

## Gold Research

A collaboration between  
WestLB GFM – GEC  
and  
Virtual Metals

August 2002

# Gold, Energy & Commodities (GEC): Precious Metals Insight

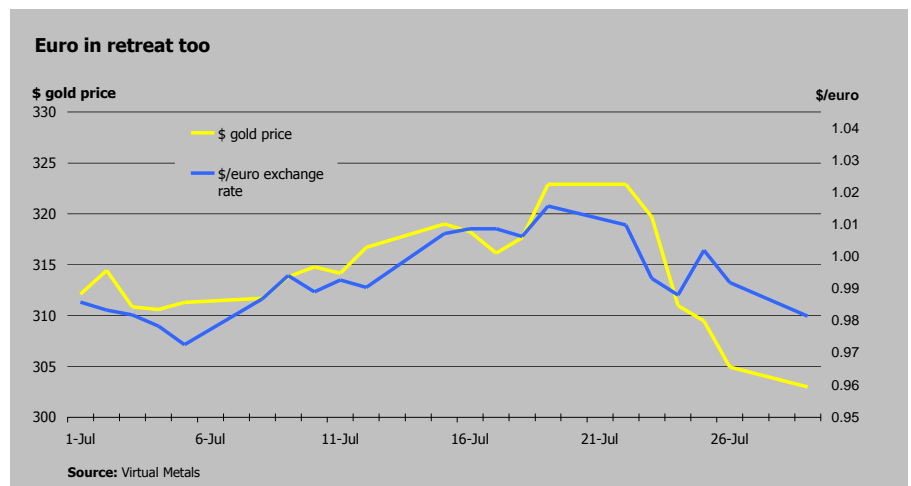
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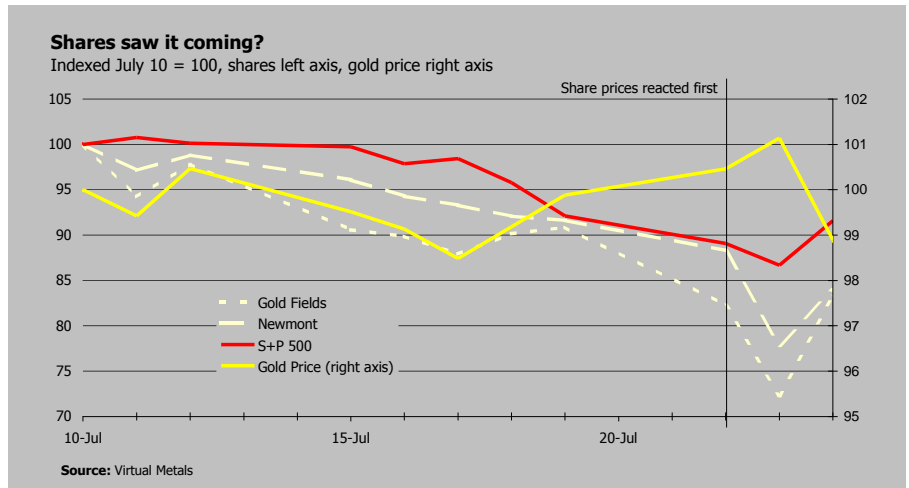
## Testing Times

By Tom Butler

At the time of writing the rally in gold prices that has been in place throughout the year is receiving its first real test, with quotations having tumbled by seven per cent over the past week to levels last seen in late April. All this despite continued stock market weakness and uncertainty. The initial catalyst for this unexpected downward correction in prices appears to have been the sharp sell-off in some gold mining equities, both absolutely and relative to the falling S&P 500. Rallies in gold mining shares often precede an upturn in the underlying gold price; what we have witnessed over the past few days is the exact opposite.

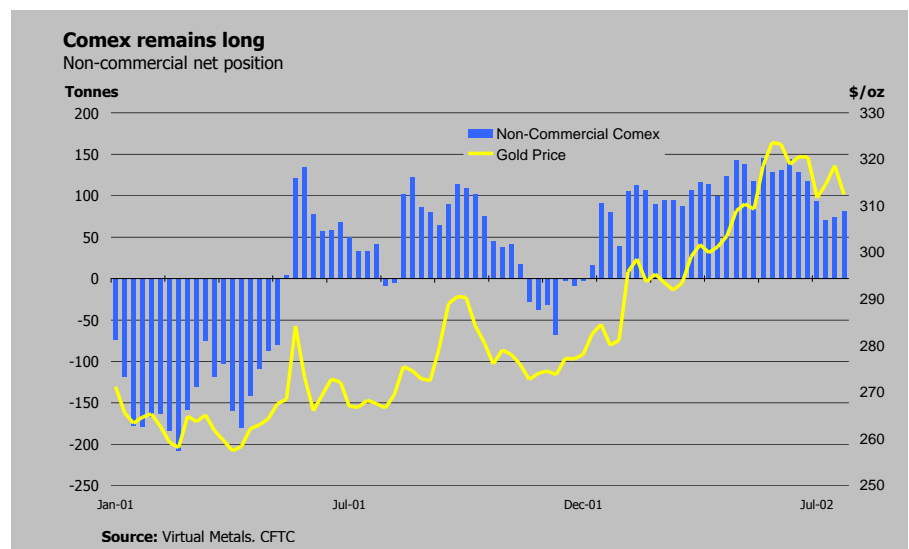


On Tuesday July 23rd, the day that gold's retreat began, neither continued global stock market weakness nor the deteriorating situation in the Middle East provided much comfort, the market paying more attention to gold equities and the dollar's recovery against the euro. Institutional funds were prominent sellers from the New York opening, and once the price was pressured below the \$317 technical support level stops were triggered, pushing quotations towards \$312. Some good physical demand began to be uncovered as the price slid, but renewed waves of fund selling prevented a bounce developing. In the market there was talk of some funds taking profits in gold in order to cover losses in equities; but interestingly, there was more support for the suggestion that some funds were taking profits from short dollar positions for the same reason, leading to a strengthening in the dollar.



On Thursday July 25th the turbulence was renewed as a decisive break of the 100-day moving average at \$310 was made, causing the fall in prices to accelerate as programme trading kicked in against the background of sharply higher stock markets. Another pick-up in physical demand only served to slow the decline towards the end of the week, and gold is currently holding above the psychologically important \$300 level.

The CFTC's latest commitment of traders report showed a small increase in the net long speculative position as of Tuesday July 23rd, with the funds (non-commercial position) long a net 26,238 contracts and the small punters 40,715 contracts. Quite obviously this position will have dropped significantly during recent days. The OTC options expiry on Monday July 29th had no obvious impact despite the closeness of the \$300 strike price. At the moment quotations appear to be enjoying a little more stability, but the market remains vulnerable in the short term; a break below \$300 could soon see the key 200-day moving average at just below \$297 under threat. Nevertheless the fundamental factors behind gold's strength over the year remain in place and once the current correction in prices is seen to have run its course then it should not take long for the funds to start reinstating their long positions.



As we passed for press (30th July), the gold stocks on the Johannesburg Stock Exchange took yet another beating. This time local factors were cited by the leading morning newspaper and this brings us to the topic of this month's main commentary. In a leaked paper, the South African government has apparently suggested that all future investment in South African mining, under the very new Minerals Bill, should have a mandatory participation of black empowerment groups, rumoured at no less than a potentially controlling 51%. While an Official spokesperson was quick to point out that the idea was mooted only to generate debate, investors clearly took fright causing a sell off of local shares. So on that note, it is particularly timely that we address in more detail the new legislation associated with South African mineral rights.

## **Commentary: South Africa's Minerals Act – What does it mean for Gold? By Gary Mead, Virtual Metals**

At the end of June, after many months of discussion, lobbying and wrangling, the South African parliament passed into law the Mineral and Petroleum Resources Development Act. It received overwhelming support in parliament, with 243 voting in favour and just 35 against. This Act has caused considerable controversy in South Africa, largely because it effectively transfers control of all mineral rights from individuals and companies to the state. One chief executive of a South African platinum group metals' company described the Bill before it became law as the South African equivalent of Robert Mugabe's land grab in Zimbabwe, "just more subtle."

This legislation has been on the agenda of the ruling African National Congress since it came to power, the inspiration for it being the desire to reverse decades of apartheid (and before that the less brutal but no less discriminatory policies of political and economic segregation under British rule), which debarred non-white South Africans from any ownership of the country's mineral wealth.

In the wake of the turmoil created by this drive towards black South African economic empowerment, there has been substantial confusion as to what the Act will mean for the future of the country's mineral exploration and exploitation. What does it really mean for the future of the South African gold mining industry?

On first examination the Act appears somewhat alarming. It gives, for example, wide-ranging and discretionary powers to the mining minister to decide – under the so-called 'use it or lose it' terms of the Act – as to whether those companies and individuals that have bought up large tracts of land, yet have not developed them for mineral extraction, will be permitted to keep these tracts, or whether the state will take them into ownership. This possibility has given rise to fears among some mining industry players that the Act is a nationalisation of private assets, albeit under a different guise and name.

On the passage of the Bill through parliament, Phumzile Mlambo-Ngcuka, the minister for minerals and energy – who has given plenty of evidence in the past of her understanding of the importance to South Africa of maintaining a strong mining sector – tried to assuage such fears. She said the measure would "help South Africans find one another" and added that the Act would be "in no way vengeful, but inclusive" in its drive to bring into the mining sector those sectors of society that had in the past been excluded. Other senior figures associated with the ANC but who have now moved into South Africa's business community, such as Cyril Ramaphosa (now chairman of Millennium Consolidated Investments Limited), have perhaps been more forceful about what the Act implies. Writing in *Business Day*, the leading South African financial daily, Ramaphosa claimed the legislation is designed "specifically to address untenable inequities

without jeopardising the profitability of existing mining companies. Mineral rights will be granted for 30 years at a time, which, at five years longer than the world average, is a significant concession. Security of tenure is guaranteed, provided the rights are being used and there are clear-cut conditions to be met before licences are awarded. The traditional mining industry – code language for those elements of the industry unwilling to embrace black South African empowerment policies – “seems unhappy about this. They wish to have mining rights forever. Whatever the economic reasons for this, it is not reasonable in today’s South Africa.”

Coming from someone like Ramaphosa, there could be no clearer definition of what the future holds, which in essence is no more than putting South African mining rights on a basis recognised and accepted internationally. Those companies that begin mining on land currently held in limbo will be able to continue their ownership; those that seek to keep the land in hock to future metals’ prices will find they come in for government scrutiny. Those companies that feel unhappy about ministerial decisions to take such land back into state control will be able to challenge such decisions in court, under the terms of the country’s Constitution.

Since the Bill was first proposed there have been significant amendments, which have become embodied in the Act itself. There were numerous criticisms of the original Bill’s vagueness, particularly concerning its black empowerment objectives. Thus, coupled with the Act is a parliamentary requirement that the minerals and energy minister prescribes, by edict, a black empowerment charter within six months of the Act’s promulgation. This will determine ownership, management, skills development, procurement, beneficiation, community upliftment and socio-economic development for all ‘historically disadvantaged South Africans.’ This will help define a clearer picture as to what the Act will require of mining companies.

Other significant amendments include an obligation on the minerals minister to refuse a prospecting right to any applicant who is deemed to have a ‘concentration’ of mineral resources, or in a case that would result in unfair competition or prevent entry to the mining industry. Other amendments include clarifications on the thorny issue of compensation for government expropriations, terms requiring companies to consult with trade unions or employees in the case of redundancies, and the period of time during which prospecting and mining rights must be converted to government ownership.

As is the case with any legislation, the government has plenty of scope to implement the Act in an aggressive or a softly-softly fashion. The ANC government is aware as anyone just how important mining and quarrying is to the country’s economy; according to the South African Reserve Bank’s quarterly bulletin of June 2002, this sector contributed R66.8 billion (\$6.7 billion) to total economic activity in 2001, twice as much as agriculture, while mineral exports amounted to 60 per cent of total export revenue in 2000. The Minerals and Energy ministry’s director general, Kanyo Gqulu, said earlier this year that the government is aiming to achieve 26 per cent participation by black empowerment companies after 10 years, assisted by financial contributions from the Industrial Development Corporation and the

Development Bank of South Africa. But how this target will be achieved is not clear at this stage; after all, 26 per cent of the mining sector amounts to some R180 billion (by market capitalisation), yet the total black South African controlled business – again, measured by market capitalisation – in South Africa is currently below R40 billion.

There has been, in the end, a widespread mining industry willingness to embrace the underlying principles and aims of the new legislation, insofar as it seeks to redress the wrongs of the past. In practical terms, those precious metals companies most worried at the moment are those in the platinum and manganese sectors, where some companies have, over years, purchased vast areas of land for possible future exploration purposes. Those involved in the gold sector are significantly less alarmed about the new Act, partly because of the sheer cost of sinking new shafts – easily R1 billion for a new kilometre deep shaft – partly because they have not, on the whole, bought land speculatively, and partly because the whole gold sector in South Africa is on a continuing trend to shrink output over the next few years. That gold is less threatened by this new legislation than platinum is perhaps reflected in the fact that South African gold shares are currently trading on p/e multiples of 25 times and above, while South African platinum shares are on p/e multiples of less than 10, lower even than the Johannesburg Stock Exchange benchmark p/e multiple of 12. It would seem that investors are not too bothered about the new mineral law affecting gold's future, while they may have some concerns vis-à-vis that of platinum. As Bernard Swanepoel, chief executive of Harmony Gold, put it recently: "We can live with this Bill and we will...obtaining rights in South Africa is still going to be easier than in Australia or Nevada."

## SAFI Program Trading Signals – Gold Models

The Strategic Automated Financial Investing (SAFI) Program is a directional long/short global macro systematic strategy that invests in a diversified portfolio of currencies, bonds, equities and commodities. The Program uses a quantitative approach for advanced analysis of high frequency market data to generate medium-term trading signals

Technical Signal (non-linear, volatility-adjusted, medium-term trend model): **Neutral**

Fundamental Signal (adaptive, high frequency, inter-asset relationship model): **Long**

### GEC Technical Indicators

COMEX August Gold Support & Resistance Levels	Basis price: 305.20	Near Term	Far Term	MBI <b>65</b>
	Secondary Resistance	318	339	
GEC Market Bias Indicator (MBI)*	Primary Resistance	312	325	
	Primary Support	299.5	298	
	Secondary Support	295	292	

\* MBI: 100: bullish sentiment; 0: bearish sentiment

If you have any questions regarding the SAFI Program or our market view, please do not hesitate to contact us: Marc Wall on +44 (0)20 7020 3923.

## Views from the GEC trading desk

The month of July witnessed a sever clean-out of gold holders as funds liquidated long positions in an attempt to right the rocky equity ship. We saw both sides of the US\$25.00 range in a matter of days, and like in the past the bulls were as revved up at US\$325/oz as the bears were at US\$300/oz. Last month we stated our expectations for July to be one of consolidation, on the one hand this was correct with the market failing to make new highs, and in the process moving to more 'neutral' price levels. On the other hand, consolidation is rarely associated with the sort of voracious price action in spot gold, albeit as a result of outside influences (equity and credit market uncertainty). Looking ahead, we expect the US\$298/300 window to provide further support with the larger risk to the topside after the longs were washed out in July.

Implied option volatilities = status quo. Essentially nothing material to report in at the money volatilities, however the premium for calls was slashed aggressively post the spot gold price giving up its gains from circa 2.5% (25 delta) to 0.50%. In general terms 25 delta puts remain cheap relative to at the money volatilities, that is no premium - we do not expect this relationship to change until such time as gold breaks US\$295/oz.

The gold interest rate curve has steepened ever so slightly, with further light borrowing out the curve. At various stages we saw 3 and 6 month borrowing interest (likely interest rate swap rate reset related), but more importantly beyond 1 year, where we suspect a bottom has been made at 0.55%.

#### ATM Implied Option Volatilities (%)

1m 15.25/16.75 2m 14.75/16.00 3m 14.50/15.50 6m 14.00/15.00 9m 13.85/14.65 1y 13.60/14.35

#### Forward Rates (%)

1m 1.65/80 2m 1.55/70 3m 1.50/65 6m 1.25/40 9m 1.10/25 1y 1.00/15

#### Deposit/Lease Rates (bps)

1m 0.02/0.17 2m 0.06/0.21 3m 0.10/0.25 6m 0.32/0.47 9m 0.44/0.59 1y 0.65/0.80

## WestLB Monthly Report – News

**I-Net Bridge,  
July 2nd;**

**Gold Fields**, South Africa's second biggest gold mining company, has been added to the PHLX gold and silver sector index, a capitalisation-weighted index composed of the common shares of eleven companies involved in the gold and silver mining industry. On a current market value basis, Gold Fields will comprise approximately 12.5% of this index, ranking it the fourth largest component.

**Dow Jones,  
July 5th;**

Australia's **AurionGold Ltd** formally rejected the unsolicited takeover offer from Canada's **Placer Dome Inc** with the latter showing no signs of improving upon the terms of its bid made in late May. The key sticking point is the slide in Placer Dome's share price since it launched its bid, which has dragged down the implied value of its offer. Placer Dome has extended its offer until July 24th, but has continued to reject arguments from AurionGold that it can only succeed by offering improved terms. To date Placer Dome has received acceptances of less than 1% for its bid, but with the lack of a third party bid being announced remains adamant about not sweetening its bid.

**Reuters,  
July 8th;**

**Durban Roodepoort Deep** announced that it has closed out its full revenue hedge book. The outstanding fixed loss on the close-out was \$17 million, which will be repaid within the current financial year; the company will now receive the full spot price for its sales.

**Bloomberg,  
July 10th;**

**Bundesbank** president and European Central Bank council member **Ernst Welteke**, speaking about the German economy, said that if the European central bank gold agreement, which limits sales of gold by central banks, were to be renewed then Germany would "want to keep the option open to possibly be able to sell gold. With some 3,500 tonnes of gold, we have a significant asset that doesn't yield any profit. Welteke declined to mention any specific amount, though he suggested the amount of gold a country is allowed to sell in the future should depend upon its gold reserves relative to its gross domestic product. "It must be an amount that is worth bringing to the market" he said. "So far there are no detailed talks about extending the gold agreement" Welteke said, adding he is in favour of renewing the accord because "it has proved itself. The gold price has stabilised."

**Reuters,  
July 10th;**

**Barrick Gold Corp** has doubled the estimated size of its gold find at the Alto Chicama property in north-central Peru. The company, which first announced the find in April, originally said it could contain up to 3.5 million ounces of gold, but now calculates the property could contain up to 7.3 million ounces. Barrick also said it was increasing the 2002 exploration budget for the property by \$15 million to \$35 million.

**Dow Jones,  
July 12th;**

**Placer Dome Inc** has extended the closing date of its takeover offer for Australia's **AurionGold Ltd** by two weeks to August 7th. Placer said that it wants to give AurionGold shareholders time to consider its offer once temporary distortions associated with its removal from the S&P 500 Index have settled down. Placer Dome, among other non-US companies, will be removed from the US benchmark after close of trading on July 19th.

**Asia Pulse,  
July 18th;**

**AurionGold Ltd** announced full year gold production of 1.02 million ounces and continued to advise shareholders to reject the hostile takeover bid by

Canada's Placer Dome. Fourth quarter gold production was 275,385 ounces at an average cash cost of A\$302 (US\$165.65) per ounce and total cost of A\$426 per ounce. Placer's share offer valued AurionGold at A\$4.51 per share at the time it was made, but then implied offer price has since fallen to A\$3.19 per share as a result of a sharp fall in Placer's share price.

**AFX News Asia,  
July 22nd;**

**Newcrest Mining Ltd** recorded gold production of 644,626 ounces for the year to June, down from 773,352 a year earlier. Total cash costs were A\$253 per ounce down from A\$290 a year earlier. Production costs fell to A\$414 from A\$439. The amount of gold hedged now represents 21% of reserves.

**Reuters,  
July 24th 2002;**

**Cambior Inc** has reduced its hedge position this month by 17%, converting 434,000 ounces of variable volume forward commitments at \$339 per ounce into 227,000 ounces of fixed forward positions at an average \$331 per ounce. The reduction was completed without any cash outlay. So far this year Cambior's hedge position has been cut by 26%.

**Reuters,  
July 26th 2002;**

**Barrick Gold** posted flat second quarter earnings as output dropped and cash costs rose. Earnings of \$59 million were reported for the period ended June 30th compared with \$58 million the year before. 1.35 million ounces were produced at a cash cost of \$178 per ounce down from 1.6 million ounces at \$163. Production slipped at most key operations including the Goldstrike property in Nevada and the Pierina mine in South America.

**Reuters,  
July 26th 2002;**

**Anglo American** described the South African government's initial plans for a new charter aimed at giving blacks more of a stake in its mining industry as unworkable and unacceptable. With the document being up for discussion with the industry in the expectation that it may be adjusted over time, Anglo said that it will work with government and other industry players in the hope of producing a more acceptable charter as well as supporting change.

**Dow Jones,  
July 30th 2002;**

Canada's **Placer Dome Inc** has raised its all-share takeover offer for Australia's **AurionGold Ltd** by offering a cash sweetener of 35 cents a share, or about A\$154.2 million. The revised offer values AurionGold at A\$2.97 per share based on Placer's closing share price on July 26<sup>th</sup> and prevailing exchange rates, a far cry from Placer's bid when first launched in May. Then Placer's offer of 17.5 shares for every 100 shares valued the target at A\$4.51 a share. Although there is no sign of any counter-bidder to rival Placer, analysts are questioning whether the offer is enough to secure AurionGold. So far the bid has won less than 1% of AurionGold, but Placer continues to be supported by 9.8% AurionGold shareholder Harmony Gold Mining Co.

**Business Report,  
July 31st 2002;**

**AngloGold** reported that in the quarter ended June 30<sup>th</sup> its operating profit was up 10% to \$162 million, while net profit rose \$8 million to \$79 million. Its hedge book has been reduced by a further 2.4 million ounces to 10.5 million following the 1.7 million ounce reduction in the first quarter of the year. Gold production climbed by 4% from the March quarter to 1.4 million ounces.

## Gold Prices in Various Currencies - Monthly Averages

	US\$/OZ	YEN/GR	ZAR/KG	AS/OZ	SFR/OZ
<b>Jan-00</b>	284.41	962	54,132	432.23	452.21
<b>Feb-00</b>	300.36	1,057	59,042	477.57	489.59
<b>Mar-00</b>	286.55	982	57,572	469.99	476.19
<b>Apr-00</b>	279.76	948	57,533	468.61	464.63
<b>May-00</b>	275.30	957	60,114	476.46	472.58
<b>Jun-00</b>	285.49	974	61,513	480.62	469.23
<b>Jul-00</b>	281.87	978	60,284	478.64	464.83
<b>Aug-00</b>	274.49	953	59,347	472.36	470.28
<b>Sep-00</b>	273.68	939	60,960	493.74	480.28
<b>Oct-00</b>	270.20	942	62,755	510.97	477.96
<b>Nov-00</b>	265.97	931	63,478	508.64	472.68
<b>Dec-00</b>	271.64	980	64,542	496.60	458.31
<b>Jan-01</b>	265.71	996	66,429	477.91	432.62
<b>Feb-01</b>	262.04	978	65,857	490.90	437.00
<b>Mar-01</b>	263.15	1,027	66,781	523.01	444.67
<b>Apr-01</b>	260.69	1,037	67,723	520.31	445.80
<b>May-01</b>	272.19	1,070	69,830	523.67	475.48
<b>Jun-01</b>	270.48	1,056	69,980	521.81	482.69
<b>Jul-01</b>	267.66	1,070	70,485	525.03	470.31
<b>Aug-01</b>	272.56	1,063	72,891	519.48	457.88
<b>Sep-01</b>	283.45	1,080	78,598	561.75	462.70
<b>Oct-01</b>	283.18	1,084	85,682	559.65	461.32
<b>Nov-01</b>	276.17	1,085	85,942	533.96	455.40
<b>Dec-01</b>	275.85	1,122	102,609	534.69	454.62
<b>Jan-02</b>	281.52	1,162	101,546	543.28	468.78
<b>Feb-02</b>	295.50	1,268	109,023	575.48	501.25
<b>Mar-02</b>	294.22	1,240	108,708	560.02	492.93
<b>Apr-02</b>	301.35	1,273	108,184	564.65	500.43
<b>May-02</b>	313.46	1,273	101,452	571.41	498.45
<b>Jun-02</b>	321.18	1,272	104,854	564.42	494.55
<b>Jul-02</b>	313.68	1,188	101,887	566.21	462.00

Source: Virtual Metals

## Lease Rates Monthly Averages - Percent

	ONE MONTH	THREE MONTH	SIX MONTH	TWELVE MONTH
<b>Jan-00</b>	0.64	1.11	1.31	1.81
<b>Feb-00</b>	0.53	0.81	1.10	1.77
<b>Mar-00</b>	0.73	0.91	1.14	1.82
<b>Apr-00</b>	0.80	1.01	1.27	1.75
<b>May-00</b>	0.81	1.02	1.28	1.66
<b>Jun-00</b>	1.01	1.17	1.39	1.80
<b>Jul-00</b>	0.82	0.95	1.32	1.65
<b>Aug-00</b>	0.74	1.04	1.23	1.64
<b>Sep-00</b>	0.88	0.97	1.24	1.62
<b>Oct-00</b>	0.89	1.16	1.25	1.67
<b>Nov-00</b>	0.89	1.11	1.21	1.59
<b>Dec-00</b>	1.14	1.11	1.21	1.67
<b>Jan-01</b>	1.06	1.06	1.14	1.61
<b>Feb-01</b>	1.77	1.63	1.54	1.78
<b>Mar-01</b>	3.30	2.60	2.25	2.19
<b>Apr-01</b>	2.77	2.45	2.22	2.25
<b>May-01</b>	2.50	2.40	2.34	2.49
<b>Jun-01</b>	2.07	2.08	2.12	2.35
<b>Jul-01</b>	1.14	1.43	1.70	1.96
<b>Aug-01</b>	0.71	0.98	1.45	1.88
<b>Sep-01</b>	0.87	1.06	1.49	1.86
<b>Oct-01</b>	0.61	1.03	1.28	1.66
<b>Nov-01</b>	0.73	1.01	1.18	1.55
<b>Dec-01</b>	1.05	1.18	1.29	1.68
<b>Jan-02</b>	0.73	0.94	1.15	1.58
<b>Feb-02</b>	0.72	0.94	1.15	1.59
<b>Mar-02</b>	0.60	0.78	1.03	1.51
<b>Apr-02</b>	0.51	0.68	0.93	1.41
<b>May-02</b>	0.45	0.63	0.82	1.25
<b>Jun-02</b>	0.46	0.56	0.98	1.07
<b>Jul-02</b>	0.45	0.55	0.70	0.98

Source: Virtual Metals

## Gold Imports in Selected Countries – Kilogramme

	USA	JAPAN	UK	GERMANY	SINGAPORE	ITALY	FRANCE
<b>Jan-00</b>	23,477	2,069	50,535	2,520	28,807	32,259	3,094
<b>Feb-00</b>	12,114	6,052	42,315	5,365	14,934	34,304	6,141
<b>Mar-00</b>	55,359	4,899	61,542	4,044	21,983	44,598	4,981
<b>Apr-00</b>	21,271	7,800	31,775	4,165	24,074	27,185	3,433
<b>May-00</b>	21,095	5,243	37,792	6,033	22,437	42,776	2,668
<b>Jun-00</b>	19,768	6,199	57,891	3,167	15,410	36,449	2,494
<b>Jul-00</b>	22,033	3,234	58,301	6,251	9,769	34,765	2,944
<b>Aug-00</b>	20,714	8,317	41,096	3,344	15,706	23,613	2,113
<b>Sep-00</b>	25,174	8,205	34,439	9,232	23,501	50,523	2,977
<b>Oct-00</b>	20,817	7,830	58,774	6,169	18,193	65,036	3,728
<b>Nov-00</b>	23,889	8,151	32,709	6,141	12,586	38,732	2,663
<b>Dec-00</b>	22,704	4,955	39,488	5,619	10,937	38,732	2,362
<b>Jan-01</b>	20,450	2,721	76,178	8,872	11,360	35,560	3,469
<b>Feb-01</b>	18,630	2,583	49,771	6,196	22,504	36,187	6,081
<b>Mar-01</b>	20,204	1,970	85,776	7,159	13,472	35,186	2,920
<b>Apr-01</b>	15,539	3,303	67,886	6,604	6,291	31,131	2,665
<b>May-01</b>	13,823	3,257	62,042	10,651	9,128	32,887	3,313
<b>Jun-01</b>	18,304	1,275	96,141	8,894	3,294	32,397	2,836
<b>Jul-01</b>	17,274	3,416	85,639	5,889	7,969	36,544	3,193
<b>Aug-01</b>	21,290	3,379	64,529	2,129	11,510	20,278	3,071
<b>Sep-01</b>	20,291	5,145	67,997	4,512	12,914	34,816	5,945
<b>Oct-01</b>	28,525	6,072	73,636	6,668	7,214	45,505	4,842
<b>Nov-01</b>	26,019	6,236	58,716	4,615	7,904	36,549	1,912
<b>Dec-01</b>	15,752	3,873	68,758	2,505	10,798	19,790	2,112
<b>Jan-02</b>	14,589	8,169	73,451	4,785	9,742	35,560	3,437
<b>Feb-02</b>	16,254	19,745	81,144	3,558	7,205	31,205	3,329
<b>Mar-02</b>	20,567	13,183	83,026	3,539	5,176	33,105	2,631
<b>Apr-02</b>					6,133		
<b>May-02</b>					6,689		
<b>Jun-02</b>					2,615		

Source: Virtual Metals

## Gold Production from Major Mining Countries – Kilogramme

	<b>SOUTH</b>	<b>CANADA</b>	<b>USA</b>
	<b>AFRICA</b>		
	QUARTERLY		
<b>Jan-00</b>		11,863	30,000
<b>Feb-00</b>		11,369	28,300
<b>Mar-00</b>	106,563	12,068	29,600
<b>Apr-00</b>		12,101	28,100
<b>May-00</b>		12,379	26,600
<b>Jun-00</b>	105,613	12,783	28,800
<b>Jul-00</b>		13,715	26,300
<b>Aug-00</b>		13,942	28,500
<b>Sep-00</b>	107,860	13,918	29,100
<b>Oct-00</b>		13,172	27,600
<b>Nov-00</b>		13,459	24,700
<b>Dec-00</b>	107,999	13,588	30,100
<b>Jan-01</b>		13,099	29,000
<b>Feb-01</b>		11,685	26,500
<b>Mar-01</b>	98,104	13,840	26,800
<b>Apr-01</b>		12,319	27,000
<b>May-01</b>		14,651	27,700
<b>Jun-01</b>	95,947	12,838	29,400
<b>Jul-01</b>		12,857	29,600
<b>Aug-01</b>		11,933	27,000
<b>Sep-01</b>	98,026	12,612	26,300
<b>Oct-01</b>		13,757	27,000
<b>Nov-01</b>		13,192	23,700
<b>Dec-01</b>	101,447	14,567	25,200
<b>Jan-02</b>		12,770	22,900
<b>Feb-02</b>		11,325	23,300
<b>Mar-02</b>	94,858	11,518	24,800
<b>Apr-02</b>		11,759	
<b>May-02</b>		12,403	

Source: Virtual Metals

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