



Capital Markets Day 18 January 2005



A World of Resources.

A Universe of Experience.

Technology Within Your Reach.







# AGENDA

- Minerals Industry Overview
- General Company Overview
  - Organization Structure
  - Products / Technologies / Industries / Competitors
- Financial Review
  - > Historical Performance
  - > 2004 Market Conditions
- Growth Opportunities



#### 23 BILLION T/YEAR OF ROCK CRUSHED



27% Sand & Gravel 22% Stone

17% Coal 7% Cement

15% Oil Based 5% Iron Ore

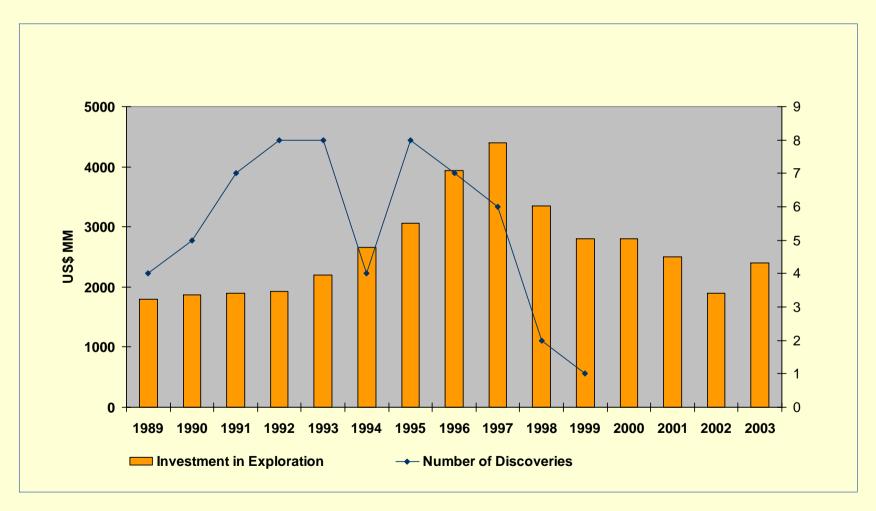
5% Hard Rock Mining 2% Other



#### **Exploration Expenditures**



#### Non Ferrous Mineral Exploration – 1989-2003



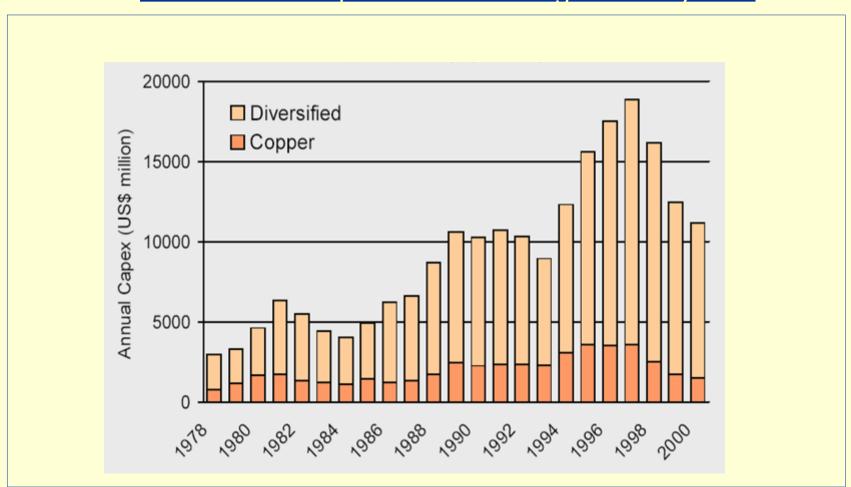
Source: Metals Economics Group, 2000



# Mining is Capital Expenditure Intensive



#### Annual Capex of the Mining Industry

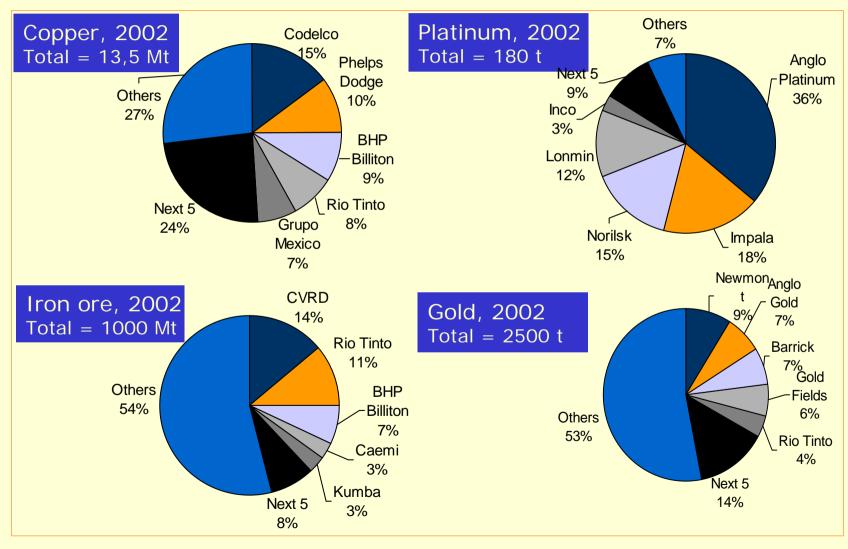


Source: CRU Copper Studies, Oct. 2001

#### **Major Producers**



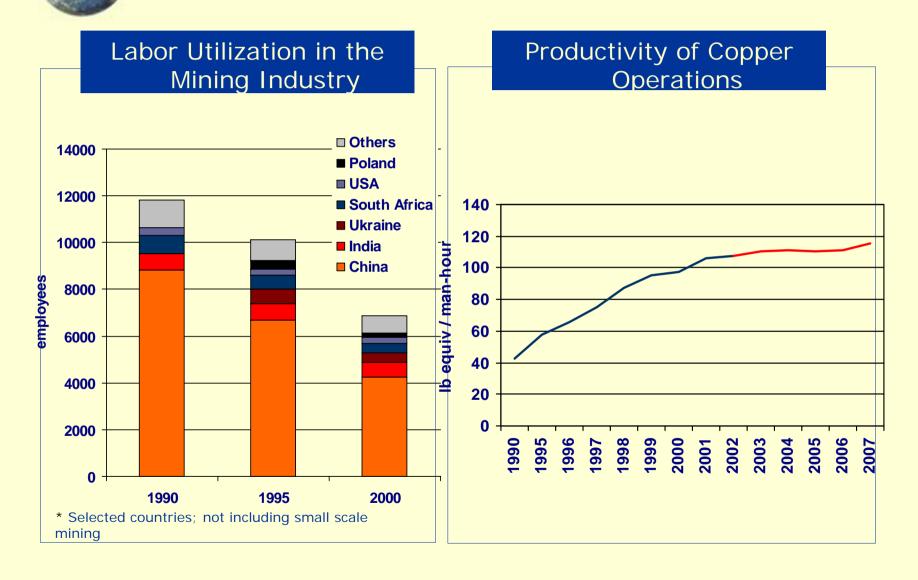




Source: CRU; UBS Warburg

# Modern Mining Methods using Large Scale Equipment have Reduced the Necessity for Labor Utilization.



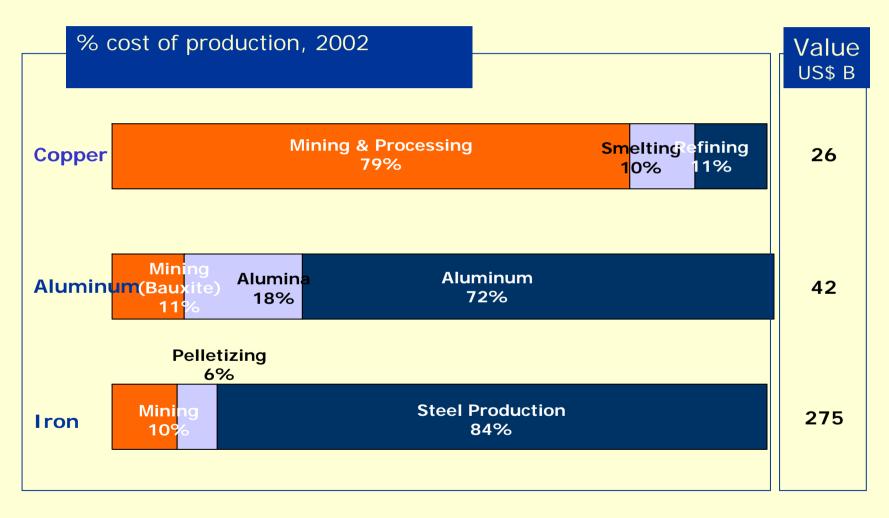


Source: International Labor Office; United Nations; US Department of Commerce; Brook Hunt 2002.

#### Segmentation of Processing Requirements of Copper, Aluminum and Iron



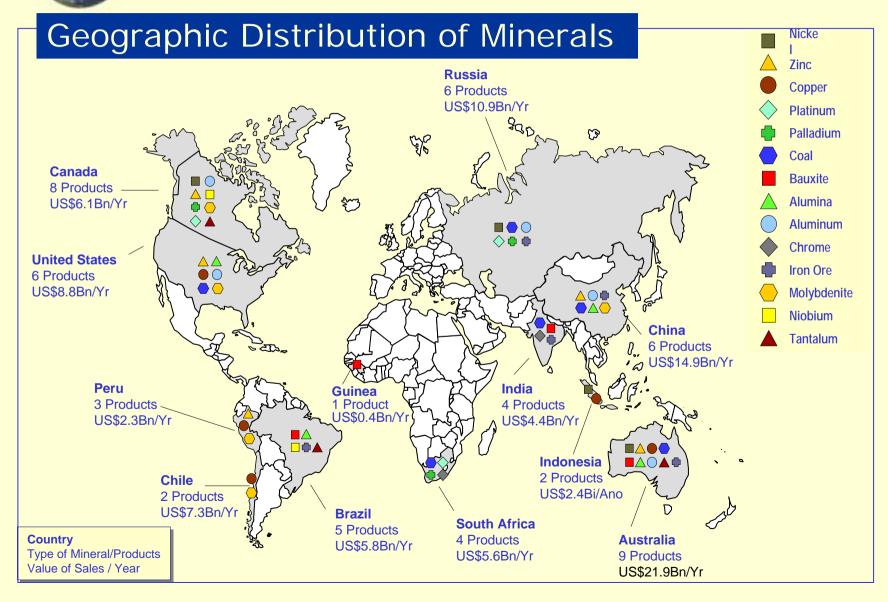
FFE Minerals is highly dependent on Copper Processing for its Minerals Technology Group compared to Al and Fe.



Source: CVRD; IISI; IBS; USGS; BNDES; IAI; Análises CVRD

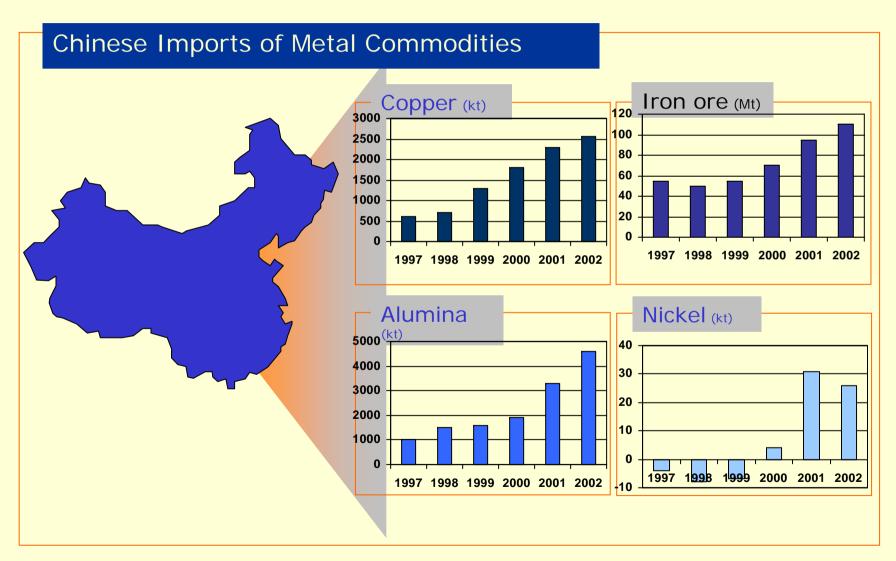
# Mineral Assets are Principally Distributed in 12 Countries





# Chinese Imports Create a Demand for Minerals and Metals





Source: Chinese Customs Statistics – UBS Warburg





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  - Current Year
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# WHO IS FFE MINERALS? FF

- We are a relatively young company, formed in 1996, but with 100 year old roots.
- We are a subsidiary of FLS Industries A/S, Denmark.
- We are worldwide with offices located in Australia, Brazil, Canada, Chile, China, Denmark, India, Mexico, South Africa and the USA.







- F.L. Smidth

- Fuller

- Engineering



#### **MISSION**

The purpose of our business is to improve the benefits and quality of solutions for customers who expect break-through technology, quality and services. Our foundation is our technical expertise, integrity, accountability – individually and in teams - and the pursuit of excellence in everything we do. We will produce sufficient financial results to enable profitable growth, creating superior stakeholder value.





#### **VISION**

To be the partner of first choice in the Minerals

Processing Industry by providing technology based on
world-class, engineered solutions and unique
performance enhancing services.



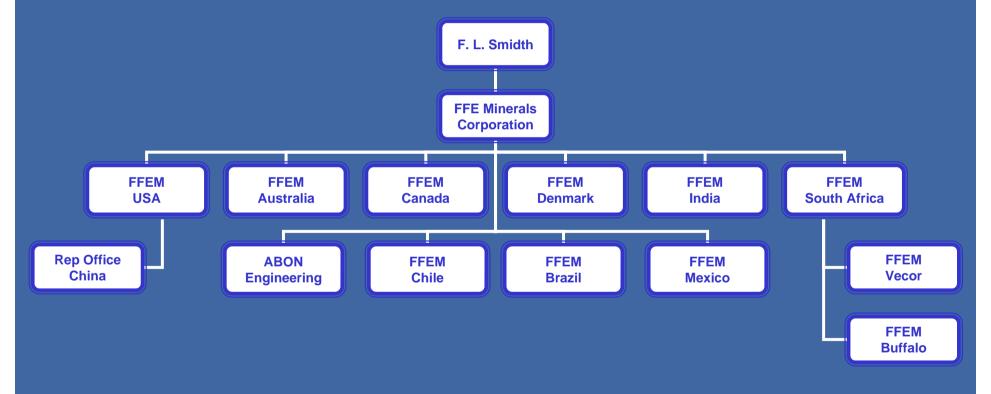


### FFE

# FFE MINERALS ORGANIZATION 2004

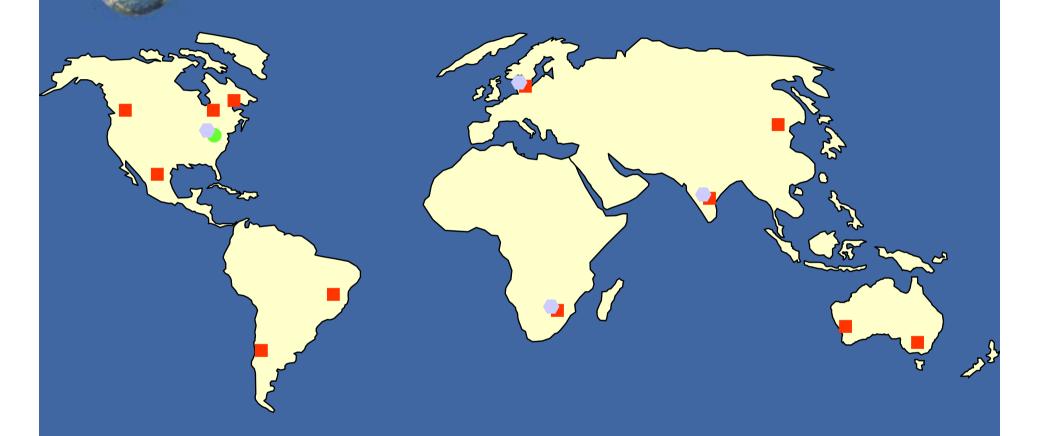
*Turnover - \$ 280 M* 

Employees – 1050



#### **GEOGRAPHIC OFFICE SUPPORT**





FFE Minerals Corporate Headquarters •

**FFE Minerals Subsidiary Offices** 

**FFE Minerals Engineering Offices** 

Employees – 1050



### FFE MINERALS

- Significant growth opportunities exist within the minerals industries. The market is HUGE!
- Relationship with FLSmidth can be further leveraged to give FFE Minerals a technical advantage over competitors in certain industries.
- ➤ FFE Minerals has been a consistent, profitable and improving performer within the FLSmidth Group since 1997.



Growth in Minerals is strategic for FLSmidth.



# KEY COMPETITORS FOCUS ON PARTS&SERVICE AND INDUSTRY CONSOLIDATION, BUT HAVE DIFFERENT SEGMENT FOCUS



•	Key	trei	nds
	KEy	ti Ci	IU3

- Competitors are consolidating the industry
- All main players increasingly focus on the after market

Metso

Sandvik

Outokumpu

• GL&V

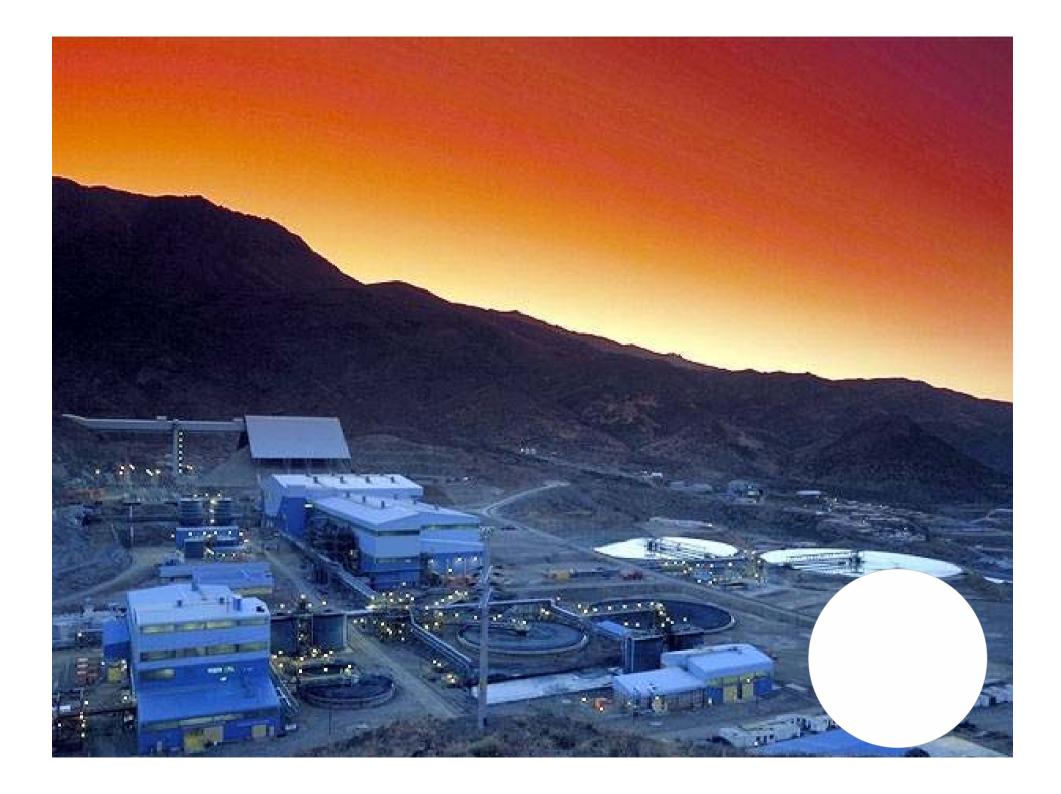
- Largest competitor in Metallic Minerals and Aggregates with large focus on Aggregates
- Present in all product segments
- Strong after market focus (~40% of sales)
- Acquisition growth strategy slow due to poor financial results for the Group
- Among top two competitors in Aggregates, little overlap in Metallic Minerals
- Products in Material Handling and Crushing
- Strong after market focus (35-40%) of sales
- Aggressive acquisition based growth strategy focussing on after market businesses
- Top player in Metallic Separation and Pyroprocessing
- High focus on Metallic Processing plants
- Acquisition based growth into new market segments (Lurgi Metallurgie, Nordberg grinding mills, Supaflow water treatment)
- Strong player in Metallic Separation and Dewatering
- High focus on Aftermarket Parts
- Acquisition based growth focused on Consolidation (Dorr Oliver, Eimco)



# A World of Resources.









# A Universe of Experience.





#### **FFE MINERALS**

#### **FOUR MAIN OPERATING GROUPS:**

- > MINERALS TECHNOLOGY GROUP
- > PYRO TECHNOLOGY GROUP
- > MATERIALS HANDLING GROUP
- > SERVICE TECHNOLOGY GROUP



# COLD AND HOT HAVE VERY DIFFERENT CHARACTERISTICS, AND THE LARGE, ATTRACTIVE PARTS&SERVICE MARKET IS MORE CLOSELY LINKED TO COLD THAN TO HOT



Market

~1000

Market potential:

7,000-10,000

ptential:

USD millions

Cold

- More standardized product range
- Process knowledge an advantage
- Parts intensive
- Large variation in order size and frequency
- Equipment warranty required
- Quoted/sold as separate components
- Dominated by Metso, FFEM and Outokumpu

Motoo EEEM

• • •

Hot

2,500-3000

potential:

Market

- High degree of engineering input/laboratory testing
- High degree of process knowledge a "must"
- Parts consumption lower
- Large, higher margin orders with less frequency
- Process performance, environmental compliance and equipment warranty needed
- Turn-key often required
- Niches controlled by smaller players
  - Weaker link

• Stronger link

Parts&Service

D. C. C.

- Parts regularly replaced
- On-site maintenance conducted in-house (potentially outsourced)
- End-user direct business
- Low degree of eng. input
- Smaller orders/higher margins
- Responsiveness is key

- Retrofit at long intervals
- Strong competition from independent service providers (e.g. for plant audits)





# MINERALS TECHNOLOGY GROUP

Provides crushing, grinding, hoisting and separation equipment for the minerals industry.





## Minerals Technology Group

We provide processes and systems which include primary crushing plants, milling systems, and wet or dry classification systems for all minerals, including iron, gold, copper, nickel, lead, zinc and coal.

#### STRONG PRODUCT RANGE

#### Crushing

- Primary gyratory and jaw crushers
- Impact crushers and hammer mills
- Low-speed sizers

#### Grinding

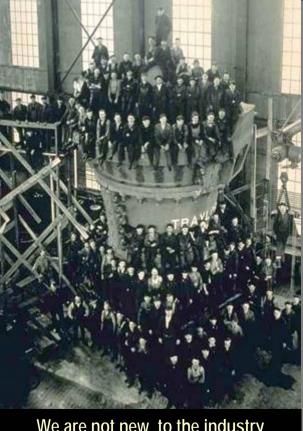
- Autogenous and semi-autogenous mills
- Ball mills
- Rod mills
- Rotary scrubbers
- Pebble mills
- Roller mills

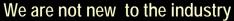
#### **Separation Technology**

- Flotation cells
- Hydrocyclones
- Tecgnequip valves
- High efficiency O-Sepa® dry classifiers

#### **Mine Hoists**

FFEM-Vecor wirewinders



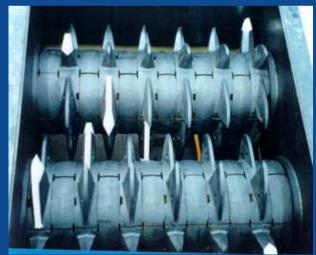




## MINERALS PROCESSING PRODUCTS









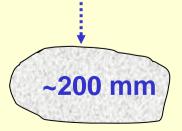


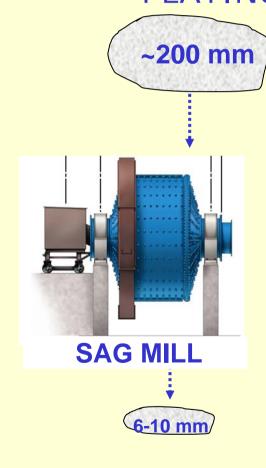
THE MINING PROCESS FOR MOST HARD ROCKS (I.E., COPPER, GOLD, PLATINUM,...)

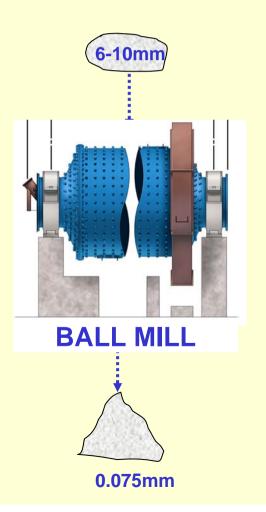
1.2-1.5 M



**CRUSHER** 









### **TOTAL CRUSHING EXPERIENCE**

PRIMARY GYRATORY CRUSHERS	391
PRIMARY DOUBLE TOGGLE JAWS	520
PRIMARY SINGLE TOGGLE JAWS	15
SECONDARY GYRATORY CRUSHERS	145
TERTIARY CRUSHERS	<u>310</u>



TOTAL CRUSHERS

1,381



# **Primary Gyratory Crushers**

 Manufacturer of Gyratory Crushers Since 1904







#### **ABON Sizer**



### TOTAL MILLING EXPERIENCE

• TRUNNION SUPPORTED BALL & ROD MILLS	2,260
SHELL SUPPORTED BALL MILLS	123
TRUNNION SUPPORTED SAG MILLS	121
SHELL SUPPORTED SAG MILLS	21
• SHELL SUPPORTED SCRUBBERS	<u>15</u>
TOTAL MILLS	2,540





## SAG & BALL MILLS







- ◆ THESE MILLS RANGE IN SIZE FROM 10' DIAMETER TO 38' DIAMETER
- ◆ THE PURPOSE OF THE MILLS IS TO FURTHER GRIND THE ROCK TO .075mm



# SAG/BALL MILL SHELLS









BALL MILL SHELLS
BEING TRANSPORTED
TO THE ANTAMINA
JOBSITE IN PERU



## Minerals Technology Group

### **Large Project Experience**

ANTAMINA, PERU (Copper/Zinc)

1 x 38' x 21' SAG Mill @ 27,000 HP

3 x 24' x 36' Ball Mill @ 15,000 HP

26' Hydrocyclones

1 x 60" x 89" Primary Gyratory





**ESCONDIDA**, CHILE (Copper)

1 x 38' x 22.5' SAG Mill @ 26,600 HP

3 x 25' x 40' Ball Mill @ 18,000 HP

1 x 60" x 110" Primary Gyatory



### Escondida Phase IV 38' SAG Mill, Chile







## FFE MINERALS - TECHNEQUIP















# PYRO TECHNOLOGY GROUP

Provides process expertise, equipment and systems to the metallurgical and minerals industries.





## **Pyro Technology Group**

We provide total pyrometallurgical solutions from R&D through to erection and commissioning for alumina and bauxite, lime, pulp and paper and the metalliferous industries.

#### STRONG PRODUCT RANGE

#### **Calcination**

- Fluid beds
- Rotary kilns
- Gas suspension

#### **Drying/Preheating/Cooling**

- Rotary
- Flash
- Fluid beds
- **Stone preheaters**
- Grate
- SF cross bar
- Compax

#### **Specialist Equipment**

- Coke oven batteries
- Slakers / hydratorsPierce Smith convertors
- **Hydrate coolers**
- Ladles
- **Combustion systems**

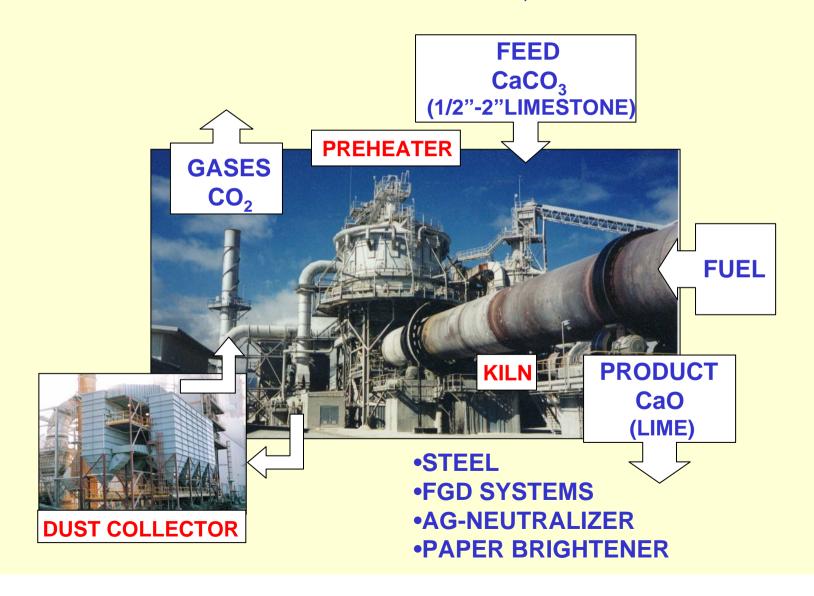






### THERMAL PROCESSING OF MINERALS

(PHOSPHATES, SODA ASH, FERRO NICKEL, LIGHTWEIGHT AGGREGATE, LIMESTONE)



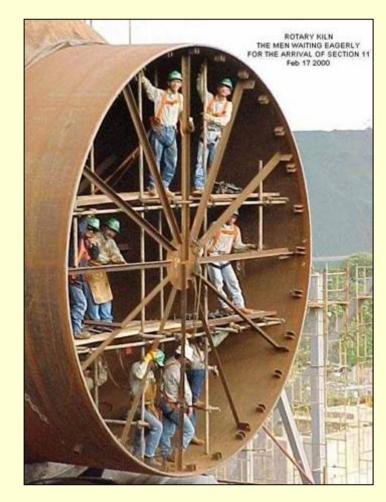


## **KILNS**

# RANGE IN SIZE FROM 4 - 6 m DIAMETER AND 33 TO 130 m LONG!









## MATERIALS HANDLING GROUP

Provides technology for the mechanical and pneumatic handling of minerals. The Materials Handling Group will service industries already served by FFEM's proprietary technologies.





## **Materials Handling Group**

We provide processes and systems which transport a variety of materials, and in some cases reduce the size of the materials, through integration of FLS / FFEM materials handling and comminution technologies.

STRONG PRODUCT RANGE

#### **Crushing Systems**

- Feeder / breakers
- Feeder / sizers
- Feeder / crushers

#### **Mechanical Handling**

- ConveyorKIT pipe conveyorsTraditional belt conveyors
- ABON roller screens
- Stackers / reclaimers
- ABON and Buffalo flight bar feeders
- Apron feeders

#### **Pneumatic Handling**

- Turbuflow conveying pipe
- Airlifts
- Alumina handling
- Alumina direct pot feeding
- Fly ash handling
- Storage silos







# Materials Handling – Stackers, Reclaimers, Spreaders

FLS Group Experience

MVT Materials Handling GmbH 1161 Machines sold as of the end of 2004







FLS Materials Handling A/S

K&E Industries GmbH



# Materials Handling – Apron Feeders

 Manufacturer of Apron Feeders since 1940

 148 Conventional Units Sold as of December 2003

 Completed product development of a tractor component type Apron Feeder in 2003

5 Tractor Units Sold in 2004



# Materials Handling – Overland Pipe Conveyors

FFE Minerals is currently supplying the world's longest pipe conveyor at 5 km long.











# SERVICE TECHNOLOGY GROUP

Provides maintenance, process, training, analytical, construction, breakdown, troubleshooting and replacement part support for the entire lifecycle of our equipment.





## Service Technology Group

We provide total service, maintenance, asset management and operational services to the minerals and metalliferous industries.

#### STRONG PRODUCT RANGE

#### **Products**

- Original OEM spares
- Product review and improvement
- Life cycle analysis
- Repair
- Retrofits

#### **Engineering Services**

- Equipment audits
- Process audits
- Testing
- Erection supervision
- Training

#### **Operations and Maintenance**

- Mill management
- Plant maintenance
- Asset management
- Plant operations



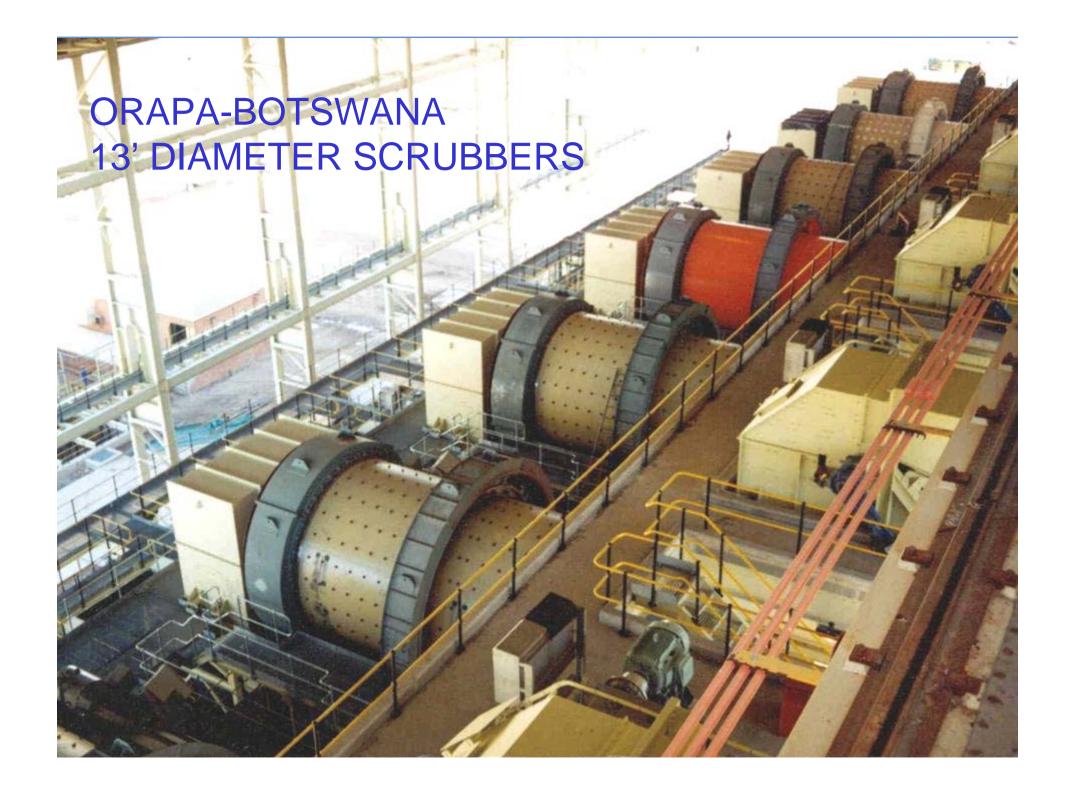




# Technology Within Your Reach.







### QUEENSLAND ALUMINA LTD Australia



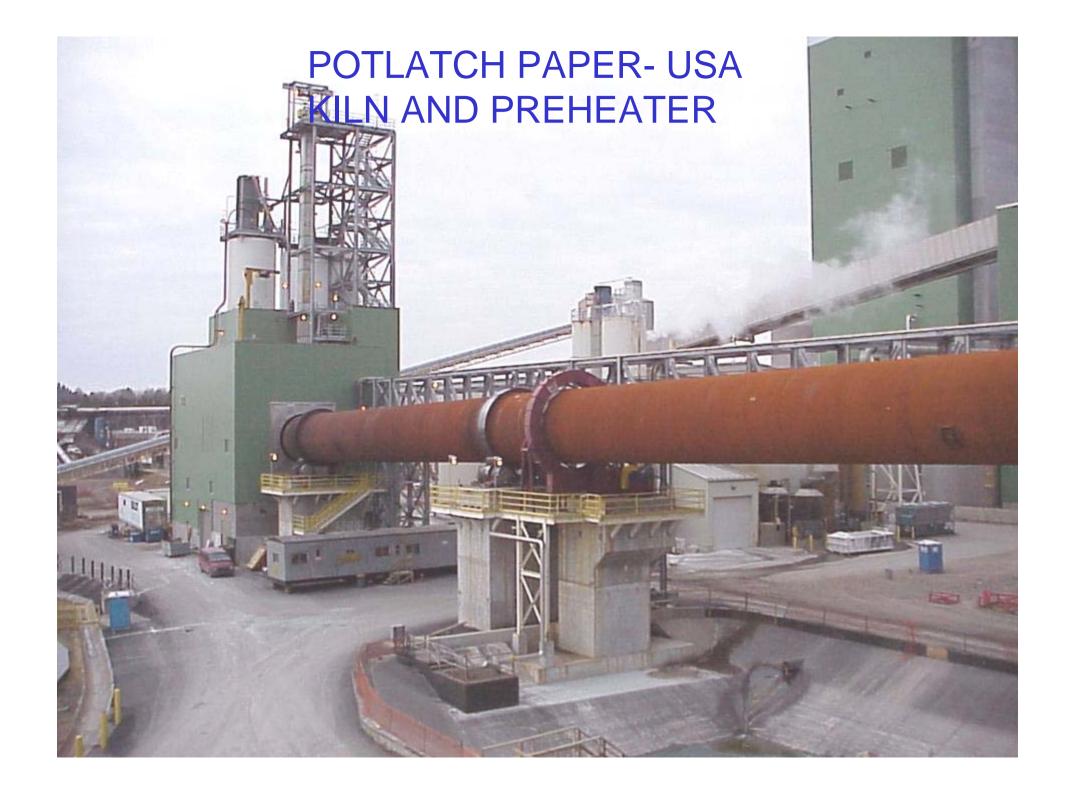




# QUEENSLAND ALUMINA LTD Australia











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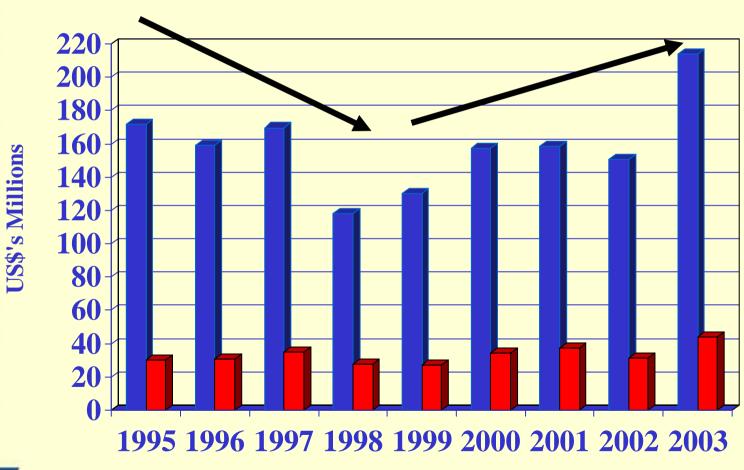
# FFE MINERALS FINANCIAL HIGHLIGHTS

			ACT		ACT	ACT		ACT	ACT
(US\$'s 000)			1999		2000	2001		2002	2003
ORDER INTAKE:				1		1	r.		
	SALES		$\Lambda$	130.4	157.5		58.3	150.5	213.9
	СМ		4	27.2	34.3	1	37.2	31.5	43.8
P&L HIGHLIGHTS:		7		H	7/1				
	REVENUE			152.5	131.2	1	58.7	135.1	191.4
	EBIT			3.2	3.9		5.4	7.0	7.9
	EBT			4.3	4.8		6.5	7.6	8.2
	<b>NET PRO</b>	OFIT		2.5	3.7		4.5	5.3	5.6
							<b>\</b>		
EVA				1.3	2.3		2.5	4.1	4.6
ROCE				12.3%	15.8%	•	16.6%	21.4%	20.7%
<b>EMPLOYEES</b>				582	624	T.	674	685	744





## HISTORICAL ORDER INTAKE ANALYSIS





■ SALES ■ CONTRIBUTION MARGIN



# SERVICE TECHNOLOGY ORDER INTAKE

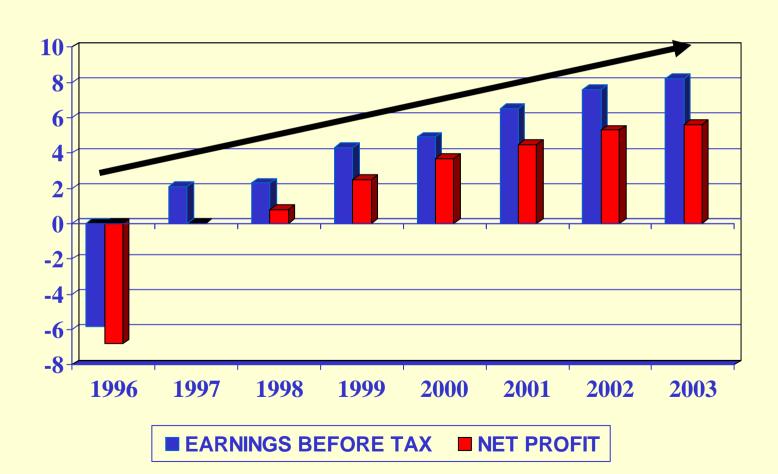






# FFE MINERALS CORPORATION FINANCIAL HIGHLIGHTS 1996-2003

(US\$ MILLIONS)







### FINANCIAL REVIEW

- Business Conditions
- ➢ Goals
- ➢ Order Intake
- Profitability
  - ➤ Net Sales
  - ➤ Contribution Margin
  - > EBITA / EBIT / EBT
- Order Execution





### **BUSINESS CONDITIONS**

- Metals Prices are Strong and Expected to Remain So
  - ➤ Copper Prices Highest Avg. Price in 15 Years
  - ➤ Gold Price Up 50% Since Jan 2002
  - ➤ Platinum Price Up 70% Since Jan 2002
  - ➤ Nickel Price Highest in 16 Years
  - "Mega-Project" Activity Picking Up
- > US\$ Devaluation Harming Producer Profits
  - Particularly the Case for South African Platinum and Gold Producers





### **BUSINESS CONDITIONS**

- ➤ Indian Economy / Market Very Active
- Pulp & Paper Market Mixed
  - ➤ Far East / Europe OK
  - ➤ Brazil Wave is Ended
- ➤ Alumina Market to be Active for Next Two Years
  - ➤ China, India, West Africa, Brazil





### ORDER INTAKE - 2004

- Very Strong Performance In 2004
  - ➤ All Business Areas (MTG, PTG, MHG, STG) Are Out-Performing Internal Targets and Historical Averages
- Market Conditions / Indicators Positive
- India Market is Booming
  - Well Positioned on Several Major Orders
- ➤ But....





- ➤ But....
  - > Steel Prices are High
  - ➤ Energy Costs are High / Volatile
  - > ZAR / USD Rate is High
  - ➤ Possible Copper Royalty in Chile and Peru
- Above Factors Have Delayed Projects
- ➤ In Spite of the Delays We Are Bullish for 2005 Order Intake
- Delayed Projects From 2004 Give Us Reason for Optimism for 2005 / 2006





## **ORDER EXECUTION - 2004**

- ➤ What Have We Learned?
  - > There is No Substitute For Experience
  - > Experience in Cement Is Good, But Is Not Enough
  - Quality of FFEM Technical Personnel is Being Upgraded
    - ➤ Balance Cost Control w/ Risk Management
  - ➤ Enlist the Assistance of Outside Experts When Available
- ➤ All Mechanical and Process "Fixes" Have Been Incorporated on New Projects
  - ➤ ISO 9001-2000 System Works
    - Document Non-Conformance
    - ➤ Correct the Problem
    - ➤ Implement Preventative Action







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### **HOW WILL FFEM GROW?**

- Continue the focus on growth in parts & services
- Integrate newly "acquired" technology to expand FFEM product offerings (i.e. materials handling)
- Continue to seek growth through alliances with suitable and strategically aligned partners
- Internal Developments R&D
- Acquisitions

## **2005 GOALS**

Grow Business While Maintaining Control

- ➤ Markets are Very Active in Most Segments
- ➤ Take Advantage of Active Markets
- ➤ But, Understand and Acknowledge our Limitations
- Continue to Improve Profitability as % of Sales
  - ➤ Increase Sales at ABON, Buffalo and Technequip on a Worldwide Basis
  - Surpass STG Bookings and Profitability
  - Continued Success in PTG (Close Projects)
  - ➤ Improve CM's in MTG



## **2005 GOALS**

- Integrate New Technologies into FFE Minerals
  - > FLS Material Handling
  - Möller Materials Handling
  - ConveyorKIT Pipe Conveyor
- Expand from Equipment Supplier to System Supplier / Solution Provider
  - > Requires Investment in Technical Resources
- Carefully Expand the Service Contracts







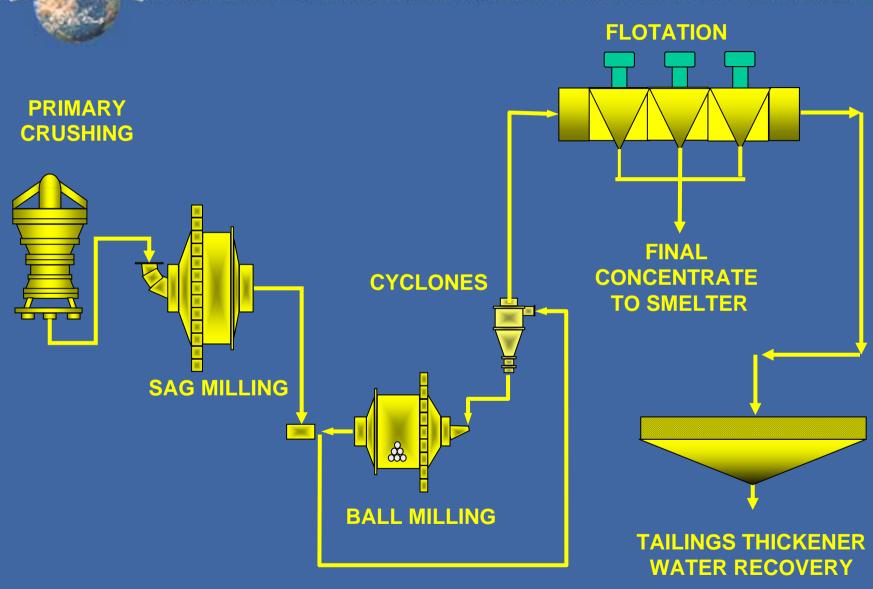
# CURRENT R&D PROJECT FLOTATION DEVELOPMENT

- Follows Crushing and Milling in Mining Circuit
  - Completes FFEM Concentrator Plant Offering
- Same Customers / Same Sales Process
- > This Is Where The Value Is Added
  - Very Process Oriented
  - Better Recovery / Lower Energy Consumption
- Prototype Units Currently in Operation
  - South Africa Platinum
  - Chile Copper
- > First Purchase Orders Received in Late 2004

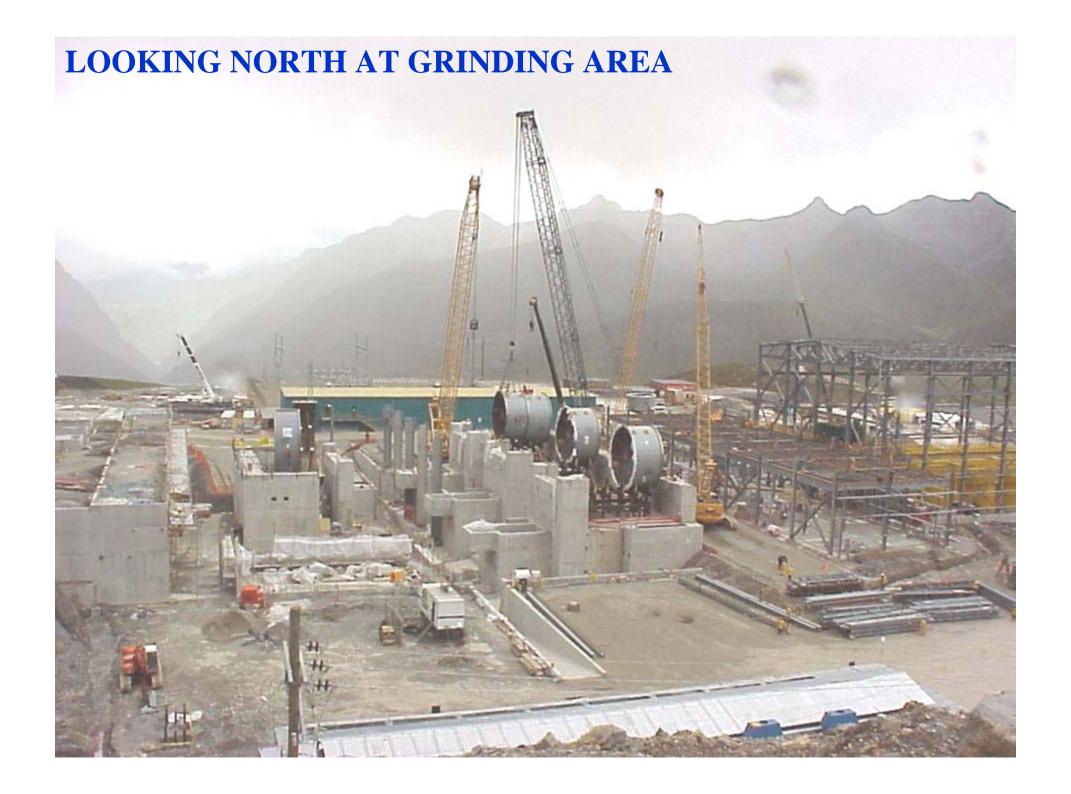


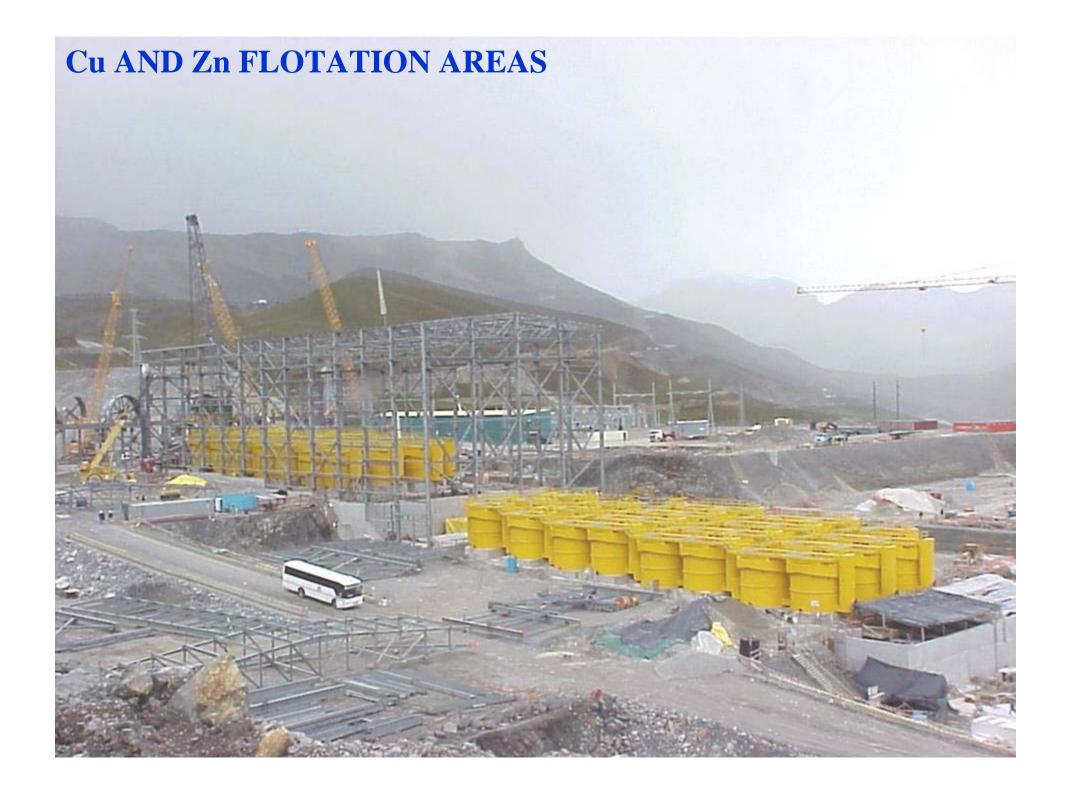
#### **TYPICAL SULPHIDE ORE TREATMENT CIRCUIT**











































## ACQUISITION PROSPECTS IMMEDIATE

- Small to medium-sized regional companies
  - Specialized "bolt-on" technology
  - Parts & service intensive
  - Leverage worldwide FFEM Group





### **Previous Acquisitions**

1993

<u>1997</u>

**1998** ABON

1999 FFEM-Buffalo 2003

Technequip Canada FFEM-Vecor South Africa

Australia

FFEM-Buffalo
South Africa

ConveyorKit South Africa





# ACQUISITION PROSPECTS FUTURE

- Downstream Equipment Supplier (flotation/thickening)
- Expansion of Pyro Capabilities
- Expansion Further into Aggregates Equipment?





## SUMMARY



### 1995-2004 Achievements / Improvements

Established Global Presence / Grew Market Share

Chile South Africa

Australia Brazil

India

Acquired Technology

Hydrocyclones

Minerals Sizers

**Feeder Breakers** 

Pipe Conveyors

- Standardized FFEM Procedures Globally
- Globalized a Direct Sales & Service Presence into Three Divisions, Now Expanding to Four





### FFE Minerals Building Blocks

- Growing Annual Revenue
  - Heritage Brand Names & Trademarks
  - Global Reach & Opportunity
  - Current Strong Market Segments
- Product & Process Expertise
  - Strong Product / Application Resources & Data
  - Balance of Legacy & New Technology
  - Building Specific Process Expertise
- Organization
  - Global Capabilities / Mining Specific
  - Growing with Volume
  - Committed, Knowledgeable & Capable "Can Do Spirit"





#### Summary

- Minerals markets are currently strong, led by the growth of the developing countries
- FFE Minerals Positioning:
  - Heritage brand names, niche products in crushing and milling
  - Developed consistently profitable Pyro-metallurgical business
  - Have grown the high margin/low risk Parts & Service business into a strong profit earner
  - Expanding into downstream processing with the new flotation products
  - Expanding into Material Handling with the expertise and technology of FLSmidth
  - Have multiple platforms to accelerate growth





### **THANK YOU**

**QUESTIONS?**