

# The Hedge Book: Q2 04

Hedge  
Impact  
falls to  
64 Moz

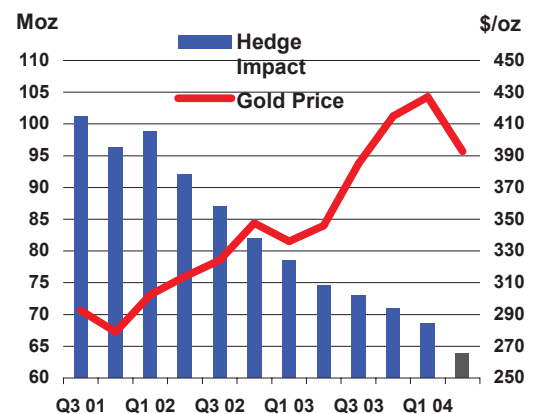
12 August 2004

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## Hedge Impact

	Q2 04 Change	
<b>Moz</b>	63.90	-4.63



The Hedge Impact measures the impact on the spot market if all forwards, options and other products were closed out.



# Why

The undeniable presence and use of gold derivatives primarily on the part of the mining industry has been a feature of the market since the mid to late 1980s. Minimal to begin with, the volume of gold associated with price risk management grew rapidly throughout the 1990s to peak in Q3 01. Despite it contracting by over a third since then, the global hedge book remains a substantive feature of the gold market.

Amidst often acrimonious and emotional debate as to the merits of hedging and the effects on the gold price of the collective hedge book, the need for reliable and accurate data was obvious. This data sheds light not only on the financial activities of the producers but also on demands made of the gold lending market and its affect on lease rates.

The results and details of this quarterly research will be made available to all interested parties on a complimentary basis in the hope that our readers will not only enjoy the read but will benefit from our shared intelligence.

# Who

Mitsui Global Precious Metals is part of the Mitsui Commodity Risk Management Group, in turn part of Mitsui & Co. Ltd, one of the largest companies in the world, active in over 90 countries. We are passionate about precious metals. In 'PGM' and gold we are the most active trader on the Japanese commodity futures exchange, TOCOM. We are a full member of the London Platinum and Palladium Market and a member of the London Bullion Market Association. In gold and silver our global offices help move metal from mine to market, managing price, credit and other risks along the way.

Haliburton Mineral Services Inc. founded in 2002 is a private mining research and advisory business based in Toronto, Canada. The President, Ted Reeve has a background as a mining analyst and has published quarterly gold producer hedge research since 1990.

Virtual Metals is a dynamic team of highly experienced analysts dedicated to understanding and explaining the current and future state of the precious metals markets. Our clients include world-class mining companies, for whom Virtual Metals specialises in proprietary research covering gold and the platinum group metals. The Virtual Metals team excels in macro-economic analysis, the generation of supply and demand scenarios, SWOT and cost analyses, derivative research and price forecasting. Confidentiality, experience and independence are key elements of such advisory roles. Our aim is to assist those in need of external expertise, as well as those who wish to supplement their own in-house resources.



# Executive Summary

■ Global gold mining companies made large reductions in their hedging in Q2 04. Measured in terms of Hedge Impact the book fell by 4.6 Moz, to 63.9 Moz, the largest fall since Q2 02 and the joint largest fall in percentage terms (7%) since our data series began in Q2 01.

■ Over the three years we have been monitoring global hedging, the Hedge Impact of the book has been reduced by 36.7 Moz (36%). We expect dehedging to continue over the rest of the year though the quarterly decline is likely to slow.

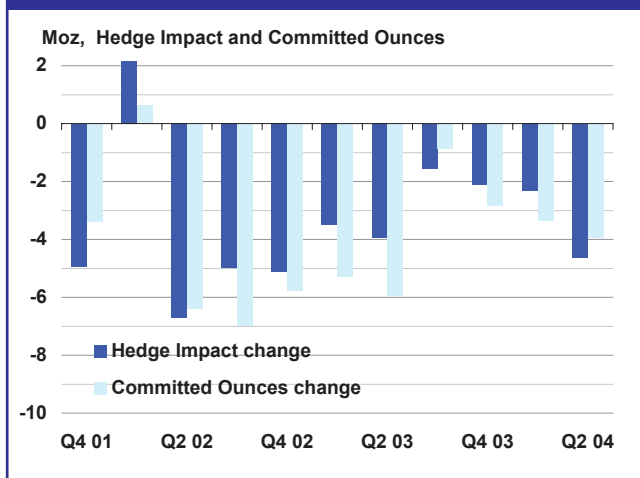
■ Measured in terms of committed ounces the hedge book fell by a smaller 3.9 Moz to 66.7 Moz, again notably faster than in recent quarters though somewhat slower than in 2002. There are two main reasons why the decline was smaller than the Hedge Impact. First, rising lease rates reduced the Hedge Impact measure but do not affect the committed ounces measure. Second, a large book restructuring by Newcrest resulted in a reduction in the amount of puts and an increase in the amount of forwards. Puts are not commitments, so are not counted in the committed ounce measure, however they are counted in the Hedge Impact measure.

■ In addition the falling gold price (in dollars and local currencies) accounted for about 0.2 Moz of the decline in total hedging when measured in terms of Hedge Impact compared with committed ounces.

■ In terms of product mix the global hedge book continues to get simpler, and is increasingly dominated by forwards. In Q2 04 they accounted for 82% of the total Hedge Impact, up from 78% in Q1 04. Net calls, at 13%, net puts at 4% and other products on 1% made up the remainder.

■ During the quarter it was 'Other products', down by 1.7 Moz in Q2, which saw the largest decline in Hedge Impact. This was mainly related to the Newcrest

## Quarterly change



restructuring. The Hedge Impact of the net calls fell by 1.1 Moz, partly in response to the weaker gold price (see footnote 1 page 4). However despite the lower price the Hedge Impact of the net puts fell by 0.8 Moz, another result of the Newcrest restructuring. The Hedge Impact of forwards declined by 1.1 Moz.

■ Regionally the Americas continue to dominate the global hedge book, accounting for 52% of the total Hedge Impact (33.2 Moz), a proportion that has been remarkably stable over the past year. Africa and Australia both account for 23% with the remainder being our smallest region, Eurasia. In terms of months' production committed however, Australia is the clear leader with 34 months, down from 40 months in Q1 04 due to falling hedging combined with an increase in production from Newcrest.

■ Africa was the region with the largest fall in hedging in Q2, down 2.0 Moz, or 12%, at 14.4 Moz with AngloGold Ashanti making the biggest cut in hedging down nearly 1.4 Moz. Next was the Americas, also down 2.0 Moz, with Barrick the region's largest dehedger. Australia saw the smallest decline, of 0.5 Moz, taking its book to 14.7 Moz. Eurasia fell by 0.1 Moz to 1.6 Moz.

■ In our analysis section we look at concerns that falling liquidity in the London market may inhibit mining companies hedging in the future.



# Dwindling Bullion Banking

The extent to which producers closed out their collective hedge positions between April and June this year tells a remarkable story and that reveals substantially more about the current gold market than mere statistics recording the price protection activities of the mining community.

Throughout the quarter, there were a number of press releases announcing the continued reduction of the cumulative hedge book. Totalling these up, back of the envelope style, would lead one to come to a large reduction of just under 4 Moz - exactly where the committed ounce measure lies. But this perspective misses the dual influence of the lease rate increases and the substantially lower dollar gold price during the quarter, which had a dramatic effect on the delta - the measure of market impact of changes in the level of hedging<sup>1</sup> - what we call its 'Hedge Impact'.

A Hedge Impact reduction of no less than 4.6 Moz was substantially more supportive of the gold price than a simple committed ounce measure would have suggested. And yet the price over the period fell from \$427/oz to \$393/oz. **This tells us that in the absence of this decline in hedging, the gold price would have most likely fallen further and faster than it did.**

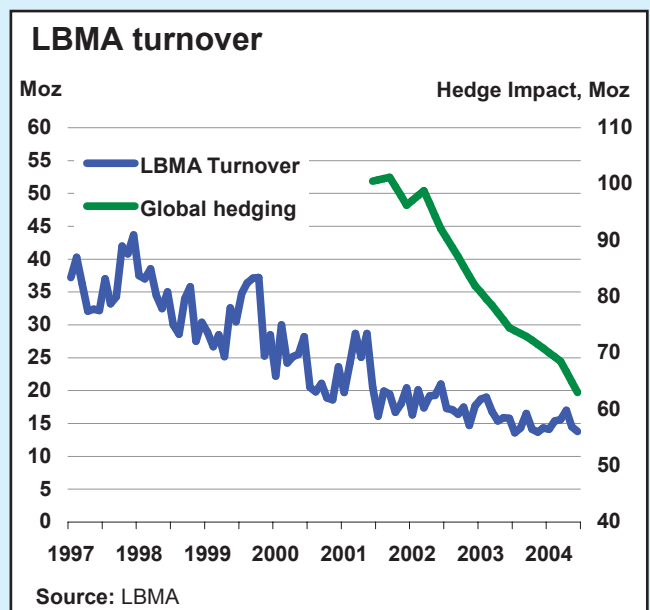
But the fact that we saw this price weakness against the background of the sharp fall in hedging gives us some insights in just how closely the hedge funds, resource funds and indeed private speculators have been following the inverse relationship between the dollar and the gold price. As US interest rates turned up, signalling to many observers the end of dollar weakness, so it appears that the speculative side of the gold market went short in volumes that swamped the supportive 4.6 Moz of dehedging and resulted in the subsequent price vulnerability.

Looking beyond this latest quarter, we are starkly conscious of the degree to which the bullion banking sector has been contracting. Almost in line with the persistent decline of hedging since September 2001, so

have bullion banks merged, been swallowed up, scaled down or have simply withdrawn from the gold market. It leads us to ask; if and when this dehedging does come full circle (as we believe it is in the process of doing, this quarter notwithstanding), will the new borrowing market be faced with capacity constraints in terms of willing and able counterparties?

The latest example of the shrinkage in the gold market comes with the news that the Paris Bourse operator Euronext has decided to throw in the towel and close France's official gold market until further notice because the market does not have enough participants to make it worthwhile. This, of course, echoes the problem that London has been facing in recent years, and although the Paris market was much smaller and could never be described as a major rival to London, it is yet another sign that there are many market players that find that the bullion business simply does not generate enough income to remain attractive.

The bull market that gold has enjoyed over the last few years has been of little benefit to the bullion banks. Margins having been squeezed so much there is no longer any money to be made in spot trading. At the same time, the forward market has shrunk in line with the dehedging policies of the mining sector, gold



<sup>1</sup> The delta measure compared to the committed ounces measure was also influenced but to a lesser degree by a complex restructuring of the Newcrest hedge position and this is discussed in more detail later in this report.



lease rates remain glued to the floor and options volumes have also suffered from the fall in hedging activity.

Since September 1999 the clearing volume for gold in London has more than halved from around 35 Moz to below 14 Moz a day. In addition, the number of transfers have fallen from 1,205 to 768 per day and the value of the gold transferred has also fallen from \$11.5 billion to \$5.4 billion, despite the price of gold being \$150 higher.

This year the London market has lost 20% of its market makers, AIG withdrawing from market making but remaining in the business and Rothschild withdrawing totally from commodities as an asset class, arguing with some justification that the capital required to support such operations could be employed more profitably elsewhere. The LBMA now boasts just eight market makers in its membership, five of whom, HSBC, Deutsche, ScotiaMocatta, Societe Generale and Barclays, are fixing members. The others are J.Aron, J.P. Morgan Chase and UBS.

To become a market maker a trader has to be prepared to quote two-way prices to other professionals on demand in spot, forwards and options for both gold and silver, conditions that only a shrinking pool of banks are inclined to accept. Quite simply, with the profitability in bullion banking contracting so rapidly, the risks attendant upon market making in assuming unwanted positions are too great for many banks to entertain. As a consequence of this reluctance we have seen the rise of the bullion broker who, though adding to the costs of dealing, has removed an element of uncertainty with regard to price discovery.

Until quite recently it was considered normal to have around 14 or 15 market makers in London. Some of the reduction in numbers has come about through mergers - Chase with J.P. Morgan, Republic with HSBC, Swiss Bank with UBS - but there was a time when Shearson Lehman, CSFB, Drexel Burnham Lambert, Phibro and Bank of Boston could be counted as market makers. At the same time, the once-parallel Swiss market has disappeared, the big banks having transferred their operations to London and

other one-time Swiss market makers simply fading away. To an extent, their place has been filled by the entrance of new players in the market, but these are a new breed, tending not to be market makers but market takers.

With so few banks prepared to show enough dedication to bullion trading to assume the role of market maker the real concern must be that any further erosion may leave the forward market too illiquid to be capable of handling large transactions. In the event that hedging makes a come-back, could a transaction on the scale of the Beatrix hedge (less than 3.0 Moz) be executed efficiently, and without unduly moving the price, with so few market makers to lay the position off with? If market activity continues to decline it seems doubtful.

Jessica Cross, Virtual Metals, London  
Ted Reeve, Haliburton Mineral Services, Toronto  
August 2004



# The Hedge Parade - Data Analysis

Of the 98 companies in our hedge survey, 60 had a hedge programme in place at the beginning of Q2. Of these 42 reduced their hedges, two (Kinross and Claude Resources) to nothing, whilst eight increased their hedges and ten kept them the same.

The net reduction in Q2 04 global hedging (as measured in committed ounces, as are all figures in this section) was 3.9 Moz, with a gross reduction of 4.6 Moz, and a gross increase of 0.7 Moz.

As shown in the tables on the right the ten largest dehedgers accounted for a remarkable 84% of the total gross dehedging, up from 79% in Q1. In part this was due to the huge reduction in the newly merged AngloGold Ashanti hedgebook, down 1.4 Moz compared with the combined AngloGold and Ashanti hedgebooks the previous quarter. This alone was 31% of the gross global reduction.

AngloGold Ashanti's hedge cut wasn't however large enough when measured as a percentage of the size of their hedge book to make the top 10. This is led by Kinross and Claude Resources, which cut their hedges entirely. Centerra (a company which now holds the gold assets of Cameco and the government of Kyrgyzstan), with a 57% reduction, and Cambior, with a 55% reduction, were second and third. In fourth place Harmony's closure of the Avgold hedge was both large in absolute (0.5 Moz) and relative (51% of their total hedge) terms.

## Hedging and Share Price

In The Hedge Book editions Q4 03 and Q1 04 we looked to see if there was a relationship between dehedging and a company's share price, but found little evidence. They were both quarters with a rising gold price and mixed share prices. Q2 04 was different, with the end-quarter gold price falling from \$427/oz to \$393/oz, and 63 out of the 67 companies for which we could get share price data seeing their share price fall.

The accompanying chart plots each company's Q2 change in hedging (as a % of their hedgebook) against the change in their dollar share price. Companies to the left of the vertical axis reduced their hedge books; companies to the right increased theirs. Companies above the horizontal axis enjoyed a rising share price, companies below it a falling share price.

If aggressive dehedging boosted a company's share price we should see the dots (each representing a company) arranged from top-left to bottom-right of the chart. However visually and statistically there is in fact no relationship.

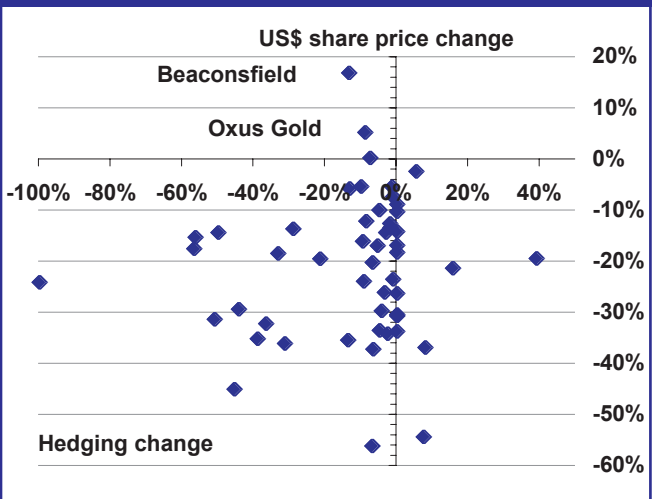
## Largest dehedgers (ounces)

Q2 2004	Ounces	% of company hedge book	% of global fall
1 AngloGold Ashanti	- 1,397,310	-9.3%	30%
2 Barrick Gold	- 850,000	-6.0%	19%
3 Harmony (Avgold)	- 515,130	-51.0%	11%
4 Cambior Inc.	- 281,000	-56.4%	6%
5 Sons of Gwalia	- 208,946	-13.3%	5%
6 Centerra Gold	- 203,200	-56.7%	4%
7 Kinross Gold	- 195,000	-100.0%	4%
8 Placer Dome	- 114,000	-1.2%	2%
9 Xstrata (e)	- 91,474	-7.5%	2%
10 Buenaventura	- 88,000	-3.0%	2%
<b>Total</b>	<b>-3,856,060</b>	<b>n/a</b>	<b>84%</b>

## Largest dehedgers (%)

Q2 2004	% of company hedge book	Ounces	% of global fall
1 Kinross Gold	-100%	-195,000	4%
2 Claude Resources	-100%	-4,500	0%
3 Centerra Gold	-57%	-203,200	4%
4 Cambior Inc.	-56%	-281,000	6%
5 Harmony (Avgold)	-51%	-515,130	11%
6 IAMGOLD	-50%	-5,700	0%
7 Pacific Rim	-45%	-2,500	0%
8 RNC Gold	-44%	-35,395	1%
9 Hecla Mining	-37%	-13,134	0%
10 High River Gold	-33%	-736	0%
<b>Total</b>	<b>-1,256,295</b>	<b>27%</b>	

## Hedging and share prices (Q2)



A somewhat stronger relationship can be found if the companies are weighted by size of their hedgebook. Here the chart is the same as before except the area of the bubble reflects the size of the company's hedgebook (in other words we give more weight to larger companies). It suggests that (at least in Q2 04) a more aggressive dehedging was met with a worse share price performance. Clearly other factors are at work.

### Is dehedging related to the gold price?

Over the long-term, as can be seen from the chart on our cover page, dehedging has gone hand-in-hand with a higher gold price. But as noted above Q2 saw a large fall in the gold price, the largest change in either direction over a quarter since our data series begins. It also saw one of the largest falls in hedging.

We thought it would be interesting to see if there was any correlation between the rate of change in quarterly US dollar gold price and the rate of change in the level of hedging.

As can be seen on the middle chart there is a (weak) correlation, with global gold mining companies dehedging more rapidly the more the price falls (each dot represents a quarter from Q2 01 to Q2 04). This is intuitive as a lower price means it is less costly to dehedge (when producers 'dehedge' they essentially buy gold to meet hedging contracts or deliver into those contracts rather than selling it into the market, thus when the market price is lower this is cheaper). This correlation holds for individual regions and local currencies.

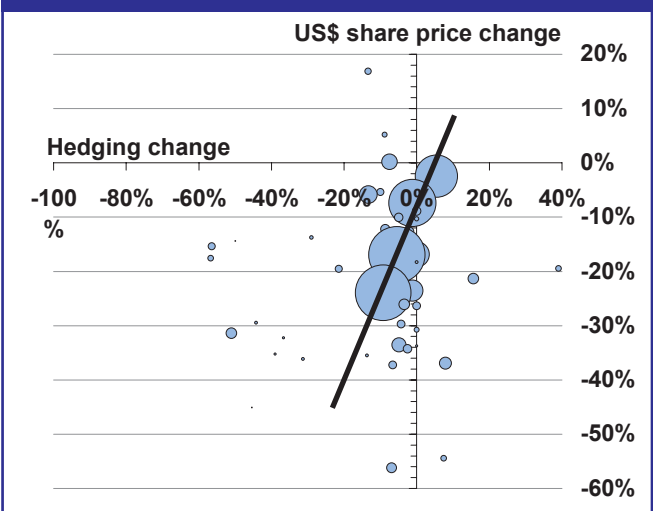
### Mark-to-Market

The mark-to-market position of the global hedge book illustrates how much it would cost mining companies to close out the entire book. For Q2 04 we estimate this to be \$3.8bn, a smaller notional loss than Q1 04's \$5.2bn, due to the much weaker gold price (\$393/oz compared with \$427/oz).

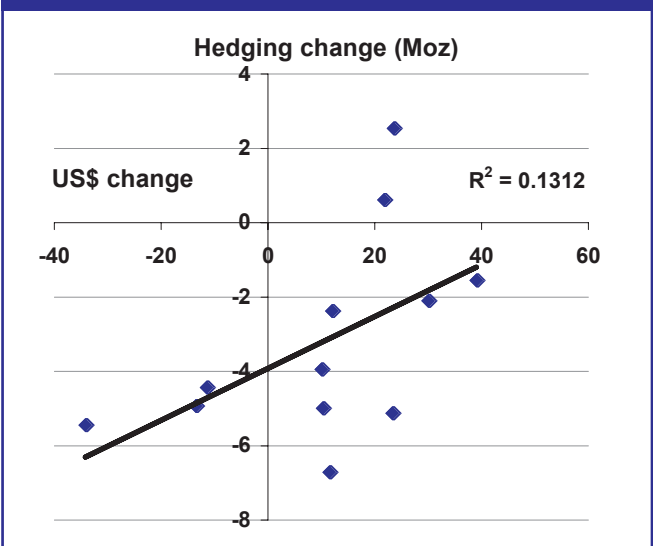
Virtual Metals estimate the global hedge book would have a positive mark-to-market value at \$326/oz, down from Q1's \$340/oz. This quarterly fall is essentially because most mining companies when dehedging close out contracts which are cheapest, ie those where the option strike price or forward price were higher.

It is important to note that mark-to-market valuations are notional in the sense that mining companies do not need to close out their hedge books now, and most have no intention of doing so. Furthermore hedge books are only a part of mining company assets, usually their largest asset is their gold reserves, the value of which moves in the opposite direction to the hedge book.

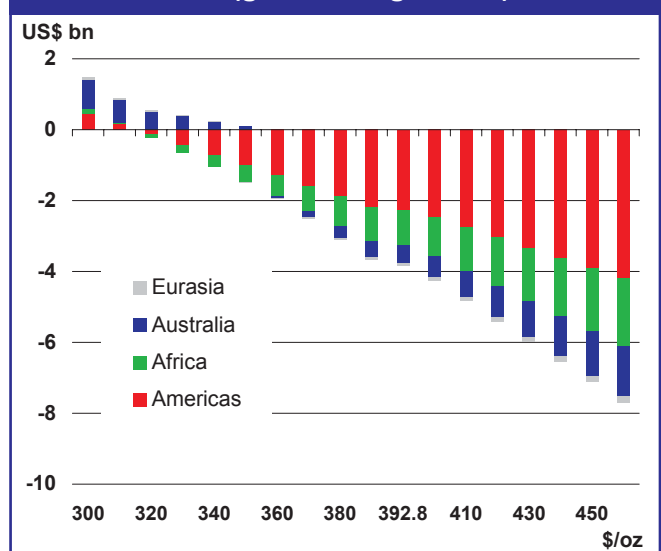
### Hedging and share prices by company size



### Hedging and the gold price



### Mark-to-Market (global hedge book)



# The Q2 04 Hedge Book

The global gold mining industry made major reductions to its hedging commitments in Q2 04. Measured in terms of Hedge Impact the global hedge book was reduced by 4.6 Moz to stand at 63.9 Moz, a rate of decline not seen since Q2 02 and, in percentage terms, at 6.8%, ranking with that quarter as our largest ever. In the three years since that date the total reduction in the Hedge Impact of the global hedge book has been 36.7 Moz (36%).

Measured in committed ounces however the decline was smaller at 3.9 Moz (though still 0.5 Moz higher than the decline in Q1 04), taking the total on that measure down to 66.7 Moz.

It is interesting to note the reasons for the difference in the two measures. First the Australian company Newcrest undertook a major restructuring of their hedge book (see 'Regional Summary'), and one change was the replacement of put contracts with forwards. Our committed ounces measure does not include puts (as they are not a 'commitment'), but does include forwards, thus this boosted the committed ounces measure. The Hedge Impact measure includes all products, thus was not so affected.

Second, the Hedge Impact measure looks at the net delta of the hedge book, which in essence is a measure of how likely options are to be exercised. This is affected by many factors, including lease rates and prices. Over the quarter the combination of higher lease rates and lower gold prices (except in Australian dollars) reduced the Hedge Impact of the hedge book by 0.5 Moz compared to if they had stayed the same as they were in Q1 04.

Most of the difference (0.3 Moz) was due to rising lease rates however. The global hedge book is not very sensitive to changes in the gold price, (seen in the chart on the right). This is because of the preponderance of forwards, which have a fixed Hedge Impact regardless of price. It is also however because the puts and

## Hedge Impact

Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net Forwards	57.86	57.58	54.91	53.58	52.56
Net Calls	7.11	8.19	9.33	9.21	8.13
Other Products	2.34	2.82	2.76	2.57	0.86
Net Puts	7.19	4.37	3.86	3.18	2.35
<b>Hedge Impact</b>	<b>74.51</b>	<b>72.96</b>	<b>70.86</b>	<b>68.53</b>	<b>63.90</b>
Change (Moz)	-3.95	-1.55	-2.10	-2.33	-4.63

## Committed Ounces

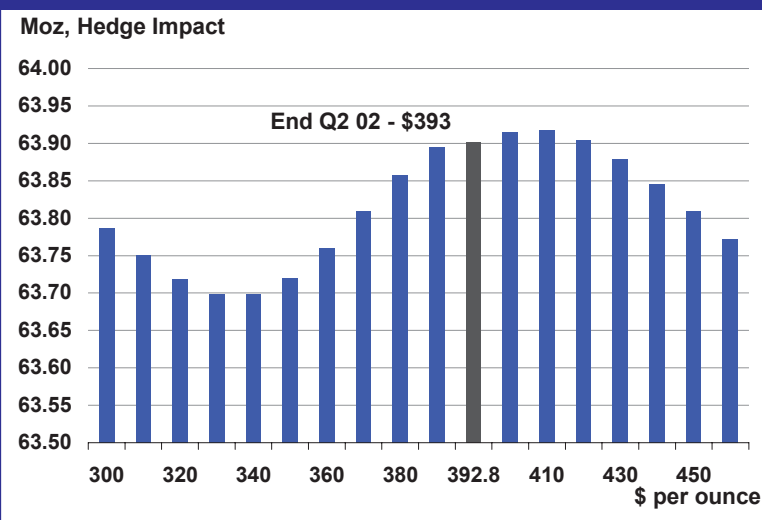
Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net Forwards	59.86	60.08	56.81	54.70	53.88
Net Calls Sold	12.92	12.03	12.38	11.57	10.77
Other Products	4.92	4.71	4.78	4.32	2.02
<b>Total Committed</b>	<b>77.70</b>	<b>76.82</b>	<b>73.97</b>	<b>70.60</b>	<b>66.67</b>
Change (Moz)	-5.94	-0.88	-2.85	-3.37	-3.93
Puts bought	17.96	17.41	16.87	16.00	15.42
Put sold	1.67	2.38	2.10	2.08	2.00

## Gold price, exchange rates & lease rates

US\$/oz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Gold Price (end-quarter)	346.00	385.00	415.00	427.00	392.80
per US\$ (except euro), end-quarter					
Canadian Dollar	1.35	1.35	1.29	1.31	1.34
Euro	1.14	1.16	1.26	1.23	1.22
South African Rand	7.45	7.10	6.65	6.35	6.28
Australian Dollar	1.50	1.48	1.34	1.31	1.44
%, end quarter					
5-yr gold lease rate	1.16	1.51	1.27	0.81	1.16

Source: Mitsui Precious Metals

## Sensitivity of global book to gold price



\* We have estimated June 30 hedge positions for a number of companies who had not yet reported results when we went to press. Companies where positions were estimated are identified in the endnotes to the detailed Breakdown by Maturity table.



the calls to a great extent offset each other. For example, 0.2 Moz of Hedge Impact decline in Q2 was attributable to the weaker gold price, this was made up of a 0.7 Moz reduction in the Hedge Impact of net calls sold<sup>1</sup>, but a 0.5 Moz increase in the Hedge Impact of net puts bought<sup>2</sup>.

In terms of product mix the global hedge book continues to get simpler, and is increasingly dominated by forwards. In Q2 04 they accounted for 82% of the total Hedge Impact, up from 78% in Q1 04. Net calls, at 13%, net puts at 4% and other products on 1% made up the remainder.

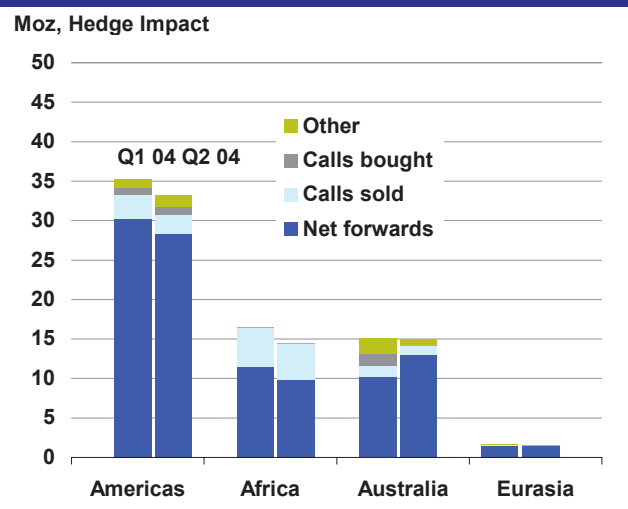
Over the quarter it was 'Other products', down by 1.7 Moz, which saw the largest decline in Hedge Impact. This was mainly related to the Newcrest restructuring. The Hedge Impact of the net calls fell by 1.1 Moz, partly in response to the weaker gold price (see footnote 1). However despite the lower price the Hedge Impact of the net puts fell by 0.8 Moz, another result of the Newcrest restructuring. The Hedge Impact of forwards declined by 1.1 Moz.

Regionally the Americas continue to dominate the global hedge book, accounting for 52% of the total Hedge Impact, a proportion that has been remarkably stable over the past year. Africa and Australia both account for 23% with the remainder our smallest region, Eurasia. In terms of months production committed however, Australia is the clear leader with 34 months. However, this is sharply down from earlier quarters due to increased production from Newcrest.

In terms of companies AngloGold Ashanti was by far the largest dehedger, reducing their commitments by 1.4 Moz, followed by Barrick gold with a 0.85 Moz decrease. Newcrest were the only company to increase their commitments substantially, but as explained earlier this is due to the switch from puts (not a commitment) to forwards (a commitment). In terms of Hedge Impact Newcrest's book fell.

In total this study covered the practices of 98 mining companies, collectively accounting for 54.9 Moz or nearly 67% of annual production.

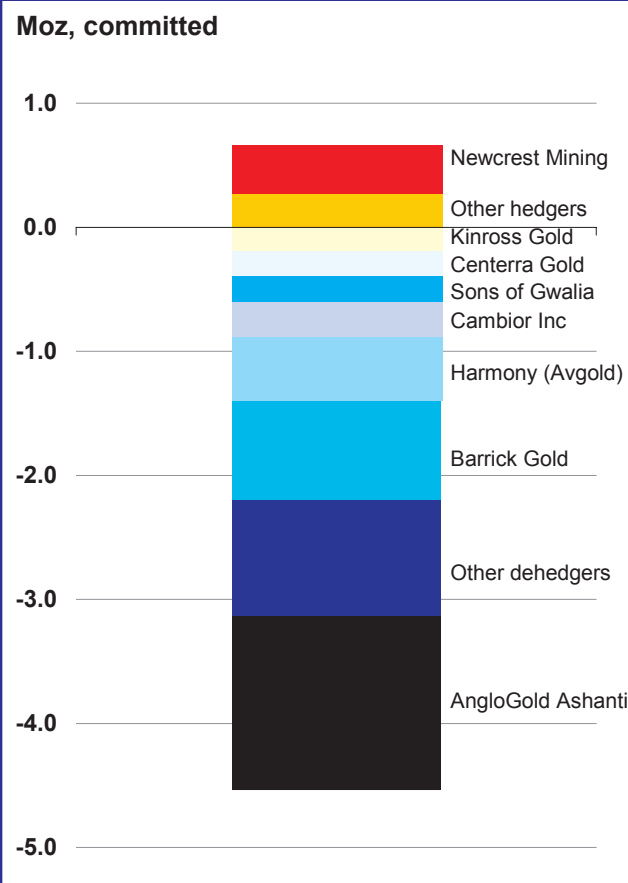
## By region and product



## Months' production committed

Months	Q2 03	Q3 03	Q4 03	Q1 04	Q204
Americas	16	16	16	16	14
Africa	14	14	13	13	12
Australia	43	44	40	40	34
Eurasia	5	2	2	4	4

## Change by company



<sup>1</sup> The likelihood of a call (which is an option to buy at a pre-arranged price) being exercised, and hence its Hedge Impact, falls with the gold price.

<sup>2</sup> Whereas the Hedge Impact of puts rises.



# Regional Summary

## Americas

### Hedge Impact

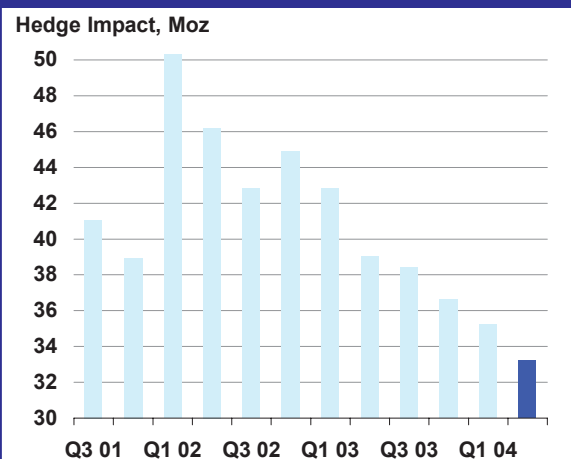
Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net forwards	33.31	33.55	31.35	30.29	28.30
Net calls	1.50	2.12	2.88	2.94	2.40
Other products	0.95	0.94	1.07	0.91	1.10
Net puts	3.28	1.82	1.31	1.08	1.42
<b>Hedge Impact</b>	<b>39.04</b>	<b>38.43</b>	<b>36.61</b>	<b>35.23</b>	<b>33.22</b>
Change (Moz)	-3.78	-0.60	-1.82	-1.39	-2.00

Our largest hedging region by far, the Americas in Q2 04 saw a decline in Hedge Impact of 2.0 Moz to 33.2 Moz. On a committed ounces basis the fall was slightly larger at 2.1 Moz, taking that measure to 33.4 Moz.

In terms of Hedge Impact the most sizeable decline came in the forwards, down 2.0 Moz. The much weaker US dollar gold price contributed to a decline in net calls sold by 0.5 Moz, however it meant the Hedge Impact of the net puts rose by 0.3 Moz. Other products rose slightly to 1.1 Moz.

Much of the America's fall can be attributed to dehedging on the part of Barrick, down 0.85 Moz, who having reduced

### Quarter by quarter



their hedge book by 1.65 Moz this year have already beaten their target of a 1.5 Moz fall for 2004. Cambior, 0.3 Moz, and Placer Dome, 0.1 Moz, were the other large dehedgers. In early August Thistle Mining announced they had closed out their entire hedge position of nearly 0.5 Moz. This will be reflected in our Q3 04 numbers.

## Africa

### Hedge Impact

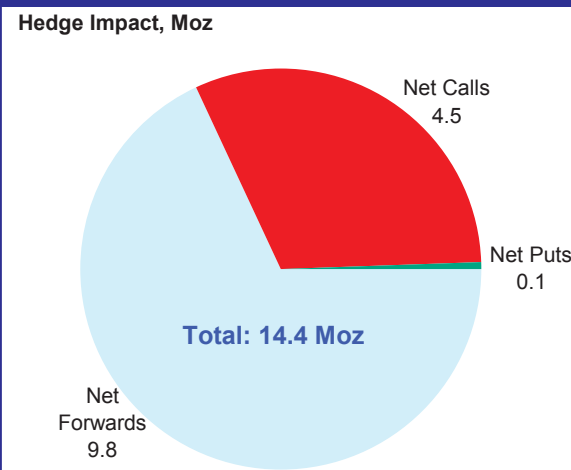
Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net forwards	12.64	12.30	11.91	11.49	9.84
Net calls	4.71	4.76	5.12	4.88	4.50
Other products	0.00	0.00	0.00	0.00	0.00
Net puts	0.28	0.25	0.16	0.09	0.07
<b>Hedge Impact</b>	<b>17.63</b>	<b>17.31</b>	<b>17.19</b>	<b>16.46</b>	<b>14.42</b>
Change (Moz)	-0.83	-0.32	-0.11	-0.74	-2.04

The Hedge Impact of the African book in Q2 04 fell by a steep 2.0 Moz to 14.4 Moz, the largest decline of all our regions, and 46% down on its level three years' ago when our detailed data series begins. On the committed ounces measure there was a slightly smaller fall of 1.9 Moz.

The decline was led by the newly formed AngloGold Ashanti, which reduced its combined hedgebook by a marked 1.4 Moz. Industry consolidation also saw Harmony close out the hedge it inherited when it acquired Avgold - another 0.5 Moz.

The African book is relatively simple, with forwards (68%) and calls (31%) accounting for almost all of the Hedge Impact; there is only a tiny amount of puts. Unsurprisingly therefore forwards contributed the most to the fall, down 1.6 Moz. Net calls fell by 0.4 Moz quarter-on-quarter, a decline aided by the strong rand, which reduced the rand gold price

### Q2 04 by product



and thus the Hedge Impact of rand call options.

Given the weakness of the rand gold price it is interesting that African mining companies are dehedging as fast as any. So far margin pressure has been dealt with in other ways, notably cost control and concerns expressed about the strength of the local currency.

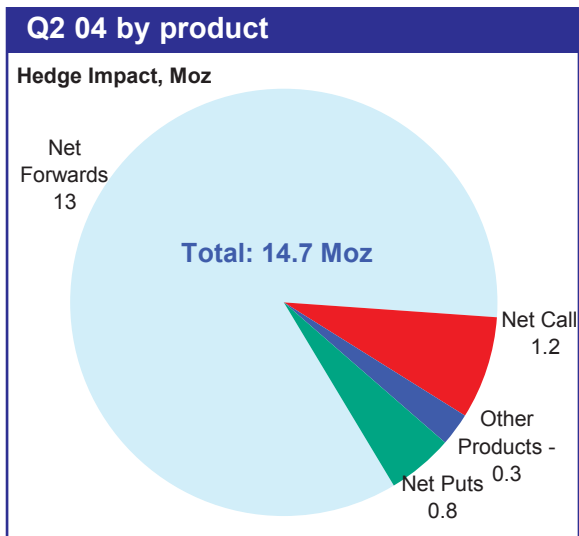


# Australia

Hedge Impact					
Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net forwards	10.64	10.32	9.99	10.25	13.00
Net calls	0.89	1.25	1.29	1.35	1.22
Other products	1.30	1.79	1.60	1.57	-0.33
Net puts	3.49	2.23	2.34	1.98	0.81
<b>Hedge Impact</b>	<b>16.32</b>	<b>15.58</b>	<b>15.22</b>	<b>15.15</b>	<b>14.69</b>
Change (Moz)	-0.49	-0.74	-0.36	-0.08	-0.45

With a Q2 04 reduction in Hedge Impact of 'only' 0.5 Moz the Australian hedge book saw the smallest percentage decline of our four regions, with the Hedge Impact of net forwards increasing by 2.7 Moz. On a committed ounce basis the total hedge book actually rose by 0.3 Moz, to 15.8 Moz.

To understand these developments one needs to look at Newcrest, which announced in early July a major restructuring of its hedgebook. Some points to note. First this simplified the book, removing all options, leaving only a series of Australian and US dollar gold forwards, and a gold loan. The removal of puts (which don't count in the committed total), and increase in forwards (which do) has increased their committed ounces by 0.4 Moz. However the Hedge Impact (which includes both puts and forwards) of these



commitments fell by 0.4 Moz. Thus the difference in the two measures.

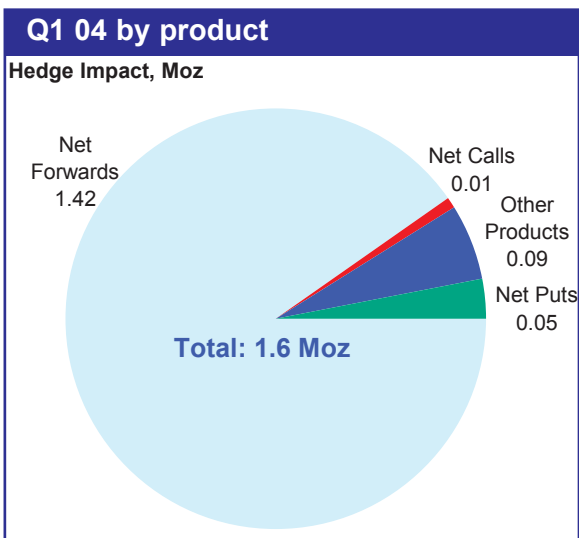
The other main dehedger was Sons of Gwalia, which cut 0.2 Moz from its book in Q2 04.

# Eurasia

Hedge Impact					
Moz	Q2 03	Q3 03	Q4 03	Q1 04	Q2 04
Net forwards	1.27	1.42	1.65	1.54	1.42
Net calls	0.02	0.05	0.04	0.03	0.01
Other products	0.09	0.09	0.09	0.09	0.09
Net puts	0.14	0.08	0.05	0.03	0.08
<b>Hedge Impact</b>	<b>1.52</b>	<b>1.64</b>	<b>1.83</b>	<b>1.70</b>	<b>1.60</b>
Change (Moz)	1.15	0.12	0.19	-0.14	-0.10

The Hedge Impact of the Eurasian combined hedge book fell 0.1 Moz in Q2 04, to stand at 1.6 Moz. In terms of committed ounces the book was reduced by a slightly larger 0.2 Moz, also to 1.6 Moz.

The book is overwhelmingly made up of forwards, which fell to 1.4 Moz, from 1.5 Moz. It also is mainly comprised of Xstrata's 1.1 Moz hedge, which we estimate in Q2 04 was 0.1 Moz lower than in Q1 04. Rio Narcea saw the largest percentage reduction, taking 29% of its hedge book to stand at 0.5 Moz.



# Breakdown by Maturity

Americas Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Agnico-Eagle Commitments</b>										
Puts - bought	68,322	260	190,020	260	152,340	260	131,280	260	-	-
<b>Apollo Gold</b>										
Calls - sold	24,000	345	16,000	345	-	-	-	-	-	-
Spot Deferrals	2,000	345	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>26,000</b>		<b>16,000</b>		-	-	-	-	-	-
Puts - bought	24,000	295	16,000	295	-	-	-	-	-	-
<b>Aurizon Mines Commitments</b>										
	-		-		-		-		-	-
<b>Barrick Gold</b>										
Forward sales	13,890,000	293		293						-
<b>Total Committed</b>	<b>13,890,000</b>			-		-		-		-
<b>Bema Gold</b>										
Forward sales	26,218	319	33,550	329	43,350	319	-	-	-	-
Calls-sold	16,667	406	40,000	406	40,000	406	60,000	406	-	-
Contingent Forwards	10,000	320	10,000	320	-	-	-	-	-	-
Contingent Forwards	16,500	350	34,500	350	36,000	350	168,000	350	-	-
<b>Total Committed</b>	<b>69,385</b>		<b>118,050</b>		<b>119,350</b>		<b>228,000</b>		-	-
Puts - bought	14,428	290	26,364	290	23,790	290	59,988	290	-	-
Puts - bought	-		40,000	390	40,000	390	60,000	390	-	-
Rand Gold	-		-		-		-		-	-
Puts - bought	73,122	3050	136,806	3,100	125,316	3,150	255,888	3,225	-	-
<b>Buenaventura</b>										
Forward sales	109,000	343	208,000	341	308,000	338	328,000	338	1,000,000	-
Calls - sold (collared options)	82,000	359	164,000	359	140,000	346	140,000	345	405,000	-
<b>Total Committed</b>	<b>191,000</b>		<b>372,000</b>		<b>448,000</b>		<b>468,000</b>		<b>1,405,000</b>	
<b>Cambior</b>										
Forward sales	-		9,000	336	130,000	326	56,000	350	-	-
Spot deferrals (long)	113,000	391	-	-	-	-	-	-	-	-
Prepaid forwards	26,000	235	52,000	235	-	-	-	-	-	-
Calls - sold	57,000	300	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>-30000</b>		<b>61,000</b>		<b>130,000</b>		<b>56,000</b>		-	-
<b>Campbell Resources Commitments</b>										
	-		-		-		-		-	-
<b>Canyon Resources Commitments</b>										
	-		-		-		-		-	-
<b>Centerra Gold</b>										
Forward sales	155,000	316	-	-	-	-	-	-	-	-
<b>Claude Resources</b>										
Forward sales	-		-		-		-		-	-



Americas Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Coeur d'Alene Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Crystallex Mining</b>										
Fixed forwards	*2004-2008	300								
Calls - sold	29,687	298	94,932	309	2,000	348	-	-	-	-
<b>Total Committed</b>	<b>69,117</b>		<b>137,362</b>	-	<b>41,996</b>	-	-	-	-	-
<b>CVRD</b>	*2004-2007									
Calls - sold	380,000	365	-	-	-	-	-	-	-	-
Hybrid instruments										
<b>Total Committed</b>	<b>400,000</b>		-	-	-	-	-	-	-	-
Puts - bought	355,000	321	-	-	-	-	-	-	-	-
<b>Defiance Mining Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Eldorado Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Freeport Copper &amp; Gold Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Glamis Gold Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Glencairn Gold Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Goldcorp Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Golden Star Resources Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Hecla Mining</b>										
Forward sales	22,660	288	-	-	-	-	-	-	-	-
<b>High River Gold</b>										
Forward sales	1,474	402	-	-	-	-	-	-	-	-
<b>IAMGOLD</b>										
Calls - sold	5,700	385	-	-	-	-	-	-	-	-
<b>Inmet Mining</b>										
Forward sales	59,400	333	131,200	340	103,400	356	5,400	353	-	-
Forward sales	6,750	366	13,500	367	13,500	369	13,500	371	6,750	-
Calls - sold										
<b>Total Committed</b>	<b>73,350</b>		<b>144,700</b>	-	<b>116,900</b>	-	<b>18,900</b>	-	<b>6,750</b>	-
Puts - bought	7,200	375	-	-	-	-	-	-	-	-
<b>Kinross Gold</b>										
<b>Total Committed</b>	-		-	-	-	-	-	-	-	-
Puts - Bought	75,000	250	150,000	250	150,000	250	-	-	-	-
<b>LionOre Mining</b>										
<i>AU Dollar Gold</i>										
Flat forwards	-		80,300	568	75,900	568	80,400	568	21,300	-
<b>Meridian Gold Commitments</b>	-		-	-	-	-	-	-	-	-



Americas Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Miramar Mining</b>										
<i>CDN Dollar Gold</i>	-		-	-	-	-	-	-	-	-
Forward sales	6,600	478	-	-	-	-	-	-	-	-
Calls - sold	18,000	478	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>24,600</b>		-	-	-	-	-	-	-	-
<b>Nevada Pacific Commitments</b>	-		-	-	-	-	-	-	-	-
<b>Newmont Mining</b>										
<i>US Dollar Gold</i>	-		-	-	-	-	-	-	-	-
Forwards - prepaid	-		161,111	300	161,111	300	161,111	300	-	-
Price-capped sales contracts	-		500,000	350	-	-	-	-	1,850,000	-
Puts - bought	98,000	293	205,000	292	100,000	338	20,000	397	-	-
<b>Total Committed</b>	-		<b>661,111</b>	-	<b>161,111</b>	-	<b>161,111</b>	-	<b>1,850,000</b>	-
<b>Northgate Minerals</b>										
Forward sales	43,500	307	87,000	307	87,000	307	87,000	307	-	-
<b>Total Committed</b>	<b>43,500</b>		<b>87,000</b>	-	<b>87,000</b>	-	<b>87,000</b>	-	-	-
<b>Pacific Rim</b>										
Forward sales	1,000	406	-	-	-	-	-	-	-	-
Forward sales	1,000	410	-	-	-	-	-	-	-	-
Forward sales	1,000	411	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>3,000</b>		-	-	-	-	-	-	-	-
<b>Penoles</b>										
Contingent forwards	27,000	355	54,000	355	54,000	355	54,000	355	108,000	-
<b>Total Committed</b>	<b>27,000</b>		<b>54,000</b>	-	<b>54,000</b>	-	<b>54,000</b>	-	<b>108,000</b>	-
Puts - bought	54,400	378	-	-	-	-	-	-	-	-
<b>Placer Dome</b>										
<i>US Dollar Gold</i>	-		-	-	-	-	-	-	-	-
Fixed forwards	313,000	335	1,047,000	343	1,239,000	344	1,245,000	373	1,999,000	-
Forwards	-		3,000	392	15,000	428	24,000	438	90,000	-
Floating lease rate fwd.	-		-	-	-	-	15,000	415	1,947,000	-
Forwards purchased	-		75,000	392	-	-	-	-	-	-
Calls - sold	277,000	346	276,000	362	249,000	356	115,000	363	200,000	-
Calls - sold	47,000	347	65,000	347	-	-	-	-	-	-
Calls - sold - Knock-in	52,000	361	128,000	358	52,000	347	5,000	401	75,000	-
Calls - sold - Knock-out	-		38,000	368	42,000	387	66,000	394	201,000	-
Calls - bought	100,000	385	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>589,000</b>		<b>1,482,000</b>	-	<b>1,597,000</b>	-	<b>1,470,000</b>	-	<b>4,512,000</b>	-
Puts - bought	810,000	348	693,000	405	512,000	416	359,000	440	450,000	-
Puts - sold	160,000	265	80,000	250	80,000	250	-	-	-	-
<b>Queenstake</b>										
<i>US Dollar Gold</i>	-		-	-	-	-	-	-	-	-
Puts - Bought	98,626	330	55,812	330	-	-	-	-	-	-
<b>Total Committed</b>	-		-	-	-	-	-	-	-	-
<b>Richmont Mines Commitments</b>	-		-	-	-	-	-	-	-	-
<b>River Gold Commitments</b>	-		-	-	-	-	-	-	-	-



Americas Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>RNC Gold</b>										
<i>US Dollar Gold</i>										
Calls - sold	34,634	340	10,000	340	-	-	-	-	-	-
<b>Total Committed</b>	<b>34,634</b>		<b>10,000</b>		-	-	-	-	-	-
Puts - Bought	34,634	290	10,000	290	-	-	-	-	-	-
<b>Royal Gold Commitments</b>	-		-		-		-		-	
<b>SEMAFO</b>										
Fixed Forward	15,426	296	30,852	296	30,852	296	30,847	296	-	-
Fixed Forward	19,500	360	34,500	360	29,000	360	25,500	360	41,500	-
Variable forwards	19,500	372	34,500	360	29,000	360	25,500	360	41,500	-
<b>Total Committed</b>	<b>54,426</b>		<b>99,852</b>		<b>88,852</b>		<b>81,847</b>		<b>83,000</b>	
<b>Sterlite Gold Commitments</b>	-		-		-		-		-	
<b>Teck Cominco</b>										
<i>CDN Dollar Gold</i>										
Forward sales	50,000	513	55,000	528	32,000	519	8,000	520	-	-
<i>US Dollar Gold</i>										
Forward sales	8,000	345	-	-	-	-	44,000	350	87,000	-
<b>Total Committed</b>	<b>58,000</b>		<b>55,000</b>		<b>32,000</b>		<b>52,000</b>		<b>87,000</b>	
<b>Thistle Mining</b>										
<i>US Dollar Gold</i>										
Forward sales	71,181	330	151,944	310	152,400	310	-	-	-	-
Contingent forwards	-		-		-		101,520	315	-	-
Puts - bought	5,033	290	5,592	290	18,666	290	-	-	-	-
<b>Total Committed</b>	<b>71,181</b>		<b>151,944</b>		<b>152,400</b>		<b>101,520</b>		-	
<b>Wheaton River</b>										
Puts - bought	87,504	300	175,008	300	175,008	300	131,256	300	43,752	-
<b>Total Committed</b>	-		-		-		-		-	
<b>Yamana Gold Commitments</b>	-		-		-		-		-	
<b>TOTAL COMMITTED</b>	<b>15,779,027</b>		<b>3,530,319</b>		<b>3,104,509</b>		<b>2,858,778</b>		<b>8,073,050</b>	
<b>TOTAL NET DELTA</b>	<b>2,743,527</b>		-		-		-		-	
<b>Total Forwards</b>	<b>1,569,639</b>		<b>4,684,887</b>		<b>4,574,509</b>		<b>4,234,258</b>		<b>14,034,050</b>	
<b>Total Calls sold</b>	<b>978,888</b>		<b>665,932</b>		<b>431,000</b>		<b>315,000</b>		<b>605,000</b>	
<b>Total Calls bought</b>	-		-		-		-		-	
<b>Total Other Products</b>	<b>25,500</b>		<b>264,500</b>		<b>184,000</b>		<b>394,520</b>		<b>384,000</b>	
<b>Total Committed</b>	<b>2,574,027</b>		<b>5,615,319</b>		<b>5,189,509</b>		<b>4,943,778</b>		<b>15,023,050</b>	
<b>Total Puts bought</b>	<b>1,805,269</b>		<b>1,743,602</b>		<b>1,337,120</b>		<b>1,077,412</b>		<b>493,752</b>	
<b>Total Puts sold</b>	<b>160,000</b>		<b>80,000</b>		<b>80,000</b>		-		-	



Africa	2004		2005		2006		2007		2008 +
	Q2 2004	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Ounces
<b>Afrikander Lease</b>									
Commitments	-	-	-	-	-	-	-	-	-
<b>AngloGold Ashanti</b>									
<i>US Dollar Gold</i>									
Forward sales	860,000	326	1,656,503	329	1,299,405	341	1,238,415	343	2,860,613
Calls-sold	577,974	368	1,096,148	345	714,004	351	633,820	342	2,089,895
Calls-bought	247,754	343	173,646	347	49,448	370	64,398	361	-
<b>Total</b>	<b>1,190,221</b>		<b>2,579,005</b>		<b>1,963,961</b>		<b>1,807,837</b>		<b>4,950,508</b>
Puts-bought	75,586	349	108,702	347	176,218	355	46,779	292	-
Puts-sold	253,991	343	89,990	345	139,984	339	-	-	-
<i>Rand Gold</i>									
Forward sales	-	-	-	-	-	-	-	-	29,997
Calls-sold	75,233	3,433	120,405	4,625	180,719	4,087	23,984	5,385	384,009
Calls-bought	293,408	2,501	-	-	-	-	-	-	-
<b>Total</b>	<b>218,175</b>		<b>120,405</b>		<b>180,719</b>		<b>23,984</b>		<b>414,005</b>
Puts-bought	105,004	2,486	-	-	60,283	2,911	-	-	-
Puts-sold	218,400	2,506	-	-	45,011	2,750	-	-	-
<i>Australian Dollar Gold</i>									
Calls-sold	59,993	566	-	-	-	-	-	-	-
Calls-bought	-	-	99,989	724	200,010	673	119,987	668	299,999
<b>Total</b>	<b>299,002</b>		<b>25,013</b>		<b>99,989</b>		<b>150,015</b>		<b>68,996</b>
Puts-sold	15,014	572	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>1,271,048</b>		<b>2,724,422</b>		<b>2,244,669</b>		<b>1,981,837</b>		<b>5,433,509</b>
<b>Durban Roodepoort Deep</b>									
Commitments	-	-	-	-	-	-	-	-	-
<b>Gold Fields</b>									
Commitments	-	-	-	-	-	-	-	-	-
<b>Harmony</b>									
<i>AU Dollar Gold</i>									
Forward sales	-	-	-	-	108,000	510	147,000	515	200,000
Calls - sold	-	-	-	-	40,000	552	-	-	-
<b>Total Committed</b>	<b>-</b>		<b>-</b>		<b>148,000</b>		<b>147,000</b>		<b>200,000</b>
<b>Randgold Resources</b>									
<i>US Dollar Gold</i>									
Forward sales	25,941	275	-	-	-	-	-	-	-
Forward sales	25,000	405	300,000	430	-	-	-	-	-
Calls bought	9,192	360	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>41,749</b>		<b>300,000</b>		<b>-</b>		<b>-</b>		<b>-</b>
<b>Western Areas</b>									
<i>US Dollar Gold</i>									
Calls - sold	80,922	269	165,564	279	157,320	289	158,136	289	1,036,296
Calls - sold	37,765	304	66,228	319	62,928	334	63,252	349	414,516
Calls - sold	21,000	310	21,000	310	-	-	-	-	-
Calls - bought	43,698	289	89,400	299	84,948	309	85,392	324	559,608
<b>Total Committed</b>	<b>95,989</b>		<b>163,392</b>		<b>135,300</b>		<b>135,996</b>		<b>891,204</b>
Puts - bought	105,198	268	215,232	278	204,516	288	205,572	288	1,347,198



Africa Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>TOTAL COMMITTED</b>	<b>1,408,786</b>	-	<b>3,187,814</b>	-	<b>2,527,969</b>	-	<b>2,264,833</b>	-	<b>6,524,713</b>	
Total Forwards	1,149,950	-	2,081,505	-	1,707,403	-	1,655,417	-	3,459,604	-
Total Calls sold	852,887	-	1,469,344	-	1,154,971	-	879,192	-	3,924,716	-
Total Calls bought	594,051	-	363,035	-	334,406	-	269,777	-	859,607	-
Total Other Products	-	-	-	-	-	-	-	-	-	-
Total Committed	1,408,786	-	3,187,814	-	2,527,969	-	2,264,833	-	6,524,713	-
Total Puts bought	285,789	-	323,934	-	441,017	-	252,351	-	1,347,198	-
Total Puts sold	786,407	-	115,003	-	284,984	-	150,015	-	68,996	-



Australia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Allstate Explorations</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Spot deferreds	-	-	30,741	501	-	-	-	-	-	-
Calls - sold	-	-	18,429	605	24,571	605	-	-	-	-
Calls - sold	-	-	10,000	480	-	-	-	-	-	-
<b>Total Committed</b>	-	-	<b>59,170</b>	-	<b>24,571</b>	-	-	-	-	-
Puts - bought	-	-	90,000	516	-	-	-	-	-	-
<b>Antam</b>										
US Dollar Gold	-	-	-	-	-	-	-	-	-	-
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Beaconsfield Gold</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Flat forwards	-	-	42,181	552	-	-	-	-	-	-
<b>Bolnisi Gold</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Croesus Mining</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	52,900	503	-	-	-	-	-	-
Calls-sold	-	-	120,000	598	-	-	-	-	-	-
<b>Total Committed</b>	-	-	<b>172,900</b>	-	-	-	-	-	-	-
<b>Dioro</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Forward sales	21,000	583	-	-	-	-	-	-	-	-
<b>Dominion Mining</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	107,500	580	40,000	560	-	-	-	-
<b>Dragon Mining</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Forward sales	17,112	400	45,016	400	26,899	400	28,840	400	32,133	-
<b>Emperor Mines</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	66,340	599	66,120	599	66,440	599	79,255	-
<b>Total Committed</b>	-	-	<b>66,340</b>	-	<b>66,120</b>	-	<b>66,440</b>	-	<b>79,255</b>	-
<b>Equigold</b>										
AU Dollar Gold	-	-	-	-	-	-	-	-	-	-
Flat Forward sales	-	-	36,060	600	56,660	600	59,312	600	193,088	-
Calls - sold	-	-	-	-	-	-	-	-	151,980	-
<b>Total Committed</b>	-	-	<b>36,060</b>	-	<b>56,660</b>	-	<b>59,312</b>	-	<b>345,068</b>	-
<b>Gallery Gold</b>										
US Dollar Gold	-	-	-	-	-	-	-	-	-	-
Flat Forward sales	-	-	53,334	393	71,112	393	71,112	393	124,446	-
Calls - sold	-	-	-	-	-	-	-	-	14,750	-
<b>Total Committed</b>	-	-	<b>53,334</b>	-	<b>71,112</b>	-	<b>71,112</b>	-	<b>139,196</b>	-



Australia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Giants Reef Mining</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	43,067	595	-	-	-	-	-	-
Forwards-convertible	-	-	-	-	47,805	584	31,610	584	-	-
<b>Total Committed</b>	-	-	<b>43,067</b>	-	<b>47,805</b>	-	<b>31,610</b>	-	-	-
<b>Gindalbie Gold</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	-	-	-	-	-	-	-	-
<b>Gympie Gold</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Herald Resources</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Fixed forward	-	-	16,405	601	-	-	-	-	-	-
Calls - sold	-	-	-	-	25,000	600	-	-	-	-
Calls - sold	-	-	-	-	10,000	650	-	-	-	-
<b>Total Committed</b>	-	-	<b>16,405</b>	-	<b>35,000</b>	-	-	-	-	-
<b>Highlands Pacific</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Flat forward	-	-	33,000	403	79,000	403	78,000	403	85,000	-
<b>Kingsgate Consolidated</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Spot deferreds	-	-	-	-	-	-	-	-	-	-
Calls - sold	-	-	30,000	310	11,300	352	15,000	360	-	-
Calls - sold	-	-	39,000	315	71,500	316	58,500	317	-	-
Total	-	-	69,000	-	82,800	-	73,500	-	-	-
Puts - bought	-	-	79,000	300	82,800	304	73,500	306	-	-
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Calls - sold	-	-	21,000	610	38,500	611	31,500	614	14,000	-
Puts - bought	-	-	32,200	570	38,500	570	31,500	570	14,000	-
<b>Total Committed</b>	-	-	<b>90,000</b>	-	<b>121,300</b>	-	<b>105,000</b>	-	<b>14,000</b>	-
<b>Legend Mining</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Lihir Gold</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	94,457	326	338,210	333	324,975	329	330,000	324	628,660	-
Calls - sold	10,000	365	95,000	327	39,000	337	96,000	319	20,000	-
<b>Total Committed</b>	<b>104,457</b>	-	<b>433,210</b>	-	<b>363,975</b>	-	<b>426,000</b>	-	<b>648,660</b>	-
Puts - bought	10,000	335	95,000	320	39,000	325	96,000	319	40,000	-
<b>MPI Mines</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	55,755	562	63,050	583	26,245	608	-	-	-	-
Calls - sold	-	-	12,500	620	5,000	640	-	-	-	-
<b>Total Committed</b>	<b>55,755</b>	-	<b>75,550</b>	-	<b>31,245</b>	-	-	-	-	-



Australia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Newcrest Mining</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	1,040,002	592	1,111,998	592	1,062,002	594	2,159,983	-
Gold loans	-	-	84,000	488	68,000	488	68,000	488	307,000	-
Total	-	-	1,124,002	-	1,179,998	-	1,130,002	-	2,466,983	-
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	67,500	333	285,000	330	344,000	350	1,153,500	-
Total	-	-	67,500	-	285,000	-	344,000	-	-	-
<b>Total Committed</b>	-	-	<b>1,191,502</b>	-	<b>1,464,998</b>	-	<b>1,474,002</b>	-	<b>3,620,483</b>	-
<b>Northern Gold</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Calls-sold	-	-	40,000	619	-	-	-	-	-	-
<b>Oceana Gold</b>										
<i>NZ Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	84,368	686	170,112	693	140,104	738	535,742	763	-	-
<b>Total Committed</b>	<b>84,368</b>	-	<b>170,112</b>	-	<b>140,104</b>	-	<b>535,742</b>	-	-	-
<b>Ok Tedi</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	30,750	366	61,500	367	61,500	369	61,500	371	30,750	-
Calls - sold	32,800	461	-	-	-	-	-	-	-	-
<b>Total Committed</b>	<b>63,550</b>	-	<b>61,500</b>	-	<b>61,500</b>	-	<b>61,500</b>	-	<b>30,750</b>	-
Puts - bought	32,800	375	-	-	-	-	-	-	-	-
<b>Oxiana Limited</b>										
Puts - bought	40,000	400	40,000	363	-	-	-	-	-	-
<b>Resolute</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	40,000	565	40,000	603	45,000	607	-	-
Calls-sold	-	-	255,000	564	-	-	-	-	-	-
Total	-	-	295,000	-	40,000	-	45,000	-	-	-
Puts - bought	-	-	60,000	546	90,000	549	96,000	555	-	-
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	113,882	306	40,000	311	-	-	-	-
Calls-sold	-	-	95,000	391	-	-	-	-	-	-
Total	-	-	208,882	-	40,000	-	-	-	-	-
Puts - bought	-	-	51,500	362	-	-	-	-	-	-
<b>Total Committed</b>	-	-	<b>503,882</b>	-	<b>80,000</b>	-	<b>45,000</b>	-	-	-
<b>Sedimentary Holdings</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Flat forwards	-	-	20,833	652	20,833	652	20,833	652	62,500	-
<b>Sino Mining</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Spot deferreds	-	-	-	-	35,000	291	-	-	-	-
<b>Total Committed</b>	-	-	-	-	<b>35,000</b>	-	-	-	-	-



Australia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Sons of Gwalia</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	37,400	368	-	-	-	-	-	-
Contingent calls - sold	-	-	-	-	-	-	-	-	18,700	-
Total	-	-	37,400	-	-	-	-	-	18,700	-
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	232,616	540	129,850	520	66,595	500	270,113	-
Forwards-convertible	-	-	-	-	-	-	-	-	40,000	-
Calls - sold	-	-	88,760	562	153,100	561	106,600	559	70,900	-
Contingent calls - sold	-	-	42,900	525	42,900	525	-	-	-	-
Convertible puts	-	-	-	-	-	-	30,000	640	32,000	-
Total	-	-	364,276	-	325,850	-	203,195	-	413,013	-
Puts - bought	-	-	275,125	589	420,250	598	404,606	601	644,188	-
<b>Total Committed</b>	-	-	<b>401,676</b>	-	<b>325,850</b>	-	<b>203,195</b>	-	<b>431,713</b>	-
<b>St. Barbara Mines</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Commitments	-	-	-	-	-	-	-	-	-	-
<b>Triako Resources</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	17,300	577	-	-	-	-	-	-
Forward sales	-	-	9,580	558	-	-	-	-	-	-
<b>Total Committed</b>	-	-	<b>26,880</b>	-	-	-	-	-	-	-
<b>Troy Resources</b>										
Commitments	-	-	-	-	-	-	-	-	-	-
<b>WMC Resources</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	-	-	-	-	-	-	-	-	-	-
<b>TOTAL COMMITTED</b>	<b>346,242</b>	-	<b>3,690,118</b>	-	<b>3,091,972</b>	-	<b>3,206,586</b>	-	<b>5,488,758</b>	-
<b>TOTAL NET DELTA</b>	-	-	-	-	-	-	-	-	-	-
<b>Total Forwards</b>	303,442	-	2,738,529	-	2,603,101	-	2,800,986	-	4,859,428	-
<b>Total Calls sold</b>	42,800	-	824,689	-	377,971	-	307,600	-	290,330	-
<b>Total Calls bought</b>	-	-	-	-	-	-	-	-	-	-
<b>Total Other Products</b>	-	-	126,900	-	110,900	-	98,000	-	339,000	-
<b>Total Committed</b>	346,242	-	3,690,118	-	3,091,972	-	3,206,586	-	5,488,758	-
<b>Total Puts bought</b>	82,800	-	733,825	-	587,750	-	628,106	-	708,188	-
<b>Total Puts sold</b>	-	-	-	-	-	-	-	-	-	-



Eurasia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>Avocet Mining</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Spot deferred	80,000	297	-	-	-	-	-	-	-	-
<b>Celtic</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Guinor Gold</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Highland Gold</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>MinMet</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Noriisk</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Oxus Gold</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	90,000	323	112,510	323	-	-	-	-	-	-
<b>Peter Hambro Mining</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-
<b>Rio Narcea</b>										
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	608	301	3,464	301	7,751	301	-	-	-	-
Puts - bought	10,547	280	25,900	280	6,960	280	-	-	-	-
<i>Euro Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Calls - sold	21,978	405	21,382	405	-	-	-	-	-	-
Puts - bought	20,113	300	70,610	300	89,420	300	-	-	-	-
<b>Total Committed</b>	<b>22,586</b>	-	<b>24,846</b>	-	<b>7,751</b>	-	-	-	-	-
<b>Rio Tinto</b>										
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	23,900	605	47,800	605	47,800	605	2,980	637	-	-
<b>Xstrata</b>					*2006-2008					
<i>US Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	113,031	364	203,332	364	290,332	378	-	-	-	-
Calls - sold	22,500	410	-	-	-	-	-	-	-	-
Calls - sold	1,190	370	-	-	-	-	-	-	-	-
Total	136,721	-	203,332	-	290,332	-	-	-	-	-
<i>AU Dollar Gold</i>	-	-	-	-	-	-	-	-	-	-
Forward sales	46,228	436	68,600	447	244,795	531	-	-	-	-
Forwards - Knock-out	-	-	-	-	76,800	541	-	-	-	-
<b>Total Committed</b>	<b>182,949</b>	-	<b>271,932</b>	-	<b>611,927</b>	-	-	-	<b>56,000</b>	-
Puts - bought	22,500	350	-	-	-	-	-	-	-	-
Puts - bought	1,190	333	-	-	-	-	-	-	-	-
<b>Zijin Mining</b>										
<b>Commitments</b>	-	-	-	-	-	-	-	-	-	-



Eurasia Q2 2004	2004		2005		2006		2007		2008 +	
	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	Price/oz.	Ounces	
<b>TOTAL COMMITTED</b>	<b>399,435</b>	-	<b>457,088</b>	-	<b>667,478</b>	-	<b>2,980</b>	-	<b>56,000</b>	-
Total Forwards	353,767	-	435,706	-	590,678	-	2,980	-	39,200	-
Total Calls sold	45,668	-	21,382	-	-	-	-	-	-	-
Total Calls bought	-	-	-	-	-	-	-	-	-	-
Total Other Products	-	-	-	-	76,800	-	-	-	16,800	-
<b>Total Committed</b>	<b>399,435</b>	-	<b>457,088</b>	-	<b>667,478</b>	-	<b>2,980</b>	-	<b>56,000</b>	-
Total Puts bought	54,350	-	96,510	-	96,380	-	-	-	-	-
Total Puts sold	-	-	-	-	-	-	-	-	-	-



## Endnotes

Hedge positions shown are based on a calendar year basis unless otherwise noted. All hedge positions are presented in the currency in which they were disclosed or denominated. These tables constitute summaries of hedge positions reported by individual producers. Such company reports often provide additional data and detail such as the duration of hedge positions, information on whether interests rates are fixed or floating, on floor prices on some contracts, on knock-ins and knock-out etc. For companies where quarterly data is not available, or detail is not provided, the data has been projected, interpolated, adjusted or repeated from adjacent quarters. In some cases aggregated positions have been allocated over a number of years. Thus we strongly refer the reader to the websites of the various companies for a more complete picture than is presented here.

### AMERICAS

For Bema Gold, Campbell Resources, Canyon Resources, CVRD, Defiance Mining, Glencairn Gold, LionOre, River Gold, Royal Gold, SEMAFO and Sterlite Gold: The June 30, 2004 positions is adjusted or repeated from Mar. 31, 2004 disclosure.

Buenaventura: Position shown for June 30, 2004 is as of July 1, 2004.

Crystallex Mining: Position shown for June 30, 2004 is as of May 31, 2004.

LionOre Mining: Has a June 30 year-end but positions shown are on a calendar year basis and are based on previous disclosure by LionOre and previous disclosure by Dalrymple Resources.

Nevada Pacific and Royal Gold: Have June 30 year-ends.

Pacific Rim: Has April 30 year-end but positions shown are on a calendar year basis.

### AUSTRALIA

Allstate Explorations, Beaconsfield Gold, Bolnisi Gold, Croesus Mining, Dominion Mining, Dragon Mining, Emperor Mines, Equigold, Gallery Gold, Giants Reef Mining, Gindalbie Gold, Gympie Gold, Herald Resources, Kingsgate Consolidated, Newcrest Mining, Northern Gold, Resolute, Sedimentary Holdings, Sons of Gwalia, St Barbara Mines, Triako Resources, and Troy Resources: Have June 30 year-ends.

Dioro: Has a Aug. 31 year-end but hedges are shown on a calendar year basis.

Dragon Mining: Hedges are shown on a calendar year basis.

Ok Tedi: Positions shown are calculated from Inmet disclosure of Ok Tedi mine hedge position.

### AFRICA

Durban Roodepoort Deep, Gold Fields and Harmony: Have June 30 year-ends.

Afrikander Lease: June 30, 2004 position repeated from previous quarter.

### EURASIA

Avocet: Has a Mar. 31 year-end but hedge position shown is on a calendar year basis.

Oxus Gold: Has a June year-end but hedges shown are on a calendar year basis

Rio Tinto: Hedge positions are based on adjustments to Dec. 31, 2001 disclosure.

Xstrata: June 30, 2004 hedge positions are based on adjustments to Dec. 31, 2003 disclosure



# Breakdown over time

Americas	Q1 04	Q2 04	Q2 change		Y-on-Y
	Moz	Moz	Moz	%	Moz
Agnico-Eagle	0	0	0		0
Apollo Gold	61,200	42,000	-19,200	-31%	-46,000
Aurizon Mines	0	0	0		0
Barrick Gold	14,740,000	13,890,000	-850,000	-6%	-2,210,000
Bema Gold	569,475	534,785	-34,690	-6%	69,735
Buenaventura	2,972,000	2,884,000	-88,000	-3%	-457,000
Cambior Inc.	498,000	217,000	-281,000	-56%	-683,000
Campbell Resources			0		0
Canyon Resources	0	0	0		0
Centerra Gold	358,200	155,000	-203,200	-57%	-453,300
Claude Resources	4,500	0	-4,500	-100%	-7,000
Coeur	0	0	0		-40,000
Crystallex Mining	316,475	248,475	-68,000	-21%	-181,506
CVRD	438,000	400,000	-38,000	-9%	-218,000
Echo Bay	0	0	0		0
Eldorado	0	0	0		0
Geomaque	0	0	0		0
Glamis Gold	0	0	0		0
Glencairn Gold	0	0	0		0
Goldcorp	0	0	0		0
Golden Star Resources	0	0	0		-48,000
Hecla Mining	35,794	22,660	-13,134	-37%	-56,068
High River Gold	2,210	1,474	-736	-33%	-3,100
IAMGOLD	11,400	5,700	-5,700	-50%	-17,100
Inmet Mining	379,600	360,600	-19,000	-5%	-27,410
Kinross Gold	195,000	0	-195,000	-100%	-352,500
Lionore	286,708	257,900	-28,808	-10%	46,582
Meridian Gold	0	0	0		0
Miramar Mining	40,200	24,600	-15,600	-39%	-48,600
Nevada Pacific	0	0	0		0
Newmont Mining	2,833,333	2,833,333	0	0%	-195,000
Northgate Exploration	326,250	304,500	-21,750	-7%	-45,500
Pacific Rim	5,500	3,000	-2,500	-45%	0
Penoles	310,500	297,000	-13,500	-4%	-69,500
Placer Dome	9,764,000	9,650,000	-114,000	-1%	14,000
Queenstake	0	0	0		0
Richmont	0	0	0		0
River Gold	0	0	0		0
RNC Gold	80,029	44,634	-35,395	-44%	-65,366
Royal Gold	0	0	0		0
SEMAFO	415,690	407,977	-7,713	-2%	-36,023
Sterlite Gold	0	0	0		0
Teck Cominco	288,000	284,000	-4,000	-1%	-62,000
Thistle Mining	512,636	477,045	-35,591	-7%	-138,345
Wheaton River	0	0	0		0
Yamana	0	0	0		0
<b>Total</b>	<b>35,444,700</b>	<b>33,345,683</b>	<b>-2,099,017</b>	<b>-6%</b>	<b>-5,434,993</b>



Africa	Q1 04	Q2 04	Q2 change	Y-on-Y
	Moz	Moz	Moz	%
Afrikander Lease Ltd	0	0	0	0
AngloGold Ashanti	15,052,794	13,655,484	-1,397,310	-9%
Durban Roodepoort Deep	0	0	0	0
Gold Fields	0	0	0	0
Harmony (Avgold)	1,010,130	495,000	-515,130	-51%
Randgold Resources	325,168	341,749	16,581	5%
Western Areas	1,461,783	1,421,888	-39,895	-3%
<b>Total</b>	<b>17,849,875</b>	<b>15,914,121</b>	<b>-1,935,754</b>	<b>-11%</b>

Australia	Q1 04	Q2 04	Q2 change	Y-on-Y
	Moz	Moz	Moz	%
Allstate Explorations	98,547	83,741	-14,806	-15%
Antam	0	0	0	0
Beaconsfield Gold	53,953	42,181	-11,772	-22%
Bolnisi Gold	0	0	0	0
Croesus Mining	160,900	172,900	12,000	7%
Dioro	21,000	21,000	0	0%
Dominion Mining	67,000	147,500	80,500	120%
Dragon Mining	150,000	150,000	0	0%
Emperor Mines	307,795	278,155	-29,640	-10%
Equigold	430,120	497,100	66,980	16%
Gallery Gold	334,754	334,754	0	0%
Giants Reef Mining	131,520	122,482	-9,038	-7%
Gindalbie Gold	0	0	0	0
Gympie Gold	0	0	0	0
Herald Resources	59,556	51,405	-8,151	-14%
Highlands Pacific	275,000	275,000	0	0%
Kingsgate Consolidated	337,100	330,300	-6,800	-2%
Legend Mining	0	0	0	0
Lihir Gold	1,999,558	1,976,302	-23,256	-1%
MPI Mines	116,954	162,550	45,596	39%
Newcrest Mining	7,358,000	7,750,985	392,985	5%
Northern Gold	40,000	40,000	0	0%
Oceana Gold	978,028	930,326	-47,702	-5%
Ok Tedi	303,400	278,800	-24,600	-8%
Oxiana Gold	0	0	0	0
Resolute	582,972	628,882	45,910	8%
Sedimentary	125,000	125,000	0	0%
Sino Mining	50,000	35,000	-15,000	-30%
Sons of Gwalia	1,571,380	1,362,434	-208,946	-13%
St. Barbara Mines	0	0	0	0
Triako Resources	9,300	26,880	17,580	189%
Troy Resources	0	0	0	0
WMC Resources	0	0	0	0
<b>Total</b>	<b>15,561,837</b>	<b>15,823,677</b>	<b>261,840</b>	<b>2%</b>



## Eurasia

	Q1 04	Q2 04	Q2 change		Y-on-Y
	Moz	Moz	Moz	%	Moz
Avocet Mining	80,000	80,000	0	0%	0
Celtic	0	0	0		0
Guinor Gold		0	0		0
Highland Gold	0	0	0		0
Minmet	0	0	0		0
Norilsk	0	0	0		0
Oxus Gold	234,000	202,510	-31,490	-13%	-60,490
Peter Hambro Mining	0	0	0		0
Rio Narcea	77,769	55,183	-22,586	-29%	-46,236
Rio Tinto	134,430	122,480	-11,950	-9%	-47,800
Xstrata	1,214,282	1,122,808	-91,474	-8%	171,312
Zijin Mining	0	0	0		0
<b>Total</b>	<b>1,740,481</b>	<b>1,582,981</b>	<b>-157,500</b>	<b>-9%</b>	<b>16,786</b>



# Methodology

## Hedge Impact & Committed Ounces

There are two distinct measures of gold hedge books used in this document, **committed ounces** and **Hedge Impact**. **Committed Ounces**, the more widely-known measure, is a simple summation of all mining company hedge commitments. For example if company A has sold 100,000 ounces of call options, and 50,000 ounces of forwards then their commitments total 150,000 ounces. This is a good guide to the extent and size of company and global hedging.

Committed ounces can be misleading however as a guide to the market impact of hedging. If a mining company has sold 100,000 ounces of call options (options to buy gold) at \$600/oz, when the price is \$415/oz then it is unlikely that they will be exercised (they would be profitable for the purchaser only if the gold price went above \$600/oz). As the gold price rises towards \$600/oz the option would be more likely to be exercised. At any gold price the net delta of an option measures the likelihood of it being exercised, this is what we term the **Hedge Impact** of the option (because typically a bullion bank, which will have bought the contract from a mining company, will sell this much gold into the spot market to hedge itself). Using the above example the Hedge Impact of 100,000 ounces of \$600/oz calls is less than 1000 ounces. If the gold price was at \$500/oz it would rise to over 10,000 ounces.



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