

**Progress of Business Strategy** 

SUMITOMO METAL MINING Co., Ltd.

Nov 2009

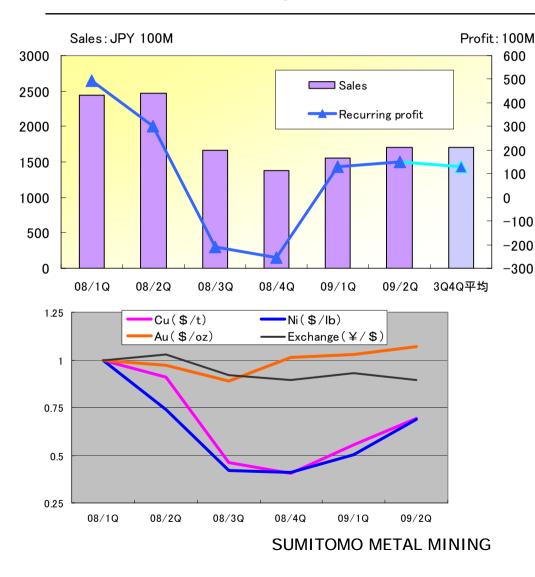
### Contents

- I . Securing FY2009 Earnings
- II. Run-up to 09 3-Yr Business Plan
- III. Our Business Environment and Metal Market
- IV. Financial Highlights



Daybreak (Coral Bay Nickel)

### 1) Has the worst passed ?



## [Background to recovery of earnings]

- Emergency management measures
- Rise in metal price (Chinese metal demand increment etc.)
- Recovery of sales of Electronics & Advanced Materials

[Revisions of Earning Projections on 9th Sep.]

•FY2009 Recurring profit

Forecast in Apr: 110 (JPY 100M) Forecast in Sep: 540 (JPY 100M)

•1H Result : 278 (JPY 100M)

2) Progress of emergency management measures to ensure profitability

## Business operations focused on earnings maximization and cost minimization

- (1) Reduce finishing costs, increase operating efficiency.
- (2) Limit investment and exploration costs to strategic projects only.
- (3) Select and focus on improvement of unprofitable business operations and products



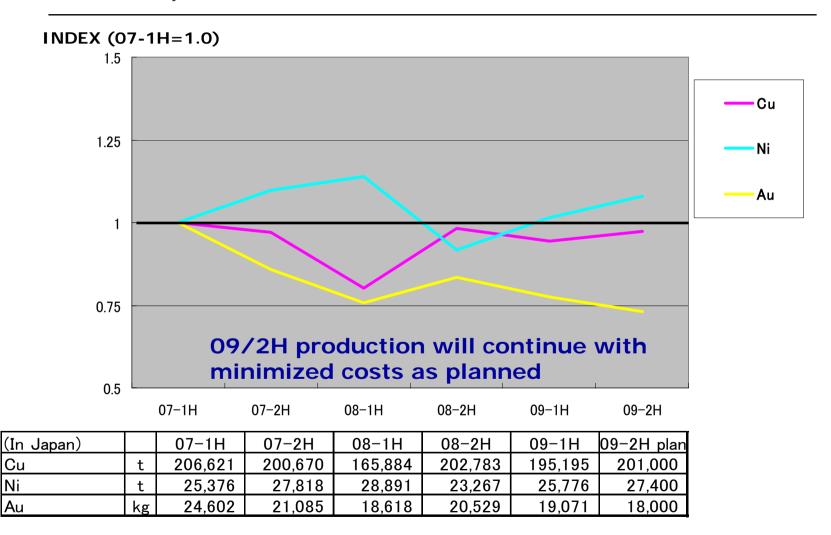
### Total cost reductions: ¥15bn, By 2Q achieved ¥10bn

(Annual Target) Mineral Resources & Metals: (¥10bn) reduction Electronics & Advanced Materials: (¥5bn) reduction

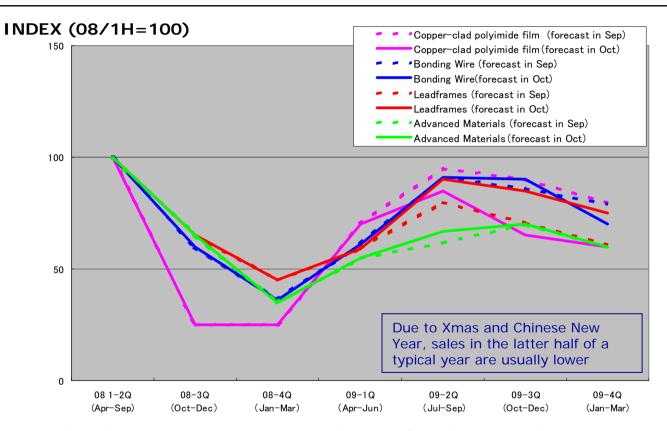
[2Q:¥10bn Breakdown] Energy costs:¥3bn( ¥5bn), Repair costs:¥2bn( ¥3bn), Controllable costs: ¥2bn(¥3bn), Labor cost, etc.:¥3bn( ¥4bn)

Progress of Reconfiguration of growth strategy of Electronics & Advanced Materials

### 3) Metal production trends

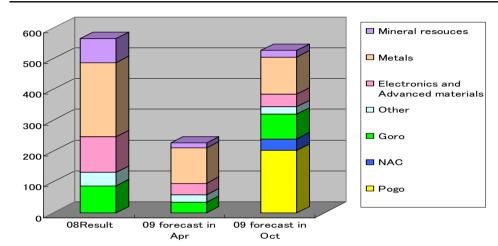


### 4) Electronics & Advanced Materials sales trends



- •Q1 & Q2 recovery exceeded expectations, so Sept. forecast revised upwards
- Compared to Sept. forecast L/F (semiconductor) sales were up, copper-clad polyimide films(liquid crystal) sales were down. Overall inline with Sept. forecast.

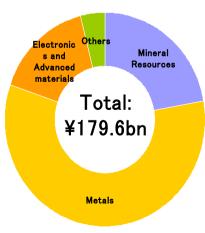
### 5) Capital outlay – execution of growth strategy investment



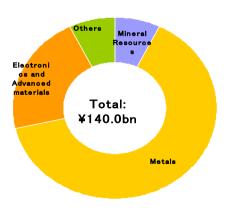
Excluding acquisition of interest

Result Forecast

Including acquisition of interest



06 3-Yr Business Plan



(JPY 100M)
FY07 Result 703
FY08 Result 566
FY09 Forecast 527

Total 1,796

Including acquisition of interest in overseas mines

etc. 461

Amount minus overseas

mine acquisition 1,335

\* Nearly in line with the 06 3-Yr Business Plan

(Interset 461Details)

•Pogo 203

•NAC 37

•Goro PJ 221

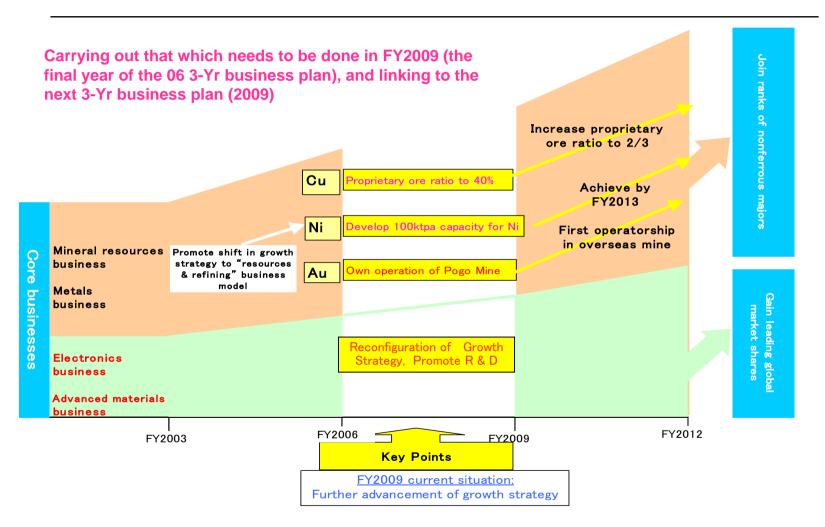
## II. Run-up to 09 3-Yr Business Plan



A Coral Leaf (near CBNC)

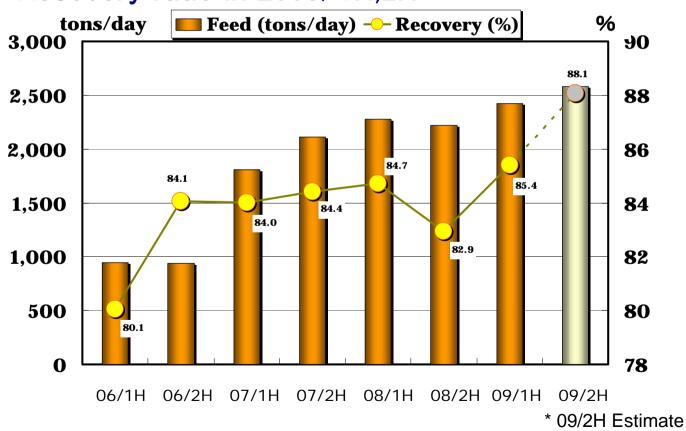
#### II. Run-up to 09 3-Yr Business Plan

## 1) Status of the 2006 3-Yr Business Plan, and Towards the 2009 3-Yr Business Plan



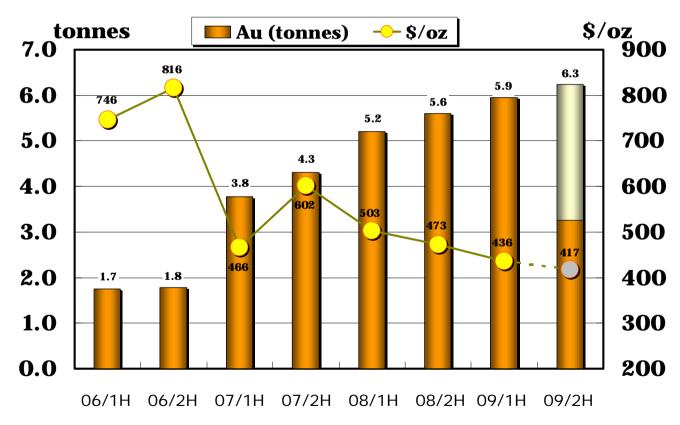
- 2) Situation of Pogo after Acquisition of 100% Interest
  - ① Operation result trend feed amount & recovery ratio

## Big improvement of Feed amount & Recovery ratio in 2009/1H,2H



- 2) Situation of Pogo after Acquisition of 100% Interest
  - ① Operation result trend gold production amount & cost reduction

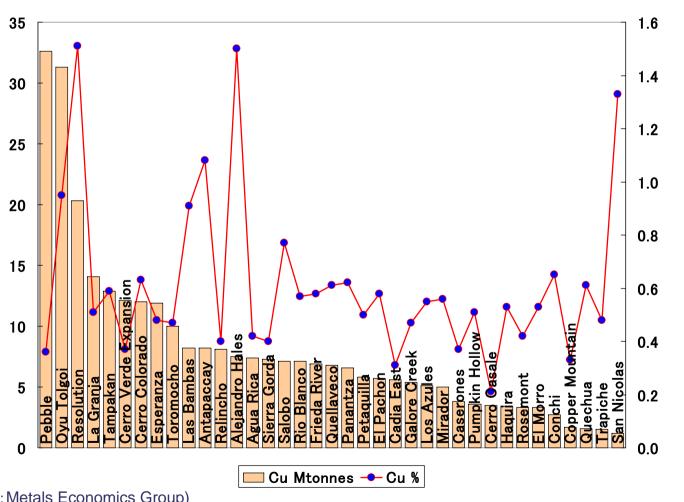
### Achievement of 12t-gold and further cost reduction



\* 09/2H Estimate

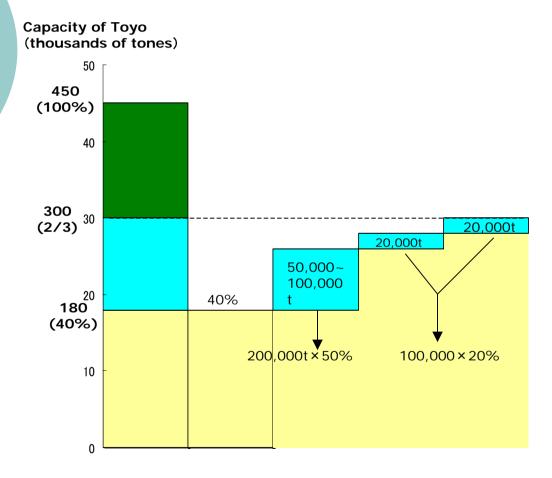
#### II. Run-up to 09 3-Yr **Business Plan**

#### 3) Approach to Increase Proprietary Ore Ratio to 2/3 **①Copper reserves and content of development projects**



3) Approach to Increase Proprietary Ore Ratio to 2/3

2 Measures to acquire copper mines

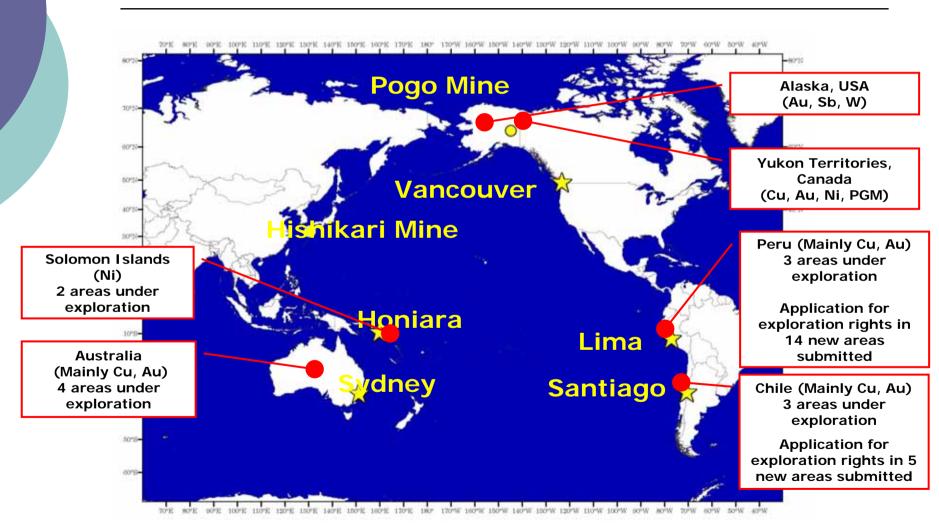


# Method to secure proprietary ore ratio of 2/3 and Cu amount of 300ktpa

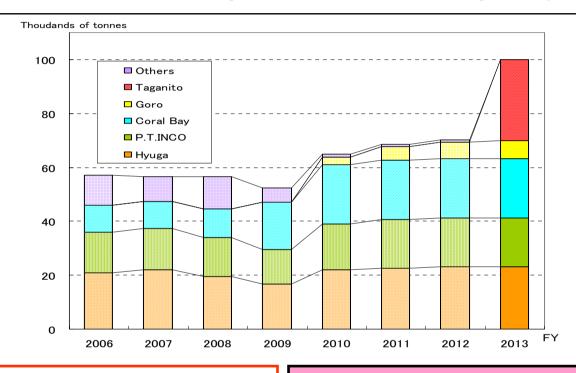
- 1)SMM Development
  From exploration to development
  Projects in 10 year units
  Secure Majority Interest
- 2) Participation in development projects
  Minority Interest: 20-49%
- 3) Increased production at existing mines
- 4) Involvement in operational mines M&A

## II. Run-up to 09 3-Yr Business Plan

4) Main Exploration Activities
FY09 Exploration costs were suppressed, but exploration was actively advanced



### 5) Nickel: Development of 100kt Capacity



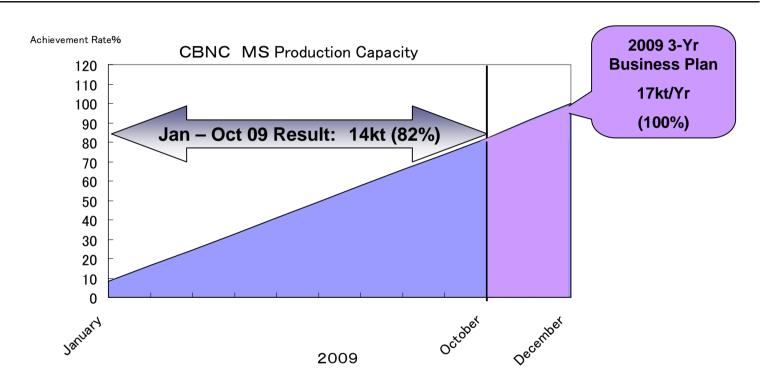
- (1) FY09 CBNC•Ni Refinery

   : vertical startup after expansion
   Coral Bay II: Production launch
   Capa.10kt ⇒ 22kt (product: 17kt)
   Ni refinery 36kt ⇒ 41kt (product33.2kt)
- (2) Goro FY09-4Q production launch

- (3) Taganito: Sept. 14 press release, Capex 1.3Bn USD capacity 30kt, project started, 2013 production to be launched.
- (4) 2013 Ni refinery: Increase capacity from 41kt to 65Kt
- (5) 2010 P.T.INCO 200M-pound production launch: 15kt ⇒ 18kt

### 5) Nickel: Development of 100kt Capacity

1 Vertical startup of CBNC II

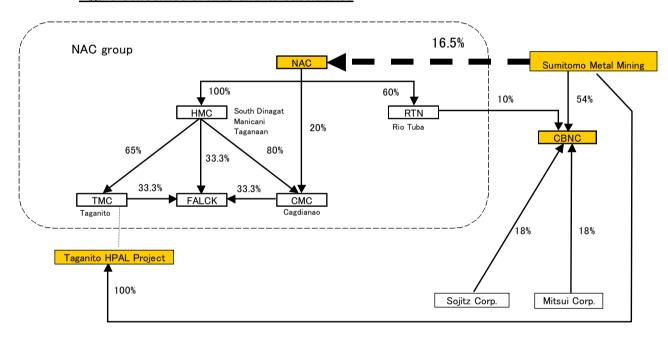


2<sup>nd</sup> line set up smoothly, increase in production as planned →Approx. 20kt of E-Ni production in the 2<sup>nd</sup> half at almost full operation

#### 5) Nickel: Development of 100kt Capacity

### 2 Strengthened relationship with NAC (Philippines)

#### Figure concerned of NAC and its subsidiaries



HMC: Hinatuan Mining Corporation RTN: Rio Tuba Nickel Mining Corporation TMC: Taganito Mining Corporation FALCK: Exploration company CMC: Cagdianao Mining Corporation

CBNC: Coral Bay Nickel Corporation

are affiliated companies of Sumitomo Metal Mining

Strengthened relationship with NAC, the largest Nickel mining company in the Philippines

## I. Run-up to 09 3-Yr Business Plan

## 5) Nickel: Development of 100kt Capacity 3 Taganito project development

#### **Investment 1.3Bn USD**

SMM holds majority interest NAC invests capital

Predicted Operational Period: 30 Years

#### **Schedule**

Sept. 2009 March 2010 2013 Project development
Scheduled start of construction
Completion of Construction
Start test operation
Start of commercial operation

Based on the HPAL process, amount produced in one year of nickel, cobalt mixed sulfides 50kt (Ni 30kt, Co 2.6kt)



#### 6) Electronics & Advanced Materials Business: Reconfiguration of Growth Strategy

**1** Selection and Concentration

Reconstruction of the growth strategy, the promotion of "selection and concentration"

(Semiconductor Materials Division)

"Aiming for a business field where further growth from an operational synergy point of view can be forecast"

"Reduced costs and enhanced competitiveness through increased production efficiency and supply streamlining"

"Involvement in new products where expansion of markets in periphery areas can be expected"

- <Operational Restructuring>
- ①Ajimu Electronics Co., Ltd. (Semiconductor package plating)
  - \*9/29 Release 2010/12 Wind-up of Operations
- 2Shinko Co., Ltd. CSP (Chip Size Package) Wind-up of Operations 2009/9
- 3 Sumiko Tec Co., Ltd./Integrated Distribution

09/9 Shutdown of Gotemba Plant, 09/10 Decommissioning of Mie Warehouse

#### (Advanced Materials Division)

"Narrow down the areas for active expansion with competitiveness and future growth potential in mind"

## ⇒ Environment related operations: "Materials for Solar Batteries" & "Secondary Battery Materials"

<Operational Restructuring>

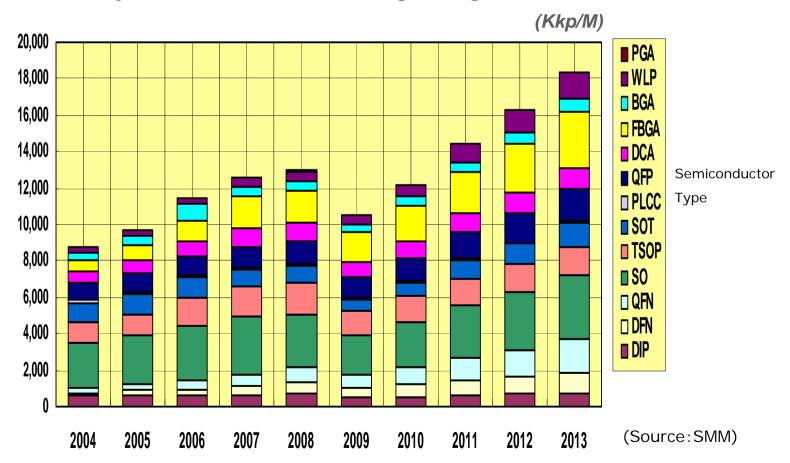
Operations from which withdrawal has started ①YAG crystal Operations ②General Purpose Nickel oxide / Cobalt oxide

#### II. Run-up to 09 3-Yr Business Plan

#### 6) Electronics & Advanced Materials Business: Reconfiguration of Growth Strategy

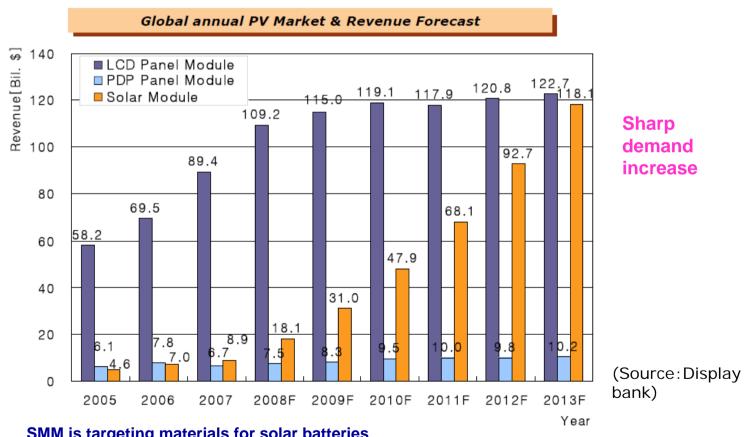
2 Semiconductor demand forecast

#### Actual recovery after 2010 Forthcoming enlargement of demand



#### II. Run-up to 09 3-Yr **Business Plan**

- 6) Electronics & Advanced Materials Business: **Reconfiguration of Growth Strategy** 
  - (3) Estimated demand of solar batteries

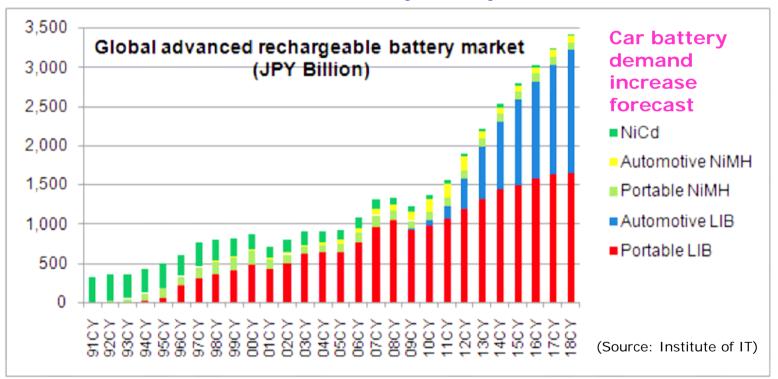


**SMM** is targeting materials for solar batteries

- Target materials for Transparent electrode
- Conductive Silver-Resin paste for Electrode

- 6) Electronics & Advanced Materials Business: Reconfiguration of Growth Strategy
  - 4 Estimated demand of world secondary battery market

#### Estimated demand of world secondary battery market



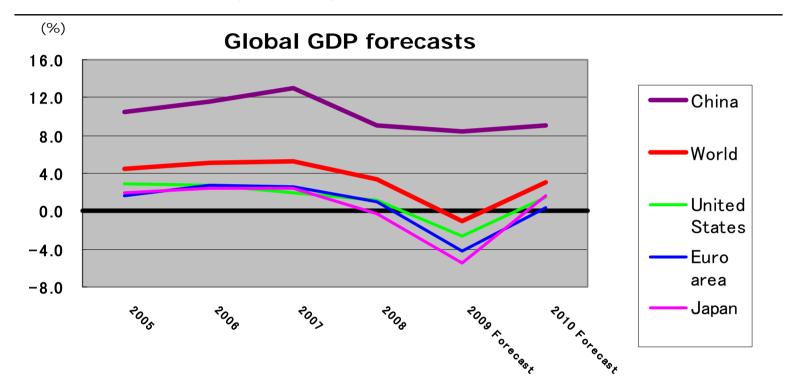
#### **SMM Products**

Nickel Hydroxide as Cathode active material for Nickel hydride batteries of Hybrid Electric Vehicles Lithium Nickel Oxide as Cathode active material for Lithium rechargeable batteries of consumer use and HEV



Pier(CBNC)

### 1) GDP of World, China, and Other Areas

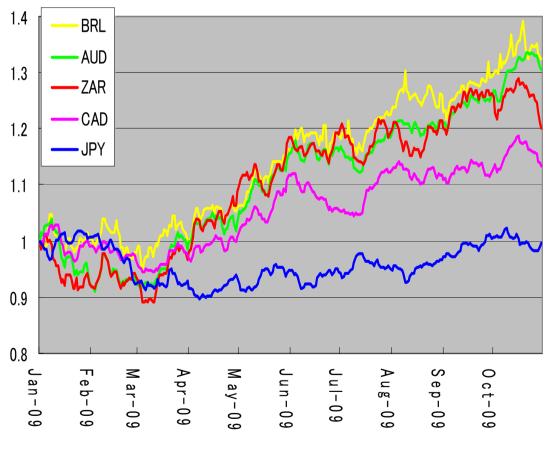


#### [2009 Forecast]

(%)	World	China	USA	Euro area	Japan
09/10Forecast	<b>△</b> 1.1	8.5	△2.7	△4.2	△5.4
09/4Forecast	△1.3	6.5	△2.8	△4.2	△6.2
09/1Forecast	0.5	6.7	△1.6	△2.0	△2.6

(Source: IMF)

### 2) Exchange Rate Movement of Resource-Holder Countries



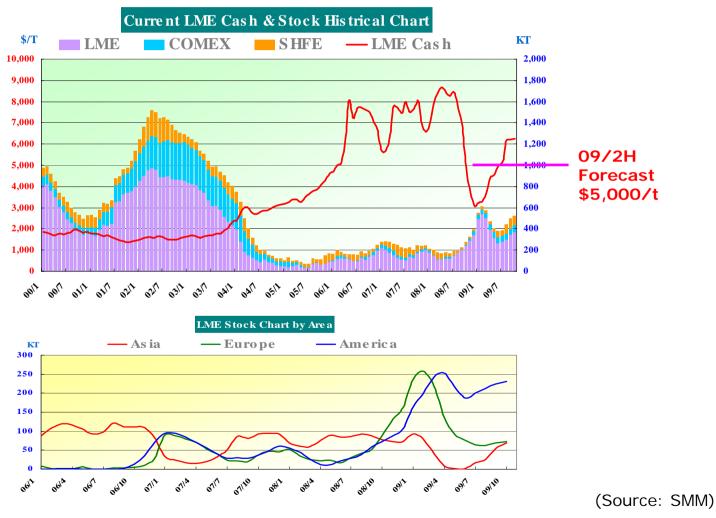
Increase in costs due to strong currencies in resource-holder countries

**Effect of weak USD** 

(Source: SMM)

3)Copper –

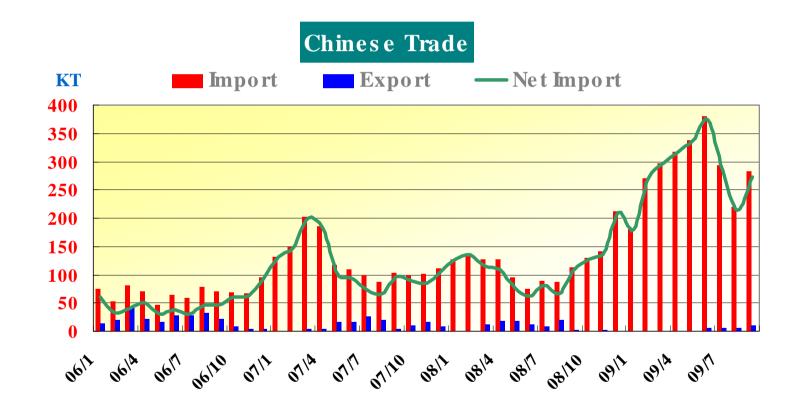
1LME price • LME/COMEX/SHFE stock



SUMITOMO METAL MINING

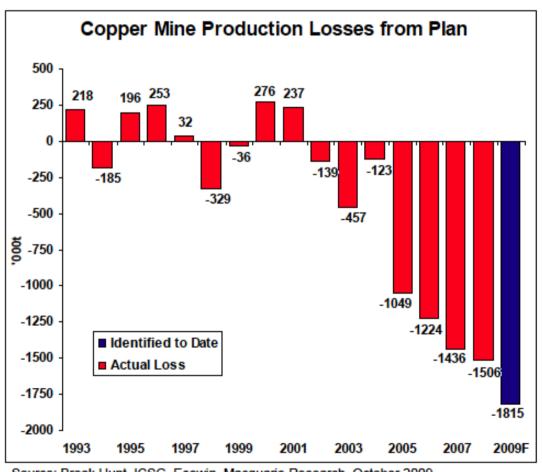
27

3) Copper –2 Copper import by China



(Source: SMM)

## 3) Copper - 3 Disruption



Source: Brook Hunt, ICSG, Ecowin, Macquarie Research, October 2009

### 3)Copper

## 4 Impact of labor agreements

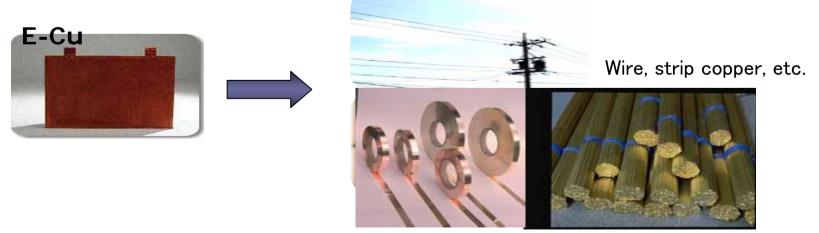
Mine	Owner	Labor Agreement Expiry Date	Production Capacity '08 (000mt)		Status
Peru		•			
Antamina	BHP/Xstrata/ Teck	2009/7/24	Conc	343	'09/7/10∼Negotiation、Deal expected to be reached in October (10/1)
Cerro Verde	Freeport	2011/8/31	Conc+EW	324	Labor Agreement ('08/9~'11/8) Concluded
Chile					
Spence	ВНР	2009/9/31	EW	165	'09/9~12 Labor negotions, Potential strike on October 8th (10/1) →10/13 Start of Strike, 10/16 Production Halted (10/15)
Andina	Codelco	2009/11/30	Conc	220	(10/8) Rejection of proposed agreement before start of official negotiations  → Negotiations scheduled to start this weekend (Week of Oct 19th) (10/20)
Escondida	ВНР	2009/12/5	Conc+EW	1250	'09/9-12 Labor Negotiations, acceptence of BHP proposed wage expected (10/8)  →10/13 Wage increase of 5% over 44 months and approx. bonus of \$25,000 agreed
Chuquicamata	Codelco	2009/12/31	Conc+EW	465	
Radomiro Tomic	Codelco	2009/12/31	EW	285	
Candelaria	Freeport	2013/7/31	Conc	179	Labor Agreement ('09/8~'13/7) Concluded
Production volume of Copper liable to be affected				1,135	

(Source: Macquarie Research, SMM)

### 3)Copper ∼

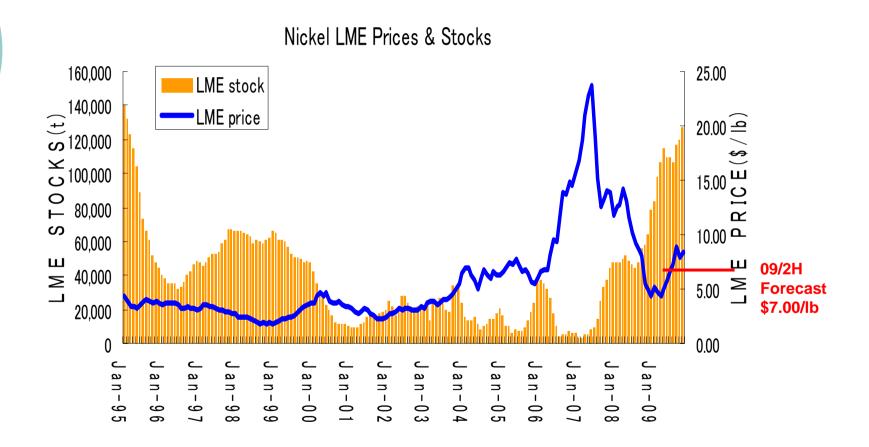
## ⑤ Supply & Demand / Price forecasts

		ICSG	Macquarie	SMM	
(kt)	2008	2009	2010	2009	2009
Output	18,232	18,093	18,218	17,793	18,100
Consumption	18,006	17,725	17,679	17,356	17,900
Balance	226	368	539	437	200
FY(\$/t)	5,864	_	1	_	-
CY(\$/t)	6,956	-	1	5,247	_
Estimated Timing	2009.10			2009.9	2009.4



## 4) Nickel

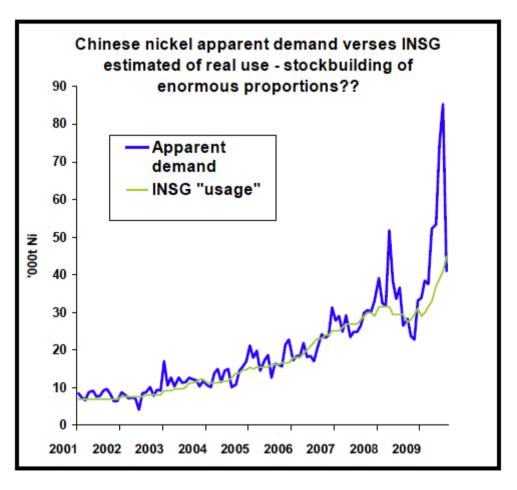
## **1)LME price & stock**



(Source: SMM)

### 4) Nickel

## 2 Apparent Chinese demand

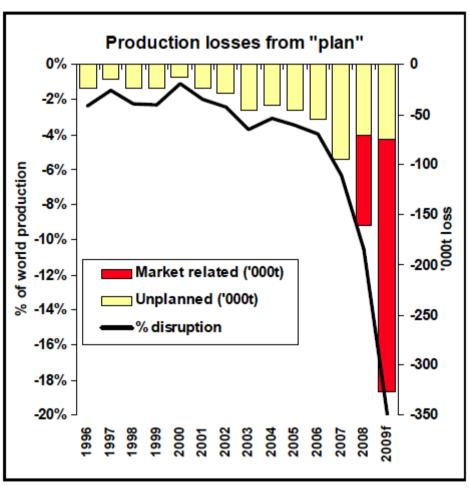


Apparent demand=
Production + Import
- Export

Source: INSG, Macquarie, October 2009

### 4) Nickel

### 3 Disruption, effect of labor agreements



(Strike)
Vale Inco Sudbury (55ktpa)
Voisey's Bay (85ktpa)

(Halted Production)
BHP Ravensthorpe (45ktpa)
Xstrata Falcondo (30ktpa)

(Projects delay)

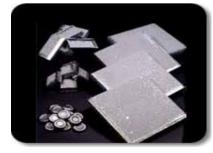
- •Ramu (33ktpa)
- Onca Puma (58ktpa)
- Barro Alto (43ktpa)
- Vermelho (46ktpa)Total 300ktpa Approx.

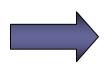
Source: Macquarie Research, October 2009

### 4) Nickel ~ ④ Supply & Demand, Price forecasts

	SMM			INSG			Macquarie
(Kt)	2007	2008	2009	2008	2009	2010	2009
Output	1,395	1,363	1,263	1,380	1,280	1,440	1,321
Consumption	1,377	1,289	1,247	1,290	1,210	1,350	1,322
Balance	18	74	16	90	70	90	-1
Estimated Timing	2009.9		2009.10			2009.9	
FY (\$/Ib)	15.47	7.48	6.78	_	-	ı	6.83
Ni Pig Iron (Excluded)	85	71	85	_		1	
Stainless steel	28,525	25,913	24,140	_	_	_	25,098

#### **Nickel**



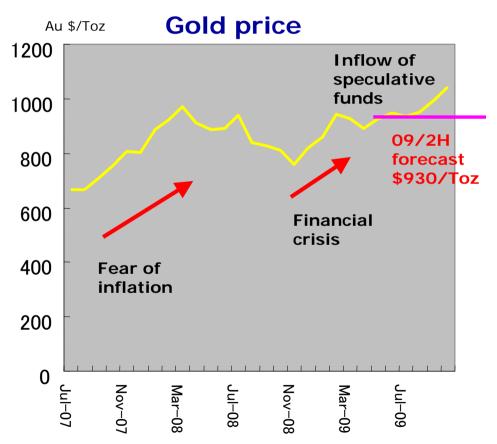






Special/stainless steel, electronic materials, etc.

### 5) Gold ~ Price



## Gold reserves by public sectors

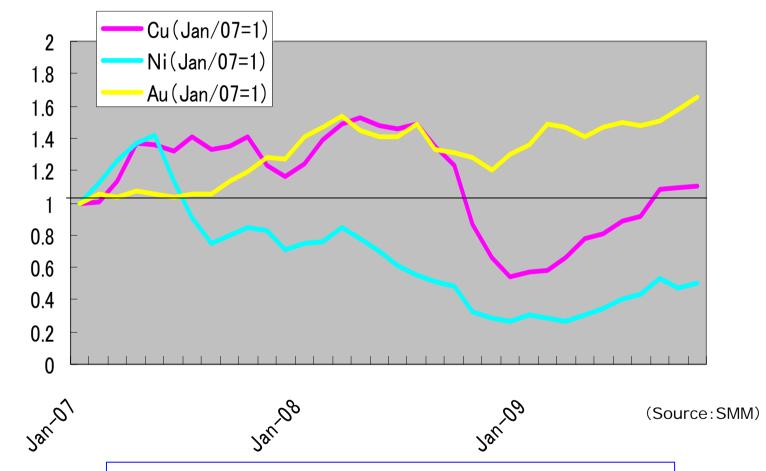
(June 30, 2009)

	Sectors	Gold reserves (t)	Gold /foreign reserves (%)
1	USA	8,133	78.3%
2	Germany	3,412	69.5%
3	IMF	3,217	_
4	Italy	2,451	66.1%
5	France	2,450	73.0%
6	China	1,054	1.8%
7	Switzerland	1,040	37.1%
8	Japan	765	2.1%
9	Nether- lands	612	61.4%
10	Russia	536	4.0%
14	India	357	4.0%

(Source:SMM)

# ■. Our Business Environment and Metal Market

## 6) SMM Metals Portfolio (Cu-Ni-Au)



Price trends of SMM's metals: Cu, Ni, Au

# IV. Financial Highlights



The first product of 2nd production line (CBNC)

## 1) Consolidated financial summary ① Annual trend

(100Millions of JPY)

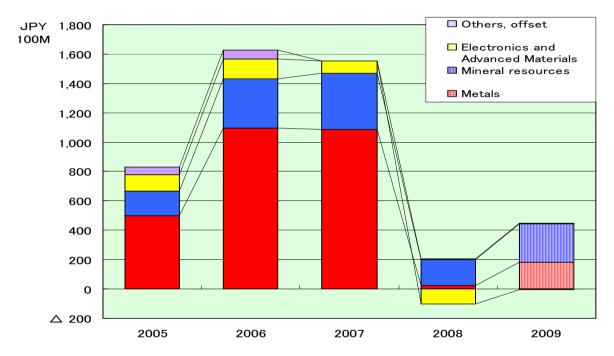
	FY05	FY06	FY07	FY08	FY09
					Forecast
Sales	6,256	9,668	11,324	7,938	6,650
Operating profit	828	1,626	1,554	105	440
Recurring profit	997	2,053	2,179	326	540
Net income	628	1,261	1,378	220	360
Net income/share (JPY)	109.96	220.49	238.13	38.87	64.23
Dividend/share (JPY)	14.00	27.00	30.00	13.00	14.00

# 1) Consolidated financial summary ② Half year trend

### (100Millions of JPY)

	FY07 1H	FY07 2H	FY08 1H	FY08 2H	FY09 1H	FY09 2H Forecast
Sales	5,932	5,392	4,905	3,033	3,259	3,391
Operating profit	1,005	549	472	△367	233	207
Recurring profit	1,371	808	794	△468	278	262
Net income	915	463	521	△301	169	191
Dividend/share (JPY)	15.00	15.00	13.00	0.00	7.00	7.00

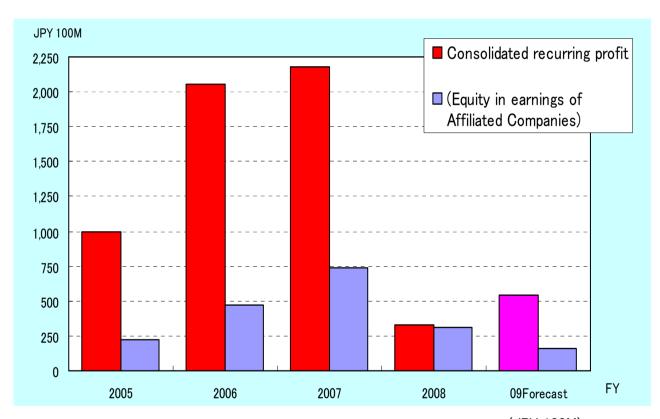
## 2) Operating Income, by Segment



(JPY 100M)

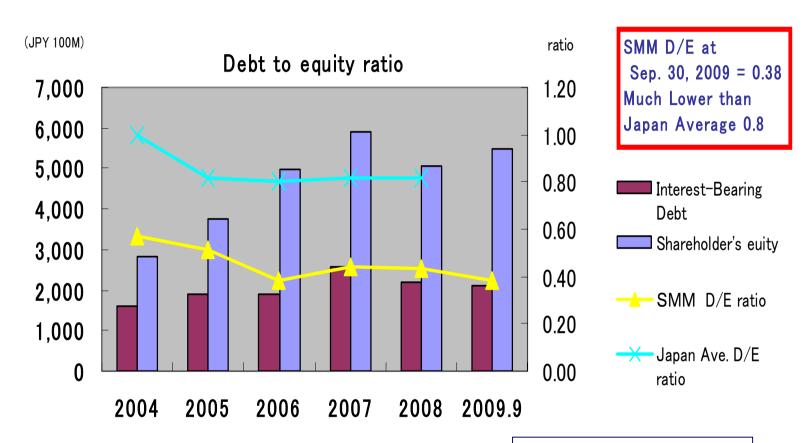
Division	2005	2006	2007	2008	2009
Division	2003	2000	2007	2008	Forecast
Mineral resources	497	1,096	1,088	24	182
Metals	171	335	381	177	258
Electronics and	112	136	82	△ 102	<b>∧</b> 5
Advanced materials	112	130	02	<u> </u>	
Others, offset	48	59	3	6	5
TOTAL	828	1,626	1,554	105	440

### 3) Earnings from Equity in Affiliated Companies



				(J	<u>PY 100M)</u>
	2005	2006	2007	2008	09 Forecast
Consolidated recurring profit	997	2,053	2,179	326	540
(Equities in earnings of Affiliated Companies)	219	467	740	315	150

### 4) D/E Ratio ~ Sound Financial Status Maintained

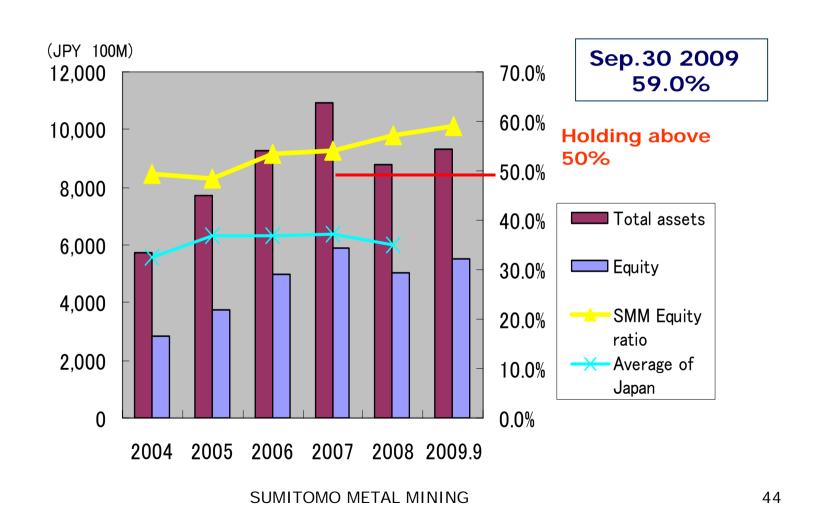


JCR Ranking:

Short-term: J-1 (highest level)

Long-term: A+ (top 30%)

### 5) Equity Ratio ~ Sound Financial Status Maintained



### 6) Sensitivity

### Billions of Yen/FY09

	Fluctuation	FY09(Forecast)		
Cu	±10¢/lb	1.4/2.8		
Ni	±10¢/lb	0.7/0.7		
Au	±10\$/Toz	0.5/0.5		
¥/\$	±1 ¥/\$	0.7/0.7		

### Remarks

- 1) Operating income / Recurring profit
- 2) USD/JPY translation applied to RC-related only. (Overseas profit effects excluded).

### Glossary

#### Mineral resources and metals

### Metal trading London Metal Exchange (LME)

The LME specializes in trading of non-ferrous metals such as copper, nickel, aluminum, lead and zinc. The LME trading prices for metals are used as the international pricing benchmarks for sales of refined metal and purchases of refining ores.

#### TC/RC

Treatment Charge (TC) and Refining Charge (RC) are commonly used in the terms of purchase for copper concentrate or nickel ore for refining. They are amounts designed to cover refining costs. For example, copper concentrate contracts may define a purchase price based on the LME price at a certain date, minus the TC or RC being used at the time.

#### London fixing

Gold is not traded on the LME. Its price is determined for each transaction between market participants. The financial institutions in the London Bullion Market Association (LBMA) agree a standard price for gold based on these transactions and publish it on the morning and afternoon of each trading day. This "London fixing" price is the benchmark for trading in gold.

#### Pound (lb)

Part of the imperial system of measures, the pound is the standard unit of weight used in measuring and pricing base metals such as copper and nickel, and in TC/RC calculations. One pound is equal to 453.59 grams; an imperial ton equals 2.204.62lb.

#### Troy ounce (toz)

The troy ounce is the standard unit of weight for precious metals such as gold and silver. It equals approximately 31.1 grams. It is named after Troyes, a city in the Champagne region of central France that was the site of a major market in Europe in medieval times. Originally used as a unit of exchange for valuing goods in terms of gold or silver weights, the troy ounce is still used today in gold trading.

#### 2) Metal refining

#### Smelting and refining

Refining processes extract valuable metals from ores or other raw materials. They fall into two basic types: hydrometallurgical (wet) and pyrometallurgical (dry). At SMM's Toyo facilities in Ehime Prefecture, the copper concentrate pre-processing undertaken at Saijo uses pyrometallurgical processes and the nickel refining at the Niihama site uses hydrometallurgical processes entirely. The term 'smelting' is used for the extraction of

#### Pyrometallurgical refining

The precursor ore is melted at high temperature in a furnace, and refining techniques are applied to separate the metal in a molten state. Although large amounts of ore can be processed at one time, the equipment needs periodic maintenance for heat proofing.

#### Hydrometallurgical refining

The ore and impurities are dissolved in a solution, and chemical reactions are used to separate out the metal. This approac allows continuous and stable refining, but incurs addition costs due to the refining chemicals consumed.

#### 3) Metal ores

#### Sulfide ores

These ores contain copper, nickel or other metals chemical bonded to sulfur. Since the application of heat breaks thes bonds, releasing the sulfur, such ores are generally refined u ing pyrometallurgical techniques.

#### Oxide ore

These ores contain metals in oxidized forms. Unlike sulfid ores, oxides need much more energy to achieve melting. For this reason, the hydrometallurgical approach is generally use to refine these ores.

#### Copper concentrates

Used as raw materials in copper smelting, copper concentrates have a copper content of about 30% by weight. The remainder consists mostly of sulfur and iron. Copper concentrates are made mostly from sulfide ores. Ores extracted from overseas mines have a typical grade of about 1%. The ores are then "dressed" at the mine to increase the purity and produce concentrate. Most of the copper ores imported by SMM for smelting in Japan are concentrates.

#### Nickel oxide ores

Whilst the higher-grade sulfide ores are used predominantly in nickel refining, nickel oxide ores are more prevalent than nickel sulfides. The sulfide-oxide ratio in current nickel reserves is believed to be about 3:7. High refining costs and technical issues have limited use of oxide ores in nickel refining to date, but SMM has succeeded in refining nickel from low-grade oxide ores based on HPAL technology.

#### Mixed sulfide (MS) ores

CBNC produces a mixed nickel-cobalt sulfide intermediate containing about 55–56% nickel by weight. This is used as a raw material in electrolytic nickel production.

#### Matte

A matte is another term for metal sulfides. For raw material, electrolytic nickel production at SMM also uses a nickel matte (of about 77–78% purity) sourced from PT Inco.

#### Proprietary ore ratio

This ratio is the proportion by volume of ore procured from overseas mining interests relative to the overall volume of smelting ores used as raw materials. Typically, off-take rights are proportional to the equity interest in a mine. In the case of Cerro Verde, SMM has secured 50% off-take rights for the first ten years of production from 2006, based on a 21% equity interest.

### Glossary

#### 4) Nickel production process Coral Bay Nickel Corporation (CBNC)

Based in the Philippines, this SMM subsidiary produces mixed nickel-cobalt sulfides using HPAL technology and exports the raw materials to the SMM Group's nickel refining facilities in Niihama, Ehime Prefecture.

#### High Pressure Acid Leaching (HPAL)

HPAL technology enables the recovery of nickel from nickel oxide ores that traditionally were difficult to process. SMM was the first company in the world to apply it successfully on a commercial scale. The oxide ores are subjected to high temperature and pressure and reacted under stable conditions with sulfuric acid to produce a nickel-rich refining intermediate.

#### Matte Chlorine Leach Electrowinning (MCLE)

MCLE is the technology used in the manufacturing process at SMM's nickel refinery. The matte and mixed sulfide ores are dissolved in chlorine at high pressure to produce high-grade nickel using electrolysis. MCLE is competitive in cost terms, but poses significant operational challenges. Other than SMM, only two companies are producing nickel based on this kind of technology.

### 5) Main applications for metals

Copper is fabricated into wires, pipes and other forms. Besides power cables, copper is used widely in consumer applications such as wiring in vehicles or houses, and in air conditioning systems.

#### Electrolytic nickel

This form of nickel, which has a purity of at least 99.99%, is used in specialty steels, electronics materials and electroplating, among other applications. SMM is the only producer of electrolytic nickel in Japan.

#### Ferronickel

Ferronickel is an alloy containing nickel (about 20%) and iron. Its main use is in the manufacture of stainless steel, which is about 10% nickel by weight. Based in Hyuga, Miyazaki Prefecture, SMM Group firm Hyuga Smelting produces ferronickel.

#### Gold

Gold is in demand worldwide for investment and decorative purposes. Gold is widely used in Japanese industry within the electronics sector because of its high malleability and ductility. Part of SMM's gold production goes to SMM Group companies engaged in fabricating and selling bonding wire.

#### Semiconductor and advanced materials

#### Copper-clad polyimide film (CCPF)

CCPF is a polyimide film that is coated using a copper base. It is used as a material for making COF substrates. SMM commands a global market share of over 70% of the CCPF supplied for use in large liquid crystal displays.

#### Chip-on-film (COF) substrates

COF substrates are electronic packaging materials used to make integrated circuits for LCD drivers. They connect these circuits to the LCD panel.

#### Lead frames (L/F)

Lead frames are electronic packaging materials used to form connections in semiconductor chips and printed circuit boards. They contain thin strips of a metal alloy containing mostly nickel or copper.

#### Bonding wire

Composed of gold wire that is just a few micrometers thick, bonding wire is used to make electrical connections between lead frames and the electrodes on semiconductor chips.

#### Secondary batteries

Secondary batteries are ones that can be recharged and used again. SMM supplies battery materials that are used in the anodes of nickel metal hydride batteries and lithium-ion rechargeable batteries, which supply power for hybrid vehicles or notebook computers, among other consumer applications.

# Note

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