



# Research

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STEELS

METALS & MINING

## Metals & Mining Weekly

*Copper counters the carnage*



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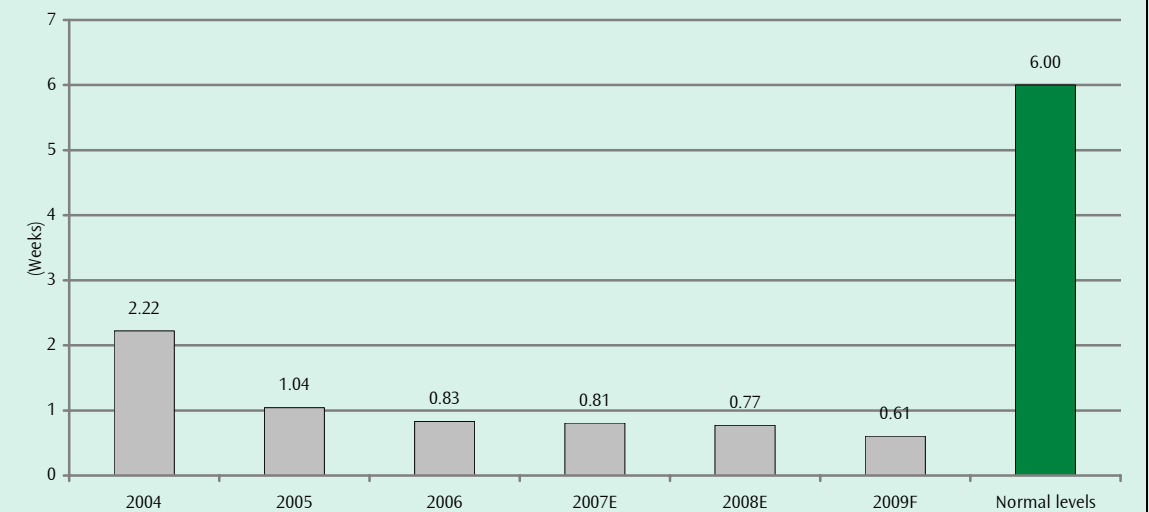
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- **Robust fundamentals to keep copper prices at US\$3/lb**
- **Buy maintained on copper producers FCX, IMN and FM**
- **Paramount Gold and Silver—site tour of San Miguel project**

### Prices to hold at the US\$3/lb level through 2009

We expect the copper market to withstand the current downward trend in the financial markets. Prices should average US\$3/lb or higher through 2009, providing strong earnings for many of our covered companies. As shown in Exhibit 1, total inventories (metal exchange + producer + merchant + consumer) should remain critically low through 2009, underpinning prices.

Exhibit 1: Copper inventories in weeks of consumption\*



\* Includes consumer, producer, merchant and exchange inventories  
Source: Desjardins Securities, LME, WBMS

Please see disclosure section on pages 18–19 for company specific disclosures, analyst certification and legal disclaimers.

We do not expect any rise in inventories as we forecast supply and demand will be in balance through 2009—see Exhibit 2.

Exhibit 2: Copper supply-demand forecast								
Year-end Dec-31 (KMT)	2002	2003	2004	2005	2006	2007E	2008E	2009F
Western World mine production	-300	-600	11,850	12,225	12,500	12,800	13,500	14,100
Russia	628	630	638	652	675	680	700	700
China	593	628	674	690	780	925	925	925
Other Former Communist Countries (FCC)	1,338	1,360	1,360	1,300	1,370	1,425	1,500	1,600
Total FCC	2,559	2,618	2,672	2,642	2,825	3,030	3,125	3,225
Total World mine production	2,259	2,018	14,522	14,867	15,325	15,830	16,625	17,325
SX-EW production	-2,635	-2,691	-2,650	-2,660	-2,875	-3,200	-3,400	-3,600
Mine production available for smelting	-376	-673	11,872	12,207	12,450	12,630	13,225	13,725
Smelter equivalent (at 98%)	-368	-660	11,635	11,963	12,201	12,377	12,961	13,451
Indicated change in concentrate stocks	-11,381	-11,629	325	-32	51	-273	-190	26
Concentrate consumed by primary smelters	11,013	10,969	11,310	11,995	12,150	12,650	13,150	13,425
Scrap consumed by primary smelters	950	950	1,050	1,100	1,400	1,500	1,600	1,800
Western World primary smelter production	8,672	8,450	8,650	8,945	9,200	9,400	9,500	9,600
Russia	754	733	760	775	780	780	800	825
China	1,249	1,408	1,615	1,950	2,200	2,600	3,000	3,300
Other FCC	1,288	1,328	1,335	1,425	1,370	1,370	1,450	1,500
Total FCC	3,291	3,469	3,710	4,150	4,350	4,750	5,250	5,625
World primary smelter production	11,963	11,919	12,360	13,095	13,550	14,150	14,750	15,225
Refined production from secondary blister & scrap fed directly to refineries	753	664	870	860	1,126	800	800	975
Western World primary refinery production	11,723	11,440	11,655	11,810	12,250	12,525	12,850	13,150
Russia	861	835	900	925	975	975	1,000	1,000
China	1,632	1,836	2,125	2,670	3,076	3,500	3,800	4,350
Other FCC	1,135	1,163	1,200	1,210	1,250	1,150	1,300	1,300
Total FCC	3,628	3,834	4,225	4,805	5,301	5,625	6,100	6,650
Total World refined production	15,351	15,274	15,880	16,615	17,551	18,150	18,950	19,800
Total World refined metal supplies	15,351	15,274	15,880	16,615	17,551	18,150	18,950	19,800
Refined consumption	14,910	15,628	16,955	17,000	17,610	18,150	18,950	19,850
% chg (yoy%)		4.8	8.5	0.3	3.6	3.1	4.4	4.7
Metal balance	441	-354	-1,075	-385	-59	0	0	-50
Price LME (US\$/lb)	0.73	0.79	1.26	1.59	3.02	3.23	3.00	3.00
Weeks of consumption	6.811	5.320	2.224	1.040	0.830	0.805	0.771	0.605

Source: Desjardins Securities

The copper market should remain tight because of three factors:

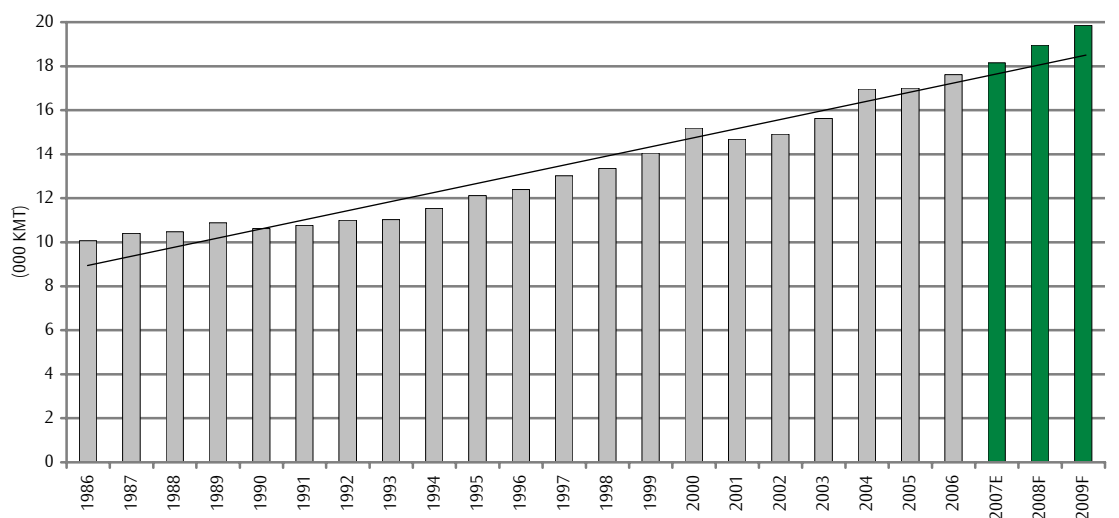
**China to remain a net importer.** As shown in Exhibit 3, we forecast China will continue to record net imports of roughly 1 MMT/yr through 2009. Chinese production is forecast to grow by more than 20% from 2007–09. However, Chinese demand (fuelled by infrastructure, electrification and the manufacture of consumer goods) should continue to outstrip domestic supply (although the rate of growth should slow from the double-digit rate of 2007).

**Exhibit 3: Chinese copper market**

Year-end Dec-31 (KMT)	2003	2004	2005	2006	2007E	2008E	2009F
Production	1,836	2,125	2,670	3,076	3,500	3,800	4,350
Demand	3,020	3,565	3,850	4,050	4,650	5,000	5,400
Market balance	-1,184	-1,440	-1,180	-974	-1,150	-1,200	-1,050

Source: Desjardins Securities

**‘Steady’ demand.** Total World demand should, according to our forecast, continue on the trend established over the last 20 years. Much has been written about the high growth rate of Chinese copper demand. However, not only is China following the same growth pattern as other countries have demonstrated during the process of industrialization, but a significant proportion of its demand has resulted from the replacement of demand from other countries ie ‘cannibalization’ (the process by which many copper goods are now manufactured in China as opposed to other regions). As for the US, we have already seen a ‘recession-like’ contraction as copper demand fell 4% in 2007. Our forecast 2009 level of 2,425 KMT compares with the 3,025 KMT consumed by the US in 2000. In summary, we expect World copper demand to remain on an established, moderate, sustainable growth pattern over the next two years—see Exhibit 4.

**Exhibit 4: Copper consumption trend**


Source: Desjardins Securities

**Incremental supply to be absorbed by the market.** In order to match demand and maintain a balanced market, existing mines have to operate at maximum operating levels and incremental capacity (as listed in Exhibit 5) must come onstream as planned, without any delay. Note that of the additional 795 KMT of mine production we expect this year, 354 KMT comes from new mines and expansions. The balance comes from higher production at existing mines, notably Collahuasi (+90 KMT), El Teniente (+30 KMT), Grasburg (+80 KMT), Los Pelambres (+45 KMT), Pinto Valley (+45 KMT) and Bingham Canyon (+40 KMT).

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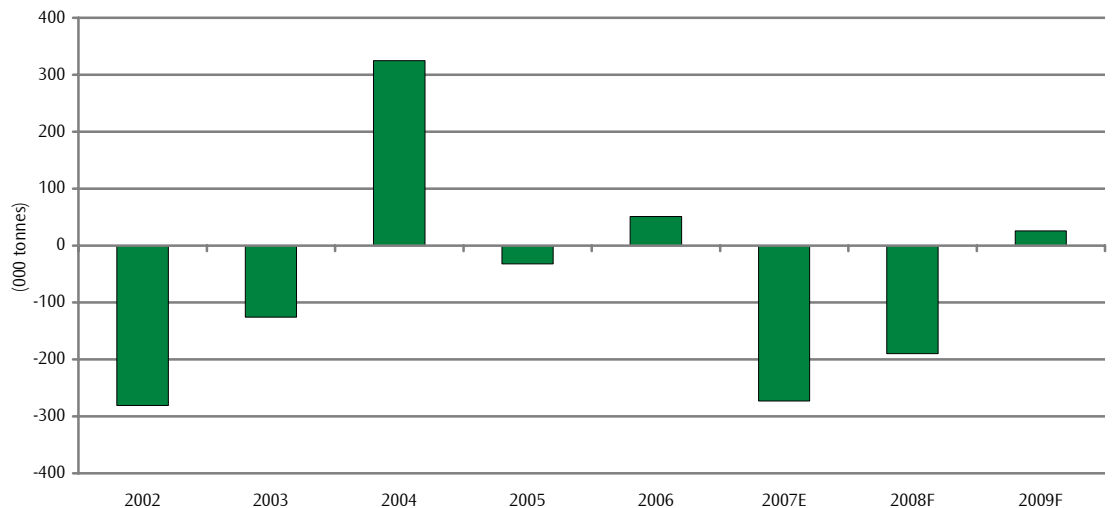
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**Exhibit 5: Incremental mine capacity**

Western World copper mines—maximum incremental metal production annually (KMT)		2008E	2009F	2010F
Cerro Verde mill expansion	Peru	50	0	0
Spence SX-EW	Chile	60	0	0
Escondida	Chile	10	0	30
Sungun	Iran	0	0	0
Chapada	Brazil	22	4	-20
Piedras Verdes SX-EW	Mexico	3	0	0
Varvarinskoye	Kazakhstan	0	0	0
Carlota SX-EW	US	0	11	12
Nifty mill	Australia	0	0	0
Phoenix (ie Battle Mountain)	US	0	0	0
Mantos de la Luna SX-EW	Chile	5	0	0
Tocopilla SX-EW	Chile	0	0	0
Sin Quyen	Vietnam	0	0	0
Cerro Corona	Peru	20	13	0
Cerro Lindo	Peru	5	5	0
Gaby Sur SX-EW	Chile	0	120	20
Lumwana	Zambia	0	25	25
Mirador	Ecuador	0	10	10
Las Cruces SX-EW	Spain	20	40	5
One One Eight SX-EW	Brazil	20	20	0
Safford	US	54	54	0
Morenci	US	25	0	0
Frontier	DRC	60	0	0
<b>Annual incremental</b>		<b>354</b>	<b>302</b>	<b>82</b>

Source: Desjardins Securities, CRU, Brook Hunt

Even if this forecast is met, smelters will have to draw down stockpiles of mine production or concentrate in order to have sufficient feed to achieve our anticipated production level for this year—see Exhibit 6.

**Exhibit 6: Change in mine concentrate stockpiles**


Source: Desjardins Securities

In addition, we have assumed levels of scrap fed directly to refineries remain at 2007 levels. Given the likelihood of mines producing at maximum levels, new capacity coming onstream without delay and the possible availability of stockpiled concentrate and scrap, we would argue that there is a substantial risk that the actual level of worldwide refined production in 2008 is significantly below our forecast level.

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We believe that the robust fundamentals of the copper market should support a price of at least US\$3/lb through 2009. The copper producers we cover, together with earnings estimates, price targets and the companies' leverage to the copper price are listed below.

**Exhibit 7: Copper producers—EPS estimates, target prices, ratings and copper price sensitivity**

	EPS (C\$)		Target	Rating	Sensitivity
	2008E	2009F	price (C\$)		
<b>Pure plays</b>					
Freeport-McMoRan (US\$)	7.16	8.01	120.00	Buy	A US\$0.20/lb chg in the copper price impacts earnings by US\$1.10/share
Inmet Mining	7.34	10.12	101.20	Buy	A US\$0.10/lb chg in the copper price impacts net income by C\$0.28/share
First Quantum (US\$)	8.75	9.00	108.00	Buy	A US\$0.10/lb chg in the copper price impacts net income by US\$0.24/share
<b>Other producers of copper</b>					
Teck Cominco	3.75	4.70	49.00	Buy	A US\$0.10/lb chg in the copper price impacts net income by C\$0.09/share
HudBay	2.02	2.38	27.00	Top Pick	A US\$0.10/lb chg in the copper price impacts net income by C\$0.09/share
GobiMin (US\$)	0.38	0.50	5.05	Buy	A US\$0.50/lb chg in the copper price impacts earnings by US\$0.01/share

Source: Desjardins Securities, company reports

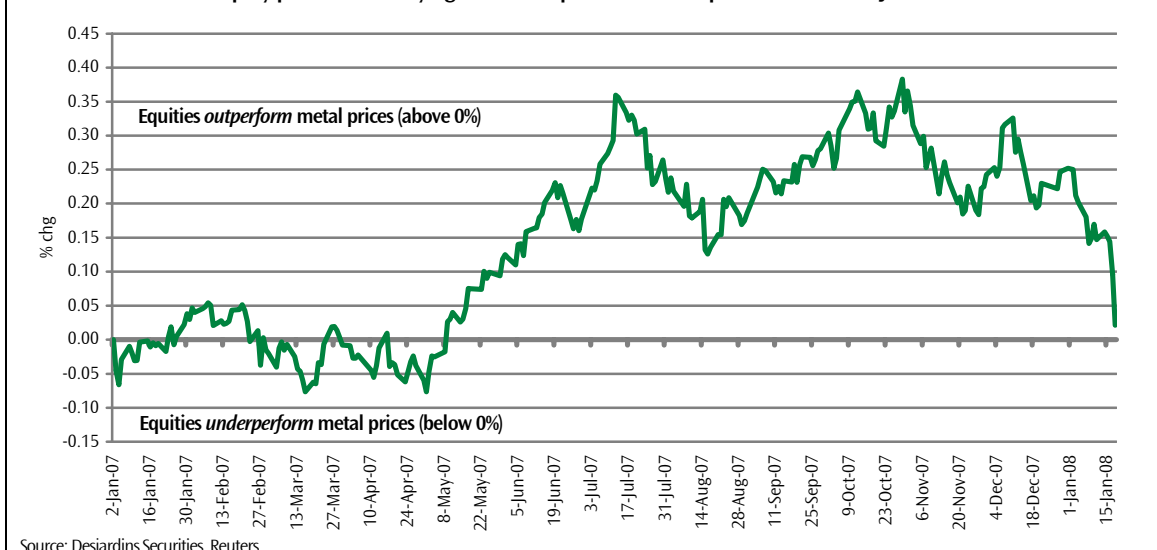
We do not expect any rise in inventories as we forecast supply and demand will be in balance through 2009—see Exhibit 2.

## Base metal equity prices decline—now less expensive compared with underlying metal prices

**Shares of North American mining companies—no longer 'expensive' compared with the underlying commodities.** The substantive current downward correction in the average share prices of North American base metal producers has outpaced declining base metal prices. Since November 29, 2007, the trend in the price of base metal equities has been one of 'underperformance' relative to the change in underlying base metal prices when measured from the beginning of 2007 (see Exhibit 8). We use the Metals & Mining sub-index on the TSX to measure movements in base metal equities and compare this to changes in the LME price index (LMEX).

In terms of percentage change, we note that the outperformance of equity prices compared with base metal prices has declined from 38% on November 29, 2007 to only 2% based on yesterday's (January 21, 2008) levels. In fact, in relative terms, the decline in equity share prices experienced on a 2008 year-to-date basis has outpaced the change in underlying base metal prices by 25%. Year to date, the Metals & Mining sub-index has fallen approximately 140 points or 19% to the current level of 640 compared with a 177-point or 5.2% increase to 3570 for the LMEX. In essence, equity prices are significantly less expensive relative to underlying base metal prices than they were through the June–December 2007 period.

**Exhibit 8: Base metal equity prices vs underlying metals—equities at least expensive level since June 2007**



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## Paramount Gold and Silver Corp.—site tour of San Miguel project<sup>1</sup>

Paramount Gold and Silver Corp. (PZG, TSX/AMEX) is an Ottawa-based exploration company focused on silver-gold projects in northern Mexico. The company has 59.36m fully diluted shares outstanding and working capital of approximately US\$14.35m as at September 30, 2007.

On January 15–16, we had the opportunity to tour the San Miguel project with Charles Reed, Manager of Exploration (Mexico) and a director of Paramount, and Lawrence Segerstrom, Chief Operating Officer.



The San Miguel project is located in the state of Chihuahua in the Sierra Madre Occidental mountain range, approximately 400 km from the city of Chihuahua and 20 km north of the town of Temoris (population 1,500). Paramount has earned a 70% stake in the project, with the other 30% held by Tara Gold Resources Corp. (TRGD, OTCBB).

Less than 10 km to the east is the Palmarejo project, operated by Palmarejo Silver and Gold Corporation before it was bought by Coeur d'Alene Mines Corporation (CDM, TSX/CDE, NYSE) in 2007 for US\$1.1b. At the time of the purchase, the project hosted measured and indicated resources of 88.7m ounces of silver and 1.0m ounces of gold, and an inferred resource of 61.4m ounces of silver and 0.7m ounces of gold. The Palmarejo project is expected to begin production in early 2009 at an annualized rate of 10.4m ounces of silver and 115,000 ounces of gold and an initial minelife of nine years.

### History

Mining in the San Miguel district dates back to 1620 and occurred as recently as the 1970s though on a small-scale basis. Intermittent drilling occurred from the 1950s to the 1990s. Paramount has embarked on the first major modern exploration effort on the concessions with geologic mapping, trenching and diamond drilling beginning in the spring of 2006.

### Targets

To date, Paramount has diamond-drilled a total of approximately 27,000 metres (20,000 metres in 2007). One drill is currently turning at the San Miguel target, with another scheduled to arrive on the property in February. Assay results from approximately 9,000 metres are still to be released.

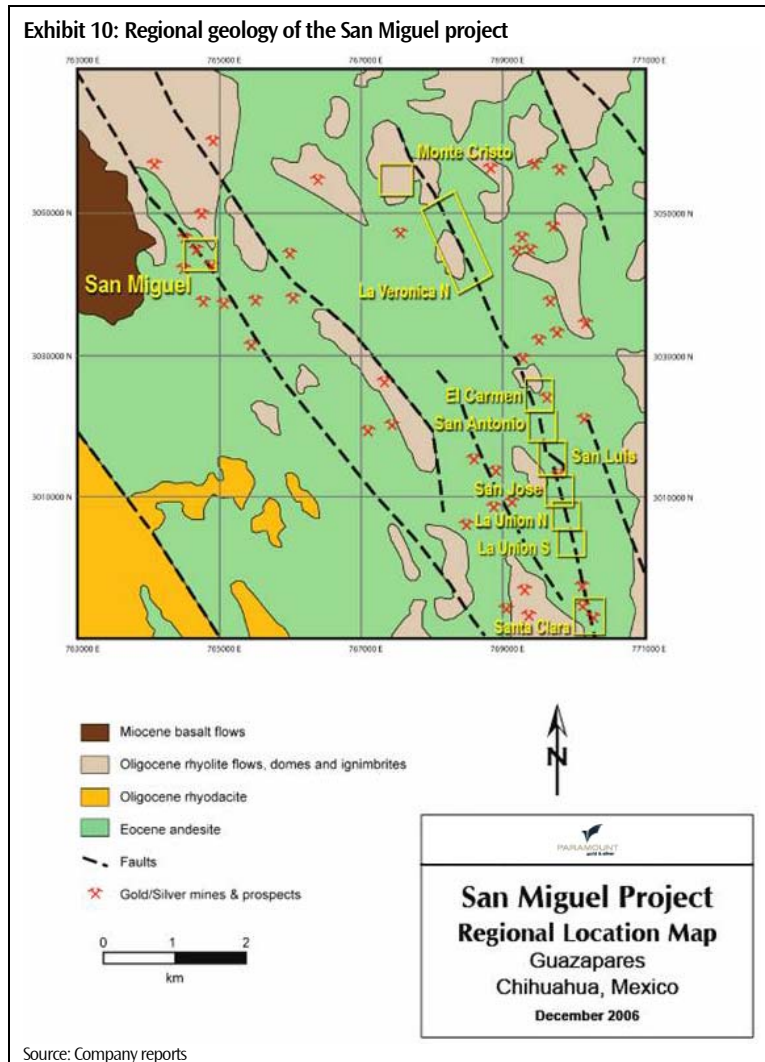
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<sup>1</sup> Contributed by Desjardins Securities Gold Analyst Craig Stanley (416) 867-3424, craig.stanley@vmd.desjardins.com

The project contains a number of targets that can be grouped as follows:

- Silver-rich area from Santa Clara in the south to El Carmen (including the gold-rich, past-producing San Jose mine),
- Gold-rich La Veronica and Monte Cristo (bulk tonnage) targets in the north, and
- Gold-rich San Miguel target to the east.



### Resource

In March 2007, Paramount released its first National Instrument 43-101 resource estimate based on 42 drill holes from the La Union, San Luis, San Antonio and El Carmen targets. This produced an inferred 4m tonnes with a silver equivalent grade of 273 grams per tonne (g/t; 0.42 g/t gold and 151 g/t silver) for over 35m silver equivalent ounces.

### Geology

Mineralization is typical of the Sierra Madre Occidentals and consists of multi-phase epithermal, low-sulphidation, silver-gold vein, breccia and quartz veinlet stockwork deposits within a north-northwest trending, steeply dipping (60–70 degrees) fault zone. The deposits occur in an echelon fashion along up to 10 km of strike length. Mineralization at the Monte Cristo target is also associated with a breccia zone developed at the margins of a rhyodacitic dome.

In general, the topography at San Miguel, though hilly, appears much more level than Coeur d'Alene's neighbouring Palmarejo project.

### ***Exploration and resource update***

To date, Paramount has drill tested only a portion of the project's strike length and to shallow depths (up to 150 metres). The company's geologists recently met to outline targets for a comprehensive drill program for 2008 though they are still awaiting 9,000 metres of assay results, an independent structural geology report and results from a geophysical study to better understand and target mineralization at depth.

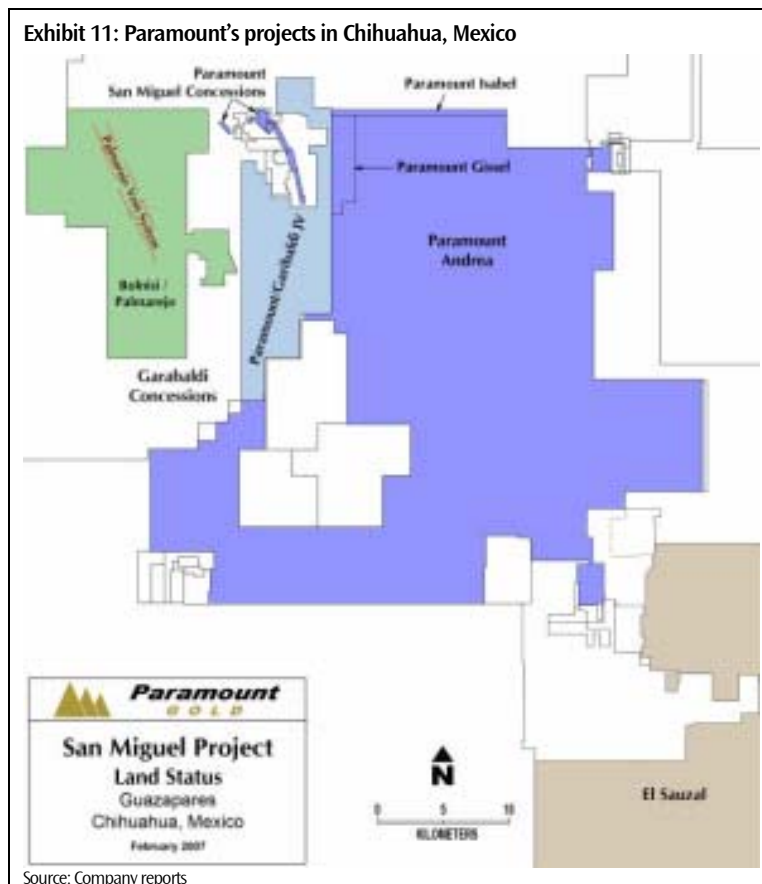
The near-term focus will be on the San Miguel and San Jose targets, the latter a past-producing mine with a reported average grade of 12 g/t gold and 350 g/t silver and more than 10% combined lead and zinc. At San Jose, Paramount sampled 11.31 g/t gold and 87 g/t silver across 25.8 metres.

Paramount intends to complete an updated resource estimate for the 3Q and commence a scoping study later this year. Metallurgical and environmental baseline studies are scheduled to begin in 2008.

### ***Other projects***

We also had the opportunity to fly over Paramount's 100%-owned, 86,300 ha Andrea concession that covers most of the ground between San Miguel and Goldcorp's (G, TSX/GG, NYSE) El Sauzal mine. The company has identified several gold and silver targets, and one copper porphyry target, through sediment sampling of over 300 drainage basins.

In October 2006, Paramount signed a letter of intent with Garibaldi Resources Corp. (GGI, TSX-V) to earn up to an 80% interest in over 6,000 ha surrounding the San Miguel project. The company is planning to conduct geologic mapping and surface sampling to establish drill targets.





## Consolidation continues

Vale (CVRD) stated it has held talks with Xstrata about a potential acquisition that has yet to lead to a formal bid. The company said it is analyzing other acquisition options as well. Vale also said in a statement that current market conditions “may constrain the realization of a major strategic move” and that it will not stray from its “prudent posture”. Two local newspapers reported that Vale is preparing to bid for Xstrata in a deal that could be worth US\$90b.

## Companies reporting

**Exhibit 12: EPS estimates**

(US\$)	4Q07E	4Q06A	3Q07A	I/B/E/S 4Q07E mean as of 18-Jan-08	Share price 18-Jan-08	Date reporting
Freeport-McMoRan	2.20	NA	1.85	1.84	84.13	23-Jan-08

Source: Desjardins Securities, Bloomberg

## Economics

### US

**January Consumer Confidence Index**—Preliminary results from the University of Michigan consumer confidence index showed a rise to 80.5 in January from 75.5 in December. The component that covers the economy's current situation increased for the first time since July, rising to 98.1 from 91.0. The consumer expectations component increased to 69.1 from 65.6. Long-term inflation expectations fell in January while short-term expectations remained steady.

**December Leading Indicator**—The leading indicator dropped 0.2% in December after declining 0.4% in November. Six of the leading indicator's 10 components retreated. The leading indicator's annual change declined to -1.4% in December from -0.6% in November. The annualized change over six months was steady at -1.6%. The coincident indicator rose 0.1% in December, confirming that no recession began at the end of 2007.

**December Retail Sales**—Retail sales fell 0.4% in December after rising by 1.0% in November. Motor vehicle sales were also down 0.4%. Excluding motor vehicles, sales were down 0.4% after growing 1.7% in November. For 2007 as a whole, retail sales increased 4.1%, the slowest growth since 2002. There were major declines in a number of categories in December: clothing sales (-2.0%), electronics (-1.9%), renovation centres (-2.9%) and stores associated with recreation (-2.0%). Gas station sales fell 1.7% because of a decrease in gas prices.

**December Industrial Production**—Industrial production was unchanged in December after rising 0.3% in November. The manufacturing sector's output stagnated (0.0%) while mining edged up 0.1%. Utilities saw output decline 0.2%. In manufacturing, activity was down in several sectors including automotive (-0.5%). Aerospace posted growth of 1.1% while the technology sector increased 0.8%. The 1.1% annual change in manufacturing production in December is the weakest since October 2003. Over 2007 as a whole, industrial production rose 1.9%, the worst performance since 2003. Growth was 4.0% in 2006. In December, the industrial capacity utilization rate declined to 81.4% from 81.6%.

**December Consumer Price Index (CPI)**—The CPI rose 0.3% in December, following November's 0.8% increase. Excluding food and energy, core CPI advanced 0.2% after rising 0.3% the month prior. On an annual basis, the total CPI increased 4.1%, lower than the 4.3% recorded in November. Core inflation went to 2.4% from 2.3%. For 2007 as a whole, the average change in prices was 2.9% for total CPI and 2.3% for core CPI. In both cases, this is slightly lower than in 2006. Energy prices rose more slowly in December, up 0.9%, after jumping 5.7% in November. Food, clothing, new car and healthcare prices have decelerated.

**December Housing Starts**—Housing starts nosedived in December to 1,006,000 from 1,173,000 in November (down 38.2% yoy). This is 56.1% down from the peak recorded in January 2006. For 2007 as a whole, average housing starts declined 25.8% to 1,344,000, the lowest level since 1993. In December, all regions saw a slide in housing starts, especially the Northeast and Midwest. Building permits issued in December dropped to 1,068,000 from 1,162,000 in November.

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## Asia

**December Consumer Price Inflation**—China's consumer price inflation eased to 6.5% in December from an 11-year high of 6.9% in November. Inflation pressure remains high as a result of increasing global oil and grain prices and domestic pork prices. The government has announced plans to intervene in prices for basic necessities, which are normally set by the open market.

## Canada

**November Manufacturing Sales**—Manufacturing shipments rose 1.1% in November, with most of the gain being attributed to a surge in prices for petroleum and coal products. Shipments of petroleum and coal products rose 7.7% while shipments for the transportation sector rose 1.8%, including a 2.0% increase in motor vehicles. Manufacturers' inventories grew 0.5% in the month. New orders jumped 8.1%, the biggest monthly increase in more than 10 years. Shipments from Quebec and Ontario saw advances similar to the national average. In real terms, after eliminating price effects, manufacturing shipments fell 0.1% in constant dollars. In 1997 dollars, inventories rose only 0.1%.

## Copper

**Exhibit 13: Copper market review and forecast**

			LME	Comex	Shanghai
<b>Market review</b>					
Closing price	18-Jan-08	(US\$/lb)	3.24	3.23	3.85
Change on the week		(US\$/lb)	-0.07	-0.07	-0.01
Ytd average		(US\$/lb)	3.20	3.22	3.84
Inventory as of	18-Jan-08	(tonnes)	183,225	12,751	26,555
Change on the week		(tonnes)	-16,050	-159	368
Ytd change		(tonnes)	-15,700	-2,479	958
<b>Weeks of consumption</b>					
Current			1.5		
Estimated for end of 2008			0.8		
<b>Forecast</b>					
<b>(000 tonnes, year-end December 31)</b>		<b>2006</b>	<b>2007E</b>	<b>2008F</b>	<b>2009F</b>
Consumption		17,610	18,150	18,950	19,850
% increase		3.6	3.1	4.4	4.7
Supply		17,551	18,150	18,950	19,800
% increase		5.6	3.4	4.4	4.5
Market balance: Surplus (deficit)		-59	0	0	-50
Average price (US\$/lb)		3.02	3.23	3.00	3.00
Note: Surplus = demand < supply, Deficit = demand > supply					
Source: LME, Comex, Shanghai Exchange					

**TC/RC processing fees.** BHP Billiton has settled 2008 treatment/refining charges (TC/RC) contracts at US\$45/tonne and US\$4.50/lb, respectively, with leading Japanese smelters Pan Pacific Copper and Sumitomo Metal Mining for its copper concentrate from the Escondida mine in Chile. The agreement does not include a price participation clause. These processing fees are lower than the 2008 TC/RC contracts of US\$47.20/tonne and US\$4.72/lb, respectively, that BHP settled with Chinese smelters towards the end of 2007. In comparison, 2007 TC/RC charges were settled at US\$60/tonne and US\$6/lb, respectively. The continuing downtrend in TC/RC charges reflect the tight supply of available copper concentrate relative to existing smelter capacity.

**Production update.** Xstrata Copper plans to double electronic scrap processing capacity at its Horne smelter in Rouyn-Noranda, Quebec, to 100 KMT by January 2010. The smelter is currently operating at a production capacity of 180 KMT copper anode per annum. **We expect World refined copper production from secondary blister and scrap material to total 800 KMT in 2008 and 975 KMT in 2009.**

A power outage at the Kariba hydropower station in Zambia on Saturday January 19 resulted in temporary shutdowns of mines across the country. According to ZESCO Ltd., the state-owned operator of the plant, the failure at the station was due to "systems disturbance". Among the affected mines were various divisions of Konkola Copper Mines and Mopani Copper Mines as well as



First Quantum's Bwana Mkubwa mine, which were able to partially resume operations the following day after Zambia began imports of emergency power from the Democratic Republic of the Congo. Luanshya Copper Mines and Konkola Copper Mines also reported flooding at some operations as well as damaged equipment.

**Brazil update.** Brazilian copper producer Mineracao Caraiba S.A. has scheduled an expansion at its Caraiba Metais copper smelter that should increase production capacity from the current 220 KMT of copper cathode per annum to approximately 260 KMT of copper cathode per annum by 2009. The expansion will proceed after the company completes its proposed IPO on Bovespa, the Sao Paulo Stock Exchange. The company also announced in December that it plans to build a new concentrator at the proposed Boa Esperanca mine, which is expected to begin producing in 2010 or 2011 over a 15-year minelife. The concentrator would produce roughly 40 KMT of copper in concentrate, a portion of which is to be processed at the Caraiba smelter. **We forecast Brazil's refined copper production will reach 225 KMT in 2008 and 260 KMT in 2009.**

**China update.** China's production of refined copper totalled 3,500 KMT in 2007, representing a 16.6% yoy increase from 3,000 KMT in 2006. **This was in line with our forecast of 3,500 KMT for the year, and we expect the country's refined production to increase to 3,800 KMT in 2008.**

**Zambia update.** Zambia has raised its mining tax rate to 41% from 31.7% previously, and anticipates a total of US\$400m in tax revenue in 2008. This compares with tax revenue of US\$142m reported for 2007. The country's Chamber of Mines expects total copper production of 750 KMT in 2008 compared with a total of less than 600 KMT forecast for 2007. **We anticipate World copper production will total 18,950 KMT in 2008 and 19,800 KMT in 2009.**

## Aluminium

Exhibit 14: Aluminium market review and forecast			LME	Comex	Shanghai
<b>Market review</b>					
Closing price	18-Jan-08	(US\$/lb)	1.11	1.07	1.13
Change on the week		(US\$/lb)	-0.03	-0.03	0.01
Ytd average		(US\$/lb)	1.12	1.09	1.12
Inventory as of	18-Jan-08	(tonnes)	947,450	33,898	107,929
Change on the week		(tonnes)	8,125	-130	-9,065
Ytd change		(tonnes)	18,000	-1,511	18,814
<b>Weeks of consumption</b>					
Current			3.6		
Estimated for end of 2008			3.1		
<b>Forecast</b>					
<b>(000 tonnes, year-end December 31)</b>		<b>2006</b>	<b>2007E</b>	<b>2008F</b>	<b>2009F</b>
Consumption		34,255	38,125	41,190	44,600
% increase		7.2	11.3	8.0	8.3
Supply		34,162	38,275	41,050	43,650
% increase		7.1	12.0	7.3	6.3
Market balance: Surplus (deficit)		-93	150	-140	-950
Average price (US\$/lb)		1.17	1.21	1.30	1.50
Note: Surplus = demand < supply, Deficit = demand > supply					
Source: LME, Comex, Shanghai Exchange					

**Company news.** National Aluminium has signed a primary agreement with the Indonesian government to construct a 500 KMT/yr aluminium smelter and power plant in Sumatra. The aluminium smelter will be developed in two phases, each with a capacity of 250 KMT. A 750 MW coal-fired power plant will be built in the first phase, with capacity expected to increase by 500 MW in the second phase.

Vedanta Resources is planning a US\$1b initial public offering for its indirectly owned subsidiary, Sterlite Energy (India), in the next few months. Through the subsidiary, the company intends to participate in a coal-based power generation project with an expected capacity of 10,000 MW by 2012. The project would be financed by 30% equity and 70% debt. Vedanta plans to increase annual production capacity of aluminium, copper, zinc and lead to 1 MMT.

**Production update.** Alcon plans to restart its Ikot Abasi smelter, which has been shut down since 1999 as a result of insufficient funding. The plant has been upgraded and is expected to resume production in February 2008. Alcon had produced approximately 40 KMT of aluminium in the past and has a capacity of 97 KMT. **We forecast World aluminium production of 41,050 KMT in 2008 and 43,650 KMT in 2009.**

**China update.** China's aluminium production totalled 12.6 MMT in 2007, up 36% yoy from 9.3 KMT in 2006. **We expect China to produce 14,000 KMT of aluminium in 2008 and 16,000 KMT in 2009.**

**4Q07 results.** Rio Tinto reported that bauxite and alumina production in 4Q07 increased by 74% qoq and 133% qoq, respectively. Aluminium production in 4Q07 reached 835.4 KMT, including additional production of 618 KMT from Alcan, and was up 287% compared with 4Q06.

## Zinc

**Exhibit 15: Zinc market review and forecast**

			LME	Shanghai	
<b>Market review</b>					
Closing price	18-Jan-08	(US\$/lb)	1.07	1.21	
Change on the week		(US\$/lb)	-0.01	-0.04	
Ytd average		(US\$/lb)	1.10	1.24	
Inventory as of	18-Jan-08	(tonnes)	104,475	63,259	
Change on the week		(tonnes)	10,300	5,796	
Ytd change		(tonnes)	16,000	8,855	
<b>Weeks of consumption</b>					
Current			2.6		
Estimated for end of 2008			2.2		
<b>Forecast</b>					
<b>(000 tonnes, year-end December 31)</b>		<b>2006</b>	<b>2007E</b>	<b>2008F</b>	<b>2009F</b>
Consumption		11,340	11,515	12,420	13,400
% increase		3.8	1.5	7.9	7.9
Supply		10,675	11,375	12,420	13,400
% increase		5.9	6.6	9.2	7.9
Market balance: Surplus (deficit)		-665	-140	0	0
Average price (US\$/lb)		1.47	1.47	1.25	1.50
Note: Surplus = demand < supply, Deficit = demand > supply					
Source: LME, Comex, Shanghai Exchange					

**Company news.** A fatality occurred at BHP Billiton's Cannington silver, lead and zinc operation in northwest Queensland. Cannington's underground mine operations have been temporarily halted. In the year ended June 2007, the mine produced 29.1m ounces of silver, 210,814 tonnes of lead and 45,682 tonnes of zinc.

**Production update.** ZincOx Resources reported that financing for its Jabali zinc oxide mine in Yemen has been secured, all the required permits have been obtained and the development program is underway. The mine is expected to produce 70 KMT of zinc oxide annually, with a minelife of 12 years. Production is set to commence in 4Q09. **We expect World refined zinc output to total 12,420 KMT in 2008 and 13,400 KMT in 2009.**

**Strike.** Workers at Penoles' Naica lead and zinc mine have gone on strike after refusing a 6% wage increase. Naica produced 16,852 tonnes of lead and 11,533 tonnes of zinc last year. The plant has experienced a steady production decline over the past few years.

**China update.** China's zinc production totalled 3.7 MMT in 2007, representing a 17.4% increase from the prior year. **We expect Chinese production of 4,250 KMT for 2008 and 5,000 KMT for 2009.**



## Nickel

**Exhibit 16: Nickel market review and forecast**

			LME	
<b>Market review</b>				
Closing price	18-Jan-08	(US\$/lb)	13.05	
Change on the week		(US\$/lb)	0.05	
Ytd average		(US\$/lb)	12.88	
Inventory as of	18-Jan-08	(tonnes)	46,422	
Change on the week		(tonnes)	-1,122	
Ytd change		(tonnes)	-1,518	
<b>Weeks of consumption</b>				
Current			4.1	
Estimated for end of 2008			4.8	
<b>Forecast</b>				
<b>(000 tonnes, year-end December 31)</b>	<b>2006</b>	<b>2007E</b>	<b>2008F</b>	<b>2009F</b>
Consumption	1,416	1,401	1,541	1,641
% increase	7.6	-1.1	10.0	6.5
Supply	1,377	1,451	1,532	1,628
% increase	4.6	5.4	5.6	6.3
Market balance: surplus (deficit)	-39	50	-9	-13
Average price (US\$/lb)	10.48	16.70	16.00	16.00
Note: Surplus = demand < supply, Deficit = demand > supply				
Source: LME, Comex, Shanghai Exchange				

**Company news.** Teck Cominco and International Nickel Ventures have completed a final cash payment of US\$9.25m for the Santa Fe-Ipora joint venture, thereby acquiring an indirect 75% interest in the project. Mineradora Montita Ltda., a private Brazilian company to whom the payment was made, has retained a 25% interest in the property. Teck Cominco and International Nickel hold direct interests of 20% and 55%, respectively, in the project. Santa Fe-Ipora is located in Goias state in Brazil, with indicated resources of 35.7m tonnes grading 1.14% nickel and inferred resources of 104.3m tonnes grading 1.03% nickel.

## Uranium

**Exhibit 17: Uranium—World balance**

(KMT)	2004	2005	2006	2007E	2008F	2009F	2010F
Average price (US\$/lb)	18.00	27.98	47.91	98.55	60.00	50.00	45.00
<b>Supply</b>							
Primary uranium	40,251	41,609	39,429	44,481	47,000	50,000	55,000
HEU downblended	5,885	6,654	9,000	9,000	9,000	8,500	8,000
DOE sales	0	0	0	0	1,000	1,000	1,000
DOE tails material	0	0	0	0	1,000	1,500	2,000
Re-enriched tails	3,000	5,000	5,000	5,000	2,000	2,000	2,000
Recycling	2,871	3,320	3,286	1,850	1,955	2,130	2,140
Russian LEU export	5,000	4,500	4,000	3,500	3,000	2,500	2,000
Ex-military MOX	0	200	200	250	300	350	400
	57,007	61,283	60,915	64,081	65,255	67,980	72,540
<b>Demand</b>							
Requirements	66,347	64,616	64,181	64,375	64,615	66,056	67,447
Metal balance (supply—demand)	-9,340	-3,333	-3,266	-294	640	1,924	5,093
Total inventory (non-strategic)	27,000	23,667	21,000	20,706	21,346	23,270	28,363
Source: Desjardins Securities							

**Company news.** AREVA has renewed the agreement with Niger whereby AREVA will buy uranium produced by the COMINAK and SOMAIR mines for the next two years at a price that is 50% higher than the previous price. Also in the agreement, Niger approved AREVA for investments of more than US\$1b to develop the country's largest industrial mining project at its Imouraren site. AREVA plans to produce approximately 13m lbs U308 annually from Imouraren, with production expected to start around the end of 2010.

Bluerock Resources has signed a letter of intent (LOI) with Denison Mines with regard to an ore purchase and uranium toll milling agreement with a term of three years plus two additional years' extension by mutual consent. Under the LOI, Bluerock will deliver 25 KMT of ore per year to Denison's ore purchase program and the ore will be processed in Denison's White Mesa mill. Bluerock will be charged for the direct cost plus a toll milling fee per tonne of ore.

**Production update.** ConverDyn plans to increase production of uranium hexafluoride (UF6) to 23 KMT by 2020. The current nameplate capacity of its conversion plant in Metropolis is 17.6 KMT of UF6. The company is carrying out an expansion of the facilities, including installation of new equipment and the construction of a new nitrogen plant facility. ConverDyn is jointly owned by Honeywell International and a privately held company, General Atomics. **We estimate World uranium output of 65,255 KMT this year and 67,980 KMT next year.**

**4Q07 results.** Paladin Energy announced that its Langer Heinrich uranium mine in Namibia met its quarterly production target with an output of 390,807 lbs of uranium oxide in 4Q07. Total output for 2H07 reached 650,562 lbs and the company expects the mine to produce 2.6m lbs of uranium oxide in 2008.

Energy Resources of Australia (ERA) produced 3.4m lbs of uranium bauxite in 4Q07, and total output for 2007 reached 12m lbs, up 14% from 2006 levels. The production increase was mainly due to higher ore grade.

## Metals & Mining and Steels: Earnings estimates and price targets

**Exhibit 18: Earnings estimates and price targets**

Year-end Dec-31	Annual EPS (\$)				Current price (\$)	Book value (\$)	Price/book (x)	1-year target (\$)	Rating
	2006	2007E	2008F	2009F					
Alcoa (US\$)	2.90	2.60	3.30	4.47	31.19	18.87	1.65	44.70	Buy
Blue Note	-0.04	0.00	0.18	0.21	0.32	0.17	1.88	0.74	Buy
Cameco	1.02	1.95	2.21	1.71	38.32	7.98	4.80	34.20	Hold
Freeport-McMoran (US\$)	8.00	8.41	7.16	8.01	94.84	40.61	2.34	120.00	Buy
GobiMin <sup>1</sup>	0.10	0.33	0.38	0.50	2.52	0.88	2.87	5.05	Buy
Inmet Mining	8.71	8.97	7.34	10.12	71.30	27.33	2.61	101.20	Buy
Thompson Creek <sup>1</sup>	-0.36	1.25	2.61	4.08	16.29	3.88	4.20	32.67	Top Pick
Corriente <sup>4</sup>	0.02	-0.22	-0.10	-0.10	4.71	2.35	2.00	6.55	Buy
First Quantum <sup>1</sup>	6.23	7.74	8.75	9.00	82.11	20.55	4.00	108.00	Buy
HudBay Minerals	4.65	1.90	2.02	2.38	16.56	8.93	1.85	27.00	Top Pick
Polaris <sup>1</sup>	-0.12	-0.18	0.37	0.50	9.94	3.47	2.86	22.20	Buy
Sherritt	1.46	1.82	1.35	1.55	13.90	11.42	1.22	19.30	Buy
Teck Cominco <sup>2</sup>	5.40	4.62	3.75	4.70	33.68	17.88	1.88	49.00	Buy
Gerdau AmeriSteel <sup>1</sup>	1.23	1.62	1.40	1.50	12.66	5.38	2.35	16.80	Buy
Harry Winston <sup>1</sup>	1.76	0.60	1.60	NA	28.29	8.43	3.35	53.50	Buy
Fording Canadian Coal Trust <sup>3</sup>	4.30	2.43	3.25	NA	38.00	2.21	17.19	36.10	Hold
Westshore Terminals <sup>3</sup>	1.21	1.16	1.40	NA	14.00	7.25	1.93	15.55	Hold

<sup>1</sup> All data in US\$ except share price and target in C\$/share

<sup>2</sup> Class B subordinate voting shares

<sup>3</sup> Annual distribution

<sup>4</sup> 2006 EPS figure is an estimate

Source: Desjardins Securities, LME, Comex, company reports

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## Commodities Outlook Conference 2008

Thursday February 14, 2008

*Le Méridien King Edward Hotel, Toronto*

Speakers will address the outlook for the various commodities. Topics to be covered include the outlook for copper, aluminium, nickel, zinc, uranium, molybdenum and gold.

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**8:30am Registration/continental breakfast**

**9:00am LME Short-Term Trading Outlook**  
Jeremy Goldwyn, Sucden Ltd.

**9:30am Nickel Outlook**  
David Humphreys, Norilsk Nickel

**10:00am Copper Outlook**  
Sven Muller-Thurau, Norddeutsche Affinerie

**10:30am Break**

**10:45am Aluminium Outlook**  
Liu Qiang, Chalco

**11:15am Zinc Outlook**

Dr Mo Ahmadzadeh, Mitsui Bussan

**11:45am Uranium Outlook**

Stephen W Kidd, World Nuclear Association

**12:15pm Lunch**

**1:00pm Molybdenum Outlook**

Anthony Warwick-Ching, CRU International Ltd.

**1:30pm Gold Market Trends in China and Outlook**

George Milling-Stanley, World Gold Council

**2:00pm Wood Products Outlook**

Peter Woodbridge, Woodbridge Associates



*Image courtesy of the London Metal Exchange*

*Note: Schedule subject to change*

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Hold	Hold	41	29	31	13
Sell	Sell	3	2	0	0
<b>Total</b>		<b>143</b>	<b>100</b>	<b>71</b>	<b>100</b>

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Blue Note Mining Inc.: 2, 3, 4, 7a, 13	Gerdau AmeriSteel Corporation: 7a	Sherritt International Corporation: 7a
Cameco Corporation: 7a	GobiMin Inc.: 2, 3, 4, 5, 7a, 13	Stelco Inc.: 7a
Corriente Resources Inc.: 7a	Harry Winston Diamond Corporation: NA	Teck Cominco Limited: 1, 7a
First Quantum Minerals Ltd.: 7a	HudBay Minerals Inc.: 13	Thompson Creek Metals Company Inc. 13
Fording Canadian Coal Trust: 7a	Inmet Mining Corporation: 7a	Westshore Terminals Income Fund: 7a

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