



**Kolwezi Tailings Project - A Case Study**

**September 15th 2004, UNESCO, Paris**

# Kolwezi – Key Features

- Third largest cobalt resource worldwide
- Potentially world's largest and lowest cost cobalt producer (Estimated at \$2.15/lb)
- Low cost copper producer (Estimated at 37c/lb)
- Anticipated very long resource life (>35 years)
- Low operating risks
- Established infrastructure
- Environmentally & socially enhancing
- Adastra owns 82.5% of this world class asset

# Kolwezi - Project parameters

- Throughput: 3 million tons per annum
- Production: 42,000 tpy Copper,  
7,000 tpy Cobalt
- Estimated total capital cost: \$306.8 million

# Key Project Components

- Resource of 112.8mt at 1.49% copper and 0.32% cobalt in two areas of tailings deposits,
- Mining using high pressure water
- New rail spur from existing line
- New Process plant, including sulphur burning acid plant
- Acid leach, Solvent Extraction and Electro Winning recovery methods
- Metal recoveries of 76% cobalt and 93% copper
- Metal qualities of >99.9% for copper and cobalt
- New tailings dam to be constructed

# The Democratic Republic of Congo



# DRC - New Mining Code now in effect



# Environmental & Social Studies

- Environmental Audit to identify potential liabilities from past mining activities, Nov 2002
- Scoping report including Social Scan to identify likely issues for the Environmental and Social Impact Assessment (ESIA) process, Jan 2004
- Environmental and Social Policies approved by Board, April 2004
- Commencement of ESIA process, using World Bank Group (WBG) policies, guidelines and procedures.

# Existing natural environment

- Legacy of 100 years of mining activity; extensive pits, waste rock dumps and tailings deposits
- Town of 200,000 in close proximity
- Several villages in Concession Area
- Human pressure on natural resources
- Shifting agriculture
- Main river valley filled with tailings
- Extensive air pollution from wind-blown tailings

# Existing Social Environment

- Once good infrastructure now poorly maintained - roads, water supply and management, schools, hospitals
- State Mining company previously provided a high level of social support
- Very high unemployment
- Juxtaposition of municipal and traditional authorities, with different roles and responsibilities
- Skilled work force
- Very high expectations

# Environmental & Social Policies

- Environmental Policy
  - Community Development Policy
  - Health & Safety Policy
  - Employment Policy
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- Each includes a Policy statement, a short section on Implementation and Specific Goals
  - Can be viewed on our website, [www.adastramin.com](http://www.adastramin.com)

# ESIA Process

- Three main parts:
  - Biophysical environment
  - Social environment
  - Public Involvement
- Reports will be produced for Department for the Protection of the Mining Environment (DPEM) and as part of Feasibility Study

# Biophysical studies

- Air quality, gaseous and particulate
- Surface water quality, flows
- Groundwater quality and hydrogeological model
- Flora and fauna, including ethnobotany
- Noise
- Archaeology and ethnology
- Geology
- Soils and landuse

# Social Studies

- Surveys of villages within the Concession
- Census of affected people
- Inventory of assets and land holdings
- Collect and collate background socio-economic data
- No relocation of villages required
- Input to Resettlement Action Plan for fields and crops

# Public Involvement

- A key theme of the proposed project is to keep local populations informed and to take into account their comments
- A series of scoping meetings to identify interested and affected parties, May/June 2004
- Three weeks of meetings with national, regional and local authorities, traditional chiefs, villagers, NGOs and other interested parties July/August 2004
- Public Scoping Report currently being developed
- Continual feedback via Community Liaison Officers

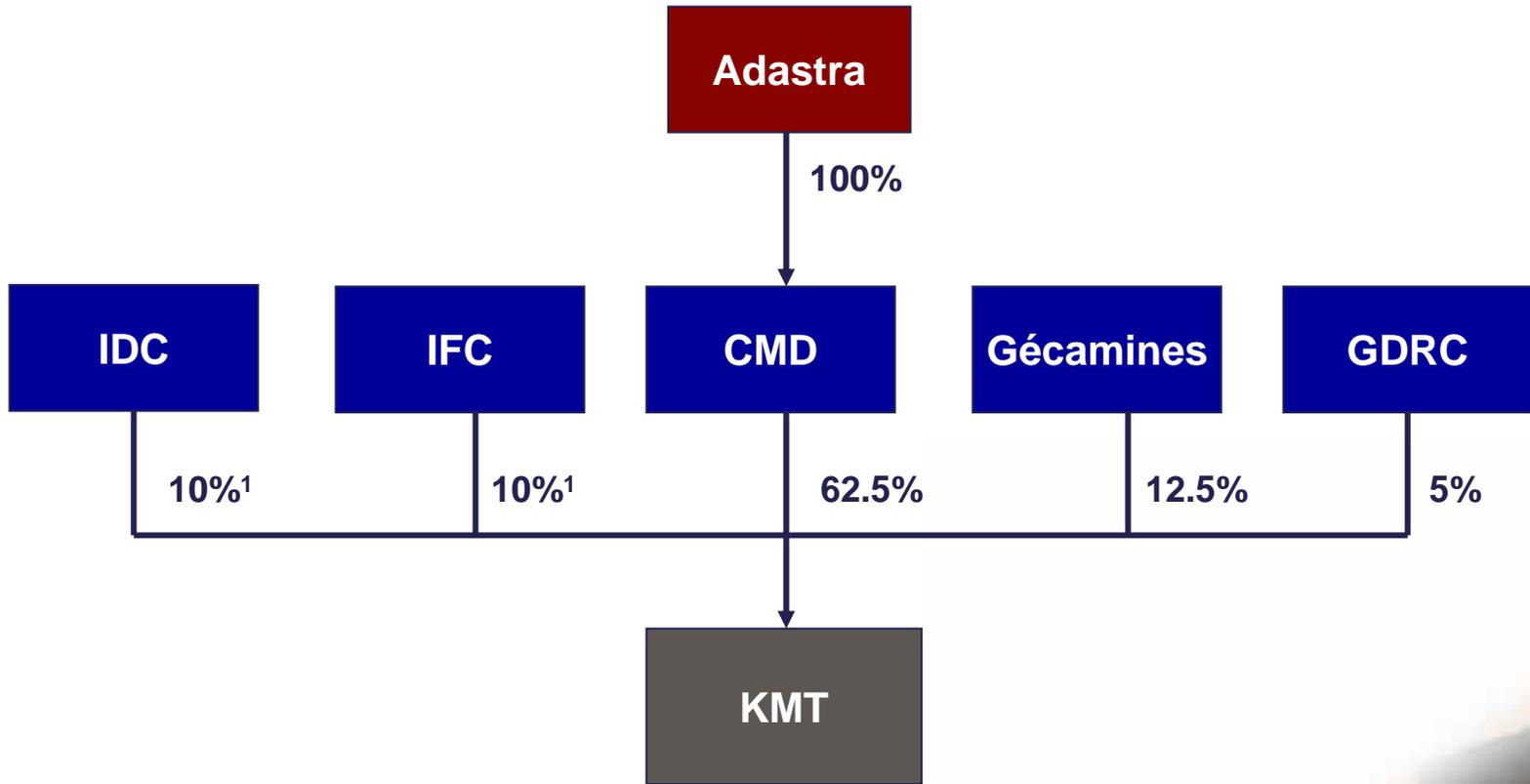
# Work in Progress

- Close liaison with Engineering Team
- Development of Environmental Design Criteria based on WBG policies, guidelines and procedures and industry best practice
- Input to siting, design and performance of operations
- Iteration with project design to optimise environmental, technical and economic solutions

# Construction and beyond

- Adastra is committed to an Environmental Management Plan to cover the construction, operation and closure of the operation
- Periodic and systematic environmental audits will be carried out
- Awareness and preparedness for possible emergencies will be promoted
- Open and constructive communication and participation with employees, government and local communities

# Kolwezi - Potential Ownership Structure



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