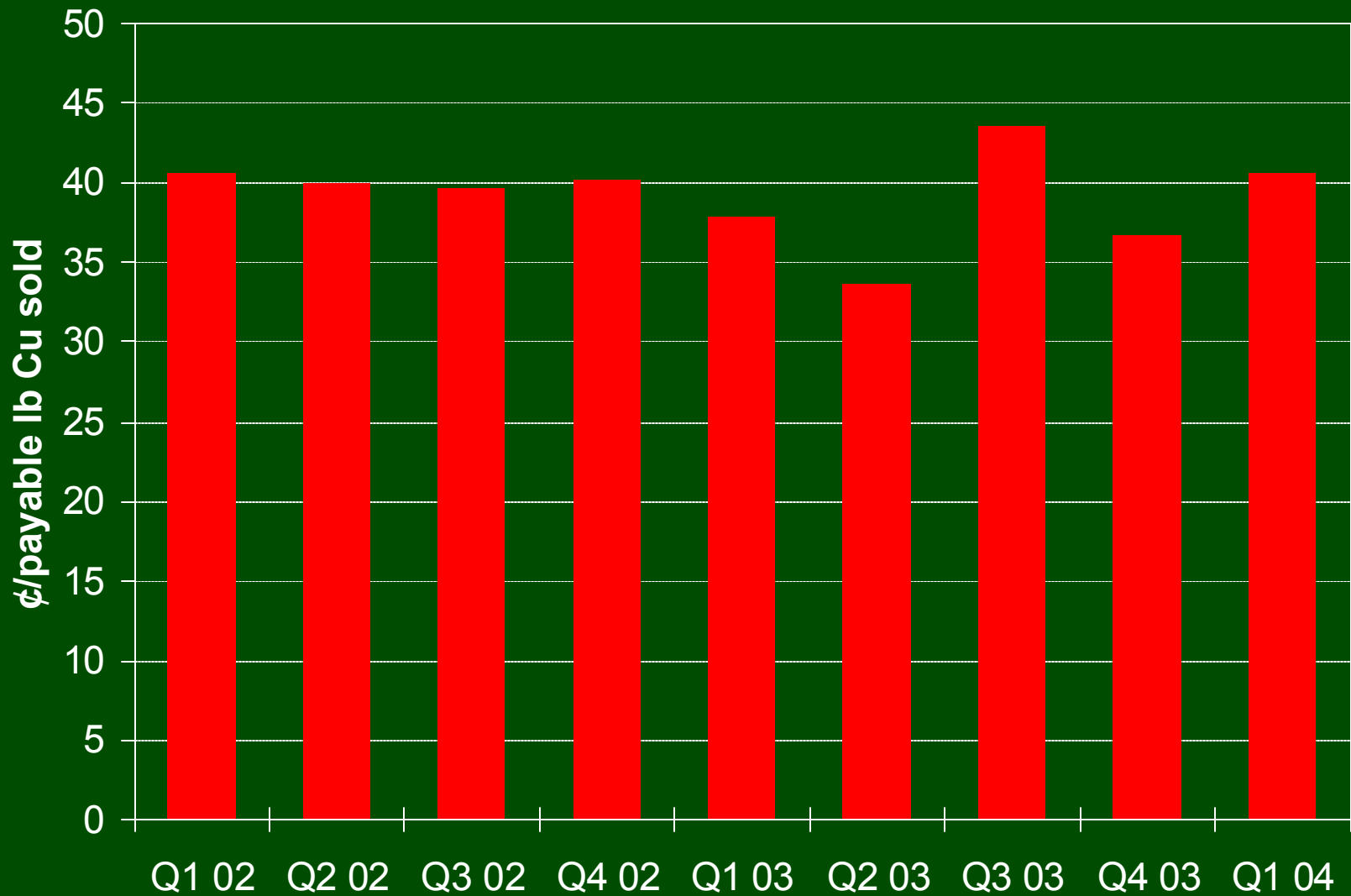
# Recoveries



# Payable Metal Production



# C1 Cash Costs



# Strengths

- Long life: 19 years, with upside potential.
- Scale: 3rd largest Zn producer, 7th largest Cu producer.
- Project execution:
  - Under budget, ahead of schedule.
- Low risk:
  - Operating above design production rates.
  - C1 cash costs in lowest quartile.
- Upside on production rates.